3B CALL MANAGEMENT SYSTEM

Release 2, Issue 1.4

ADMINISTRATION

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3B CMS Description

The 3B Call Management System (3B CMS) is a software product used by business customers that have an AT&T telecommunications switch and receive a large volume of telephone calls that are processed through the Automatic Call Distribution (ACD) feature of the switch. The 3B CMS collects call-traffic data, formats management reports, and provides an administrative interface to the ACD feature in the switch.

The CMS administrator can access the CMS database, generate reports, and also monitor call activities to determine the most efficient service possible for the calling customers.

> **NOTE** If you are a new CMS administrator, read this chapter and Chapter 2, "Getting Started," to learn more about the Call Management System. If you are unfamiliar with the Automatic Call Distribution (ACD) feature, see Appendix C, "ACD Basics."

CMS interfaces with the UNIX operating system of the 3B computer and uses several UNIX system utilities to communicate with terminals and printers, log errors, execute processes, and so forth. CMS works with the INFORMIX* database management system, which provides an interface to the CMS historical database.

The 3B CMS software can run on the following 3B2 computers: 310, 400, 500, 522, 60-0, or 1-000 Model 70 (the 3B2 310, 400, 500, and 600 are supported but are no longer sold) and can be connected to the following AT&T switches:

DEFINITY Communications System, Generic 1 (hereafter referred to as Generic 1)

DEFINITY Communications System, Generic 2 (hereafter referred to as Generic 2)

DEFINITY Communications System, Generic 3i (hereafter referred to as Generic 3i)

System 75, Release 1, Version 3 (R1V3)

System 75 XE (R1V3)

System 85, Release 2, Version 3 (R2V3)

System 85, Release 2, Version 4 (R2V4)

DIMENSION System, Feature Package (FP) 8.3.

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* Registered trademark of Informix Software, Inc.

Single and Multiple ACDs

Depending on which computer you have and how the CMS software was installed, the CMS software can communicate with up to four ACDs. (The 3B2 310, 400, 500, and 522 computers can communicate with only one ACD while the 3B2 600 and 1000 Model 70 computers can communicate with up to four ACDs.) If your system was configured with more than one ACD, a separate copy of the CMS file structure under different UNIX system directories was established for each ACD. These CMS file structures are */cms/acd1*, */cms/acd2*, */cms/acd3*, and */cms/acd4*.

References to multiple ACDs in this document refer to multiple-switch configurations. If you have only one switch, you can ignore multiple-ACD considerations because your data will always be under */cms/acd1*. A different CMS login ID is created, during installation, for the CMS Administrator of each ACD: *acd1*, *acd2*, *acd3*, and *acd4*.

ACD Administration

Using the appropriate switch administration tool, your switch administrator can add or remove measured splits from your system, administer announcements, add agents to the system, terminate trunk groups to splits, and administer many other aspects of the ACD. See Table C-1, "Model-Specific Data on ACD Features," in Appendix C, "ACD Basics," for the specific administration tool used with your switch to make these changes.

| NOTE | The primary CMS administrator should coordinate with the switch administrator to be sure that the needed ACD/CMS configuration is understood by both. |

3B CMS Vectoring Feature

Call Vectoring, which is available on the Generic 3i, Generic 2, and System 85, R2V4 switches, is a flexible and sophisticated way of routing and processing incoming calls to the switch. The 3B CMS software provides an administration interface to the Call Vectoring feature on the Generic 2 and System 85, Release 2 Version 4 (R2V4) switch. In addition, 3B CMS provides reporting capability on vectors and VDNs for Generic 3i, Generic 2, and System 85 switches that have vectoring.

On Generic 2 and System 85, the 3B CMS Vectoring feature allows you to create, copy, edit, and delete Call Vectors (vector tables). Call vectors are user definable, multistep routing tables. These programmable call vectors direct calls to specified on-network or off-network destinations, to queues in ACD splits, or to treatments such as forced first announcements, multiple recorded announcements, forced disconnect, forced busy, or delay.

If your system has this feature, refer to *3B Call Management System Vectoring Administration* (5-85-215-502) document for detailed procedures, background information, and reference material.

3B CMS Graphics Package

The 3B CMS Graphics Package uses bar graphs to graphically represent real-time or historical data for various agent, split, vector directory number, or system activities such as ACD calls, calls abandoned, average speed of answer, etc. The bar graphs are most useful as a quick reference on ACD activity.

The graphics package works on monochrome or color terminals with three levels of color/ intensity indicators for normal, caution, and warning situations. See the *3B Call Management System Graphics Administration* (5-85-215-505) document for more information.

Important Terms

Before administering your CMS, you need to know the meaning of several terms. These terms are also defined in the "Glossary."

Real-Time Database — Consists of the current and previous half-hour data on each CMS-measured agent, split, trunk, trunk group, vector, and Vector Directory Number (VDN).

Historical Database — Contains half-hour records for up to 31 days in the past and daily records for up to 387 days in the past for each CMS-measured agent, split, trunk, trunk group, vector, and VDN.

Current Interval — Represents the current half-hour, part of the real-time database.

Previous Interval — Represents one half hour, part of the real-time database. At the end of each half hour, the contents of the current half hour are copied to the previous half-hour portion.

Daily Data — Data that has been converted to a 1-day summary.

Real-Time Reports — Give information on the current ACD activity of agents, splits, trunks, trunk groups, vector, and VDN.

Historical Reports — Display past data for various agent, split, trunk, trunk group, vector, or VDN activities.

Call Profile Report — Used with real-time reports and shows the wait times of incoming calls handled and abandoned in a split during the current half hour. Used to determine what answering speed is required to reduce abandoned calls.

Daily Call Profile Report — Used with historical reports and shows the wait times of incoming calls handled and abandoned in a split during a specified day. Also used to determine what answering speed is required to reduce abandoned calls.

Exception Reports — Display occurrences of unusual call-handling events.

Forecast Reports — Display expected call traffic and agent/ trunk group requirements for your call center for a particular day or period in the future.

Agent Trace Report — Displays, by individual agent, every activity performed for a specified time period.

Custom Reports — Real-time or historical reports that have been customized from standard reports or created from scratch. See the *3B CMS Custom Reports* (5-85-215-5-03) document for more information.

ACD/CMS Parameters

Table 1-1 shows the maximum values of the Automatic Call Distribution (ACD) parameters supported by the AT&T Private Branch Exchanges (PBXs), while Table 1-2 shows the maximum values of the ACD parameters supported by the 3B CMS-approved 3B2 computers.

Table 1-1   ACD Parameters Supported by AT&T Switches

Host Switch	ACD Parameters						
	Splits	Agents	Trunk Groups	Trunks	Vectors	VDNs	Call Arrivals (Per Hour)
DIMENSION	30	512	18-255†	1,600	n/a	n/a	20,000
System 75 R1V3	32	200	60	200	n/a	n/a	2,000†
Generic 1, 1.1	32*	400	99	400	n/a	n/a	4,000** or 5,500‡
Generic 3i	99	500	99	400	256	500	7,000
System 85 R2V3	30	1,024	18-255†	6,000	n/a	n/a	20,000
System 85 R2V4	60	1,024	18-999†	6,000	128	32,000	25,000 (Vectoring) 32,000 (No Vectoring)
Generic 2.1	60	1024	18-999†	6,000	128	32,000	25,000 (Vectoring) 3-2,000 (No Vectoring)

* 99 splits are available on the Generic 1.1 Load 5.0 PBX. For earlier versions of Generic 1, the number of available splits is 32.

† The switch can have a maximum of 999 trunk groups, but CMS can only measure 2-38 trunk groups. In addition, to be measured, a trunk group must be assigned a trunk group number from 18 to 255.

** These rates assume an ideal ACD scenario in which incoming ACD calls comprise 100% of call traffic on trunks to the PBX and the calls are equally divided between two general types of splits, each with the following call flow:

> For the first type of split, calls receive a forced first announcement and are then answered immediately.
> For the second type of split, calls go into queue, where half of the calls receive a first announcement and are then answered immediately and the other half receive a first announcement, a second announcement, and are then answered immediately.

If other applications or other types of call flow are involved with the PBX, call arrivals will be lower.

‡The 5,500 call arrival rate on Generic 1 applies **only** to the Generic 1.1 Load 5.0 PBX. For earlier versions of the Generic 1 PBX, the call arrival rate is 4,000.

.

Table 1-2   ACD Parameters Supported by 3B CMS

ACD Parameters	3B CMS Host Computers		
	3B2 310, 400	3B2 500, 522	3B2 600, 1000 Model 70
Agents*	400	1,023	1,023†
Splits*	60	60	60†
Trunk Groups*	238**	238**	238**†
Trunks*	700/ 100	1,400/ 100	1,400/ 100†
Vectors*	128	128	128†
VDNs*	255	255	255†
Call Arrivals Per Hour*	10,000	25,000	35,000†
			The maximum number of calls the 3B2 600 and 1-000 Model 70 can handle for all ACDs is 8-0,000.
Number of ACDs	1	1	4
Hr. Data (Days)	31	31	31
Daily Data (Days)	387	387	387

* The maximums of the listed parameters cannot be achieved simultaneously (refer to the sections *Disk Memory Sizing Guidelines* and *Processor Occupancy* for a description of the constraints).

† Since CMS on a 3B2 600 and 1000 Model 70 can handle up to 4 ACDs, these values can theoretically be multiplied by 4. These are maximum values per ACD connected to the 3B2 600 and 1000 Model 70 and are for a Generic 2 ACD. If the customer has a different switch, these values could be lower. See the *3B CMS Planning, Configuration and Implementation* (5-85-215-601) document for more information.

** On a System 85 R2V4/ Generic 2, CMS can measure only trunk groups numbered from 18 to 255.

NOTE Your switch and CMS will probably be configured differently than the maximum values shown in Tables 1-1 and 1-2. Make note of these differences. You will need your particular CMS values to initially start administering CMS.

NOTE In Table 1-2 the number of agents each computer supports represents the maximum number of agents that CMS can simultaneously track. In actuality, CMS can keep records for as many agents as there are possible login IDs. Therefore, if a call center has three shifts, with 1023 agents active per split, CMS on a 3B2/ 1000 Model 70 could provide data for 3069 different login IDs.

> **NOTE** CMS measurement of AUDIX* system splits is **not** recommended. The CMS Daily Login and Logout report for an AUDIX system split will show an unusual number of logins and logouts since AUDIX system ports are automatically logged in/ out each half-hour. This number of logins and logouts can use substantial amounts of disk space.
>
> If an AUDIX system split is administered on the switch, the split's number should be higher than that of any CMS-measured split since CMS-measured split numbers must be in sequence starting from 1.

Measured and Unmeasured Trunks

The entries for trunks under the 3B2/ 400, 3B2/ 522, and 3B2/ 1000 Model computer columns in Table 3-2 are measured and unmeasured trunks. A minimum of 100 unmeasured trunks are provided by default. This number of unmeasured trunks is required for intra-PBX calls to splits and for transferring calls (transfers seize an unmeasured trunk only until the transfer is complete). On a Generic 3i switch with Call Vectoring, additional unmeasured trunks (over and above the base of 100 unmeasured trunks) are required if calls will be queued to multiple splits simultaneously.

If more than 100 unmeasured trunks are needed for an ACD, the maximum number of measured trunks will decrease accordingly. For example, on a 3B2/ 1000 Model 70, which supports a total of 1500 measured and unmeasured trunks for the ACD, you might choose to have 300 unmeasured trunks, which will leave 1200 trunks available for measurement.

> **NOTE** A PBX can actually support many more unmeasured trunks than shown in Table 3-2 — **without affecting the available number of measured trunks**. However, these additional trunks can only be used for non-ACD purposes. Using additional unmeasured trunks for ACD will **always reduce** the available number of measured trunks.

Unmeasured Trunks For Multiple Split Queuing

On a Generic 3i switch with Call Vectoring, a call may queue to up to three splits simultaneously. However, after occupying a measured trunk and queuing to one split, the call will occupy an unmeasured trunk for each additional split the call queues to. Therefore, if a call is queued to three splits simultaneously, the call will occupy one measured trunk and two

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unmeasured trunks. When the call connects to an agent in a split, the call will continue to occupy the measured trunk, regardless of which split it is answered in, and the two unmeasured trunks become available again.

The unmeasured trunks that are used in multiple split queuing reduce on a one-to-one basis the number of measured trunks available on the Generic 3i switch. To determine how many unmeasured trunks are needed for multiple split queuing, do the following:

1   Estimate the maximum number of calls N_{calls} that, at any point in time, will be queued across all splits on the ACD.

   If an estimate cannot be made based on historical experience, use the following formula to calculate maximum queued calls on the ACD:

   $$N_{calls} \quad N_{agents} \frac{T_{wait}}{T_{agocc}}$$

   Where:

   N_{agents} is the expected number of agents simultaneously logged in

   T_{wait} is the expected average time in seconds that a caller will wait in queue before hanging up

   T_{agocc} is the expected average time in seconds that an agent will spend on a call, including after-call-work.

2   Estimate the average number of splits N_{splits} that a call might queue to. This average can be determined with the following formula:

   $$N_{splits} \quad \frac{N_{non\ msq\ calls} \quad (N_{msq\ calls} \cdot N_{queued})}{N_{non\ msq\ calls} \quad N_{msq\ calls}}$$

   Where:

   $N_{non\ msq\ calls}$ is the maximum number of calls per hour that do **not** queue to multiple splits

   $N_{msq\ calls}$ is the maximum number of calls per hour that queue to multiple splits

   N_{queued} is the average number of splits a call will simultaneously queue to in a multiple split scenario

3   Find the number of unmeasured trunks N_{trunks} with the following equation:

   $$N_{trunks} \quad N_{calls} \cdot (N_{splits} \quad 1)$$

Add this number of unmeasured trunks into one of the formulas in the following section, Measured Trunks Available On the Switch.'' These formulas are used to determine the number of measured trunks available on the switch. The number of unmeasured trunks is represented in the formulas by *u*.

Measured Trunks Available On the Switch

The measured trunks available can be determined as follows:

For the 3B2 500, 522, 600 and 1000 Model 70 computers:

$$t \quad 1\text{-}400 \, max \, (u \quad 1\text{-}00,0)$$

Where *t* is the number of measured trunks and *u* is the number of unmeasured trunks.

For example, 3B CMS residing on a 3B2/ 400 computer is used to monitor an ACD with 150 unmeasured trunks. The maximum number of measured trunks that the 3B CMS will be able to monitor can be determined as follows:

$$t \quad 700 \quad max \, (u \quad 1\text{-}00,0)$$

$$t \quad 700 \quad max \, (1\text{-}50 \quad 100,0)$$

$$t \quad 700 \quad 50$$

$$t \quad 6\text{-}50$$

For this example, 3B CMS will only be able to monitor 650 measured trunks.

CMS User Hardware

Terminals

Display terminals connected to the 3B computer and properly identified to the computer can be used to administer the Call Management System. In addition, the UNIX system can be accessed by these terminals. If terminals incompatible with the CMS application are used, if terminals are not properly identified within the CMS environment, or if terminal options are not properly set up, the terminals will not operate correctly. The following terminals have been approved for use with the 3B CMS software application:

AT&T DATASPEED* 4425 Terminal

605 Business Communications Terminal (BCT)

610 BCT

615 Multitasking (MT) Terminal

615 Color Multitasking (CMT) Terminal

| NOTE | You must have a 615 color terminal to have color graphic reports. Also, you must select **615c** as your terminal type if you want color with the graphics package. |

620 Multitasking Graphics (MTG) Terminal

* Registered trademark of AT&T.

705 Multitasking Terminal

AT&T 6500 Display Terminals (6528, 6529, 6538, and 6539) with vt220 terminal emulation. See Appendix B, 6500 Display Terminals'' for more information.

NOTE	6-500 terminals are**not** suitable for running graph reports because they do not offer the dim, normal, and bright intensity levels required for effective graph reports.

See Chapters 8 and 9 in *3B2 Call Management System Installation and Maintenance* (5-85-215-104) for information about other terminal requirements and for troubleshooting.

See Chapter 12 for terminal setup information on all terminals. For the 615 CMT terminal, see the *3B CMS Graphics Administration* (5-85-215-505) document for more specific information.

Among the features that terminals require in the CMS application are:

Screen-labeled keys (SLKs) that can display 2 lines of characters, with 8 characters each. See Screen-Labeled Keys (SLKs)'' later in this chapter for more information.

NOTE	For the 6500 display terminal features, see Appendix B.

A-132-column display. This is required for viewing and editing historical reports at your terminal.

NOTE	When required, the 132-column feature of the terminal will be automatically invoked by CMS.

Console Terminal

One system terminal (not a 6500 display terminal) should be set up as the Console Terminal. This terminal connects to the Alarm Interface Circuit (AIC), and the AIC connects to the Console Port on the 3B computer.

The console terminal is installed and wired to allow AT&T Services technicians to remotely log into your system to help diagnose the causes of remote alarms or other troubles. If you are using the console terminal and an AT&T Services technician logs into your system, you may lose control of the computer. Therefore, **it is recommended that the console terminal not be used in normal CMS administration**.

Printers

All CMS sites require at least one system printer. Printers are used to print CMS historical, forecast, and exception reports; error logs; and so forth. All printers are named to the system, and the CMS administrator should know these names. One printer is identified during CMS installation as the **default printer**. When you execute a CMS print request, the print job will normally be routed to the default printer, unless the printer destination has been administered differently.

The printer select screen will appear whenever a user requests the following reports: **Historical, Forecast, Exception**, **Agent Trace**, and **Error Log**. See Use of CMS Menus, Screens, and Keyboard'' in this chapter for more information.

Each user with a CMS login will require the use of a printer. This printer can be the default printer, but it can be any system printer.

> **NOTE** When you send a report to the terminal, you are placed in a UNIX system editor, but with reduced functionality.

For a complete listing of compatible printers, see the *3B Call Management System Planning, Configuration, and Implementation* (5-85-215-601) document.

The CMS Menus, Screens, and Keyboard

For a CMS user with access to all subsystems, the CMS Main Menu looks like Figure 1-1.

```
┌─────────────────────────────────────────────────────────────────┐
│ ╭                                                               ╮ │
│ │ ┌─────────────────────────────────────────────────────────┐ │ │
│ │ │ Call Management System          Switch_Name:Up      Time │ │ │
│ │ └─────────────────────────────────────────────────────────┘ │ │
│ │                                                               │ │
│ │  _____                                          │ │
│ │                                                               │ │
│ │                          MAIN MENU                            │ │
│ │                  [ ] REPORTS                                  │ │
│ │                  [ ] DICTIONARY                               │ │
│ │                  [ ] CONFIGURATION                            │ │
│ │                  [ ] SCHEDULE                                 │ │
│ │                  [ ] FORECAST                                 │ │
│ │                  [ ] EXCEPTIONS                               │ │
│ │                  [ ] CUSTOM REPORTS CREATION                  │ │
│ │                  [ ] ADMINISTRATION                           │ │
│ │                  [ ] MAINTENANCE                              │ │
│ │                  [ ] UNIX                                     │ │
│ │                  [ ] MAIL                                     │ │
│ │                  [ ] PASSWORD                                 │ │
│ │                                                               │ │
│ │ ┌─────────────────────────────────────────────────────────┐ │ │
│ │ │ Error and confirmation messages appear in this field.    │ │ │
│ │ └─────────────────────────────────────────────────────────┘ │ │
│ │                                                               │ │
│ │ ┌────┐ ┌────┐ ┌─────┐   ┌──────┐ ┌──────┐ ┌────┐ ┌─────┐ ┌────┐│ │
│ │ │    │ │    │ │     │   │      │ │LOGOUT│ │    │ │PRINT│ │HELP││ │
│ │ │    │ │    │ │     │   │      │ │      │ │    │ │SCREEN││KEYS││ │
│ │ └────┘ └────┘ └─────┘   └──────┘ └──────┘ └────┘ └─────┘ └────┘│ │
│ ╰                                                               ╯ │
└─────────────────────────────────────────────────────────────────┘
```

Figure 1-1   **CMS Main Menu**

> **NOTE** Refer to the *3B Call Management System Custom Reports* (5-85-215-503) document for information on Custom Reports Creation.

3B CMS Main and Subsystem Menus/Screen Organization

[ ] *REPORTS**
   Standard
   [ ] Real-Time
   [ ] Historical

   Custom
   [ ] Real-Time
   [ ] Historical

[ ] *DICTIONARY**
   [ ] Login-Identifications
   [ ] Agent-Groups
   [ ] Extension-Groups
   [ ] Calculations
   [ ] Constants
   [ ] Database-Items
   [ ] Split-Synonyms
   [ ] Trunk-Group-Synonyms

[ ] *CONFIGURATION**
   Split
   [ ] Extension-Assignments
   [ ] Trunk-Group-Assignments†
   [ ] Parameter-Administration†
   [ ] Call-Profile-Administration
   [ ] Agent Trace

[ ] *SCHEDULE*
   [ ] Scheduler
   [ ] Program Editor

[ ] *FORECAST*
   Reports
   [ ] Long-Term
   [ ] Intraday
   [ ] Current-Day
   [ ] Special-Day
   [ ] Agent-Positions-Required
   [ ] Trunk-Engineering

   Administration
   [ ] Special-Days
   [ ] Call-Characteristics
   [ ] Trunk-Group-Blocking
   [ ] Weighting-Coefficients

[ ] *EXCEPTIONS**
   Reports
   [ ] Splits
   [ ] Trunk-Groups

   Administration
   [ ] Splits
   [ ] Trunk-Groups

[ ] *CUSTOM REPORTS CREATION*
   Standard Reports
   [ ] Real-time Reports
   [ ] Historical Reports

   Custom Reports
   [ ] Real-time Reports
   [ ] Historical Reports

[ ] *ADMINISTRATION**
   [ ] System-Access
   [ ] Split-Access
   [ ] Trunk-Group-Access

[ ] *MAINTENANCE*
   [ ] Backup-Data
   [ ] Restore-Data
   [ ] Archive-Parameters
   [ ] Daily-Data-Archive
   [ ] Session-Status
   [ ] Error-Log
   [ ] Forecast Manager

[ ] *UNIX SYSTEM*

[ ] *MAIL*

[ ] *PASSWORD*

*If you have a Generic 2 or System 85 R2V4 with the Vectoring feature, your menu will be different. See the *3B Call Management System Vectoring Administration* (5-85-215-502) document for more information.
†If you have a Generic 1 or System 75, you will not have this menu item.

The CMS Screen Header Information

Figure 1-2 shows a typical CMS data-entry screen header.

```
Call Management System                              Switch_Name:Up           Time
```
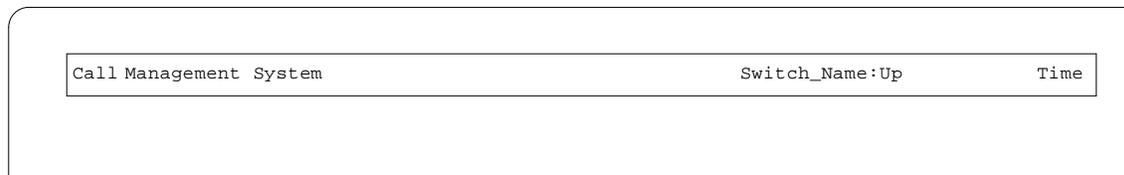
Figure 1-2   The CMS Screen Header

The top line of each CMS data-entry screen always appears in reverse video and has the following information:

The name of the application, Call Management System''

The name of the switch you are linked to

The status of the link (Up, Down, or Up but Out-of-Sync'')

If the 3B and switch clock are more than 5 minutes apart, you should reset one of the clocks. See Chapter 12, UNIX System,'' for more information on resetting the clocks.

The current 3B time.

How to Use the CMS Menus

From the main menu, you first select the appropriate subsystem menu. From the subsystem menu, you select the appropriate menu or screen to perform your task. Alternative methods for selecting subsystem menus and screens are as follows:

Move the cursor using the arrow keys to the brackets next to the option desired, and press [RETURN]. On most terminals, the [SHIFT] plus [TAB] keys move backwards through the fields.

Type in the name of the function desired at the top of the menu screen, and press [RETURN]. You can abbreviate the selection down to the characters needed to create a unique, leading string. This principle is true of all CMS menus. For example, if two options were `Agent` and `Agents`, you would have to type in all characters.

If two options are DICTIONARY and REPORTS, initials only are required.

In a 2-tiered menu, you must uniquely identify both the subhead and the menu selection. Look at the following menu for exceptions.

```
Call Management System                    Switch_Name:Up          Time

                    EXCEPTIONS
r t_____ or a s_____

                    Reports
                    [ ] Splits
                    [ ] Trunk Groups

                    Administration
                    [ ] Splits
                    [ ] Trunk Groups
```

It is sufficient to type r t" to select Trunk Group Reports or a s" to select Split Administration. Notice that you must leave a space between the abbreviations for the subhead and the selected item.

| NOTE | If you select the UNIX system from the main menu, you will be placed in the UNIX System shell," where you must use standard UNIX shell program commands. See the *UNIX System V User Guide* (3-07-100) for information on the shell. |

| CAUTION | Do not use UNIX system commands unless you understand their implications. |

Screen-Labeled Keys

Screen-labeled keys (SLKs) are at the bottom of your screen in reverse video and correspond to the eight f'' (function) keys at the top of your keyboard. These keys will appear and disappear automatically within the various functions of CMS. Their general meanings are as follows:

[CHANGE]

Changes data already present in the database for a screen. For example, if a report is scheduled to run Fridays, and you want to start running it Thursdays, call up the Scheduler screen, make the change in the Day of Week'' field, and press [CHANGE].

[ADD]

Adds new data on most administrative screens. For example, if you wanted to create a synonym for a split, you would go to the Split Synonym screen, enter the synonym, and press [ADD] to enter the new data into the database.

[DELETE]

Deletes administrative data from the database. For example, if you want to delete a program from the schedule, position the cursor in the appropriate field and press [DELETE].

[PRINT SCREEN]

Prints the contents of the screen on the default system printer.

[REPORT]

Generates a printout from the process you are administering (available with the Dictionary and Agent Trace reports).

[COMMAND LINE]

Generates a command line (a set of commands in schedule program format that perform a certain task) and displays the Program Editor within the Schedule [DELETE], Subsystem. You can then schedule the task (print a report or move an agent) to be executed regularly or once, but not now.

[RESUME]

Returns to the primary set of screen-labeled keys.

SEARCH

Searches for data in a database; for example, searches for an agent in the Dictionary.

START and STOP

Begins and ends tracing of an agent's activity. These keys appear on the Agent Trace screen only.

ITEM LOOKUP

Invokes the Dictionary Search screen and enables you to search for items in the Dictionary.

DICTNARY ACCESS

Accesses the Dictionary from the Screen Painter in the Custom Reports subsystem. When you finish your tasks in the Dictionary, CMS returns you to the Custom Reports subsystem directly, without having to work through the CMS menus again.*

PREV PAGE or NEXT PAGE

Displays previous page or next page of a multipage block of screen data. These SLKs appear on your screen only when such blocks are present.

PREV ITEM or NEXT ITEM

Displays the next or previous Dictionary items.

EXIT

Exits the current screen and accesses the previous screen or menu.

LOG OUT

Logs you out of CMS. This SLK appears only on the CMS Main Menu.

MORE KEYS

Displays the second set of SLKs.

---

* For other SLKs used only in the Custom Reports Subsystem, see the 3B CMS Custom Reports (585-215-503) document.

EXCEPT

Generates a display of all exceptions pegged during the current session in which you view a real-time report.

HELP KEYS

Displays a series of help keys.

CMS Help Keys for On-Line Documentation

The SLK HELP KEYS appears on every CMS screen and displays the following tier of Help SLKs.

SCREEN HELP	FIELD HELP	EXPAND MESSAGE	PREV MESSAGE	NEXT MESSAGE	HARD KEYS		RESUME

The Help SLKs display information about the screen you are currently viewing. The Help information can supplement or replace the information in this document. Once you are familiar with the use of these keys, you will be able to find information faster by using them.

The Help SLKs give you the following information:

SCREEN HELP

Displays a full-screen description of the menu or screen and information for entering data or obtaining a report, for example, Screen Painter and what options are available when designing a report.

FIELD HELP

Displays a single-line message about the proper entry for the field the cursor is in. For the Screen Painter, this SLK applies only to the Data Item Window and Time Stamp Window.

EXPAND MESSAGE

Displays a multiple-line window that expands the information given in the last CMS message.

PREV MESSAGE

Redisplays the last single-line message CMS displayed.

⎡NEXT MESSAGE⎤

Displays the next message, if one exists, that CMS generated after the currently viewed message.

⎡HARD KEYS⎤

Displays a complete list of the terminal keys available for use in CMS. For the Screen Painter, see Screen Help for Hard Keys available in the Screen Painter.

⎡RESUME⎤

Redisplays the first tier of SLKs.

Error Messages and Error Help

Any invalid, out-of-bounds, or otherwise incorrect data entered into a field will automatically generate an error message on the screen. If the message does not completely clarify what you should do to avoid the error, use the on-line help information.

Press the ⎡HELP KEYS⎤ key for a relabeling of the SLKs; then press ⎡EXPAND MESSAGE⎤. A more complete explanation of the error and a recovery procedure will be displayed.

You can also move from the error mode" to a help mode." That is, when an error message appears, you can get information about the field in which the error was made by pressing ⎡HELP KEYS⎤ and ⎡FIELD HELP⎤.

The sequence is important. To generate error recovery information:

1   Receive error message.

2   Press ⎡HELP KEYS⎤.

3   Press ⎡EXPAND MESSAGE⎤.

To generate background information on the field where the cursor is located:

1   Press ⎡HELP KEYS⎤.

2   Press ⎡FIELD HELP⎤.

3   Press ⎡EXPAND MESSAGE⎤.

The Terminal Keyboard in CMS

In addition to the screen-labeled keys, the terminal keyboard is used to select options and enter data.

The cursor, the light rectangle on your screen, indicates where you are on the screen. When you make an entry or execute part of a process, you do it from the cursor location.

You can only move the cursor to valid data-entry fields. You cannot move to all locations on the screen.

The five major sets of keys needed to operate CMS are:

The RETURN key at the right of your keyboard, which executes many of the data-entry processes

> **NOTE** On terminals with both an ENTER and a RETURN key, you must use the RETURN key.

The *alphanumeric* keys (all the numbers and letters), which are used to fill in most data fields and to move around in Custom Report Creation

The up and down arrow keys, which move the cursor from field to field

The space bar, which moves the cursor within a field, removing what is there (destructive forward space)

The BACK SPACE key, which is a destructive back space.

Keyboard Operation in the UNIX System Environment

When you use CMS at your terminal keyboard, you are in one of two environments:

> The standard CMS screen-data-entry environment, which is used with all screens and menus

> The UNIX System visual editor *vi*, (pronounced vee-eye) which is used with three specialized functions:
>
> — The Program Editor
>
> — The terminal displays of CMS reports and logs, including standard historical reports, forecast reports, exception reports, and the error log.

The *vi* editor is briefly discussed in Appendix B, The UNIX System vi Screen Editor.'' It is documented in more detail in the *UNIX System V User Guide* (3-07-100).

CMS Performance Guidelines

For peak performance of the 3B CMS software, you should adhere to the following guidelines:

Large reports should be printed during off-peak hours.

Reports should not be scheduled to print at the same time during off-peak hours.

Forecasting should be done during off-peak hours.

Excessive logging in and out by the agents will cause disk storage space to be used up at a rapid rate. Therefore, agents should log in and out only once during their shift.

Database backups should be scheduled to run during off-peak hours when reports are not being printed, preferably after midnight.

Do not activate more than 20 agent traces at any given time.

Whenever you run a Group Status real-time report, see the equations in the Refresh Rates for the Group Status Real-Time Report'' section later in this chapter to determine the optimal refresh rate.

ACD agent statistics should be monitored with the minimum number of supervisor terminals sufficient for adequate and timely management of the ACD.

Minimize the number of terminals used to view real-time reports. See the Refresh Rates for Real-Time Reports'' section later in this chapter.

If a custom report containing quads'' is used to display real-time information, each quadrant in the report should be considered a terminal when determining refresh rates. It is recommended that quads not be used with current releases of CMS software.

Processor Occupancy

Processor occupancy is a measure of the busy-ness'' of the processor (computer) with a given application. Processor occupancy ranges from 0 (or 0 percent) to 1.0 (or 100 percent), where 0 or 0 percent is completely idle, and 1.0 or 100 percent is completely busy.

The combined steady-state processor occupancy of a 3B computer running 3B CMS should not exceed 0.80 (80 percent). The steady-state processor occupancy for 3B CMS (that is, the occupancy attributable to the CMS-to-switch communications link, the refresh or update of terminals, and management and detection of exceptions) can be approximated with the following equations:

For the 3B2/310 and 3B2/400:

Processor Occupancy $= 0.075A + 0.005v + 0.016a + 0.005c + 0.015t + \min(0.055T, 0.275)$

For the 3B2 500, 522, 600, and 1000 Model 70 computers:

Processor Occupancy $= 0.04A + 0.003v + 0.008a + 0.003c + 0.008t + \min(0.025T, 0.275)$

Where:

A is the number of ACDs.
a is the total number of agents (in all ACDs) divided by 100.
c is the total traffic in thousands of calls per hour.
t is the total number of observed trunks divided by 100.
T is the total number of terminals.
v is the number of ACDs using the Call Vectoring feature.

The half-hour data-save process may contribute as much as 0.20 to the processor occupancy. (This process is reasonably short in duration and appears to have minimal impact on the observed performance of CMS.)

However, the **Daily Data Archive** or **daily dsave** process may contribute as much as 0.35 to 0.40 to the processor occupancy. For this reason, the **Daily Data Archive** process should be scheduled to run after midnight. (Refer to the *Maintenance* chapter in this document.)

Refresh Rates for Real-Time Reports

Real-time reports can be refreshed or updated from every 10 to every 300 seconds. The default refresh or update rate for any real-time report is 30 seconds. Before a CMS user can display a real-time report, the user must choose a refresh rate.

The processor occupancy of the 3B host computer should be considered when selecting the refresh rate for a real-time report. In other words, as the number of terminals used to display real-time reports increases, a slower refresh rate should be selected to maintain a tolerable processor occupancy. Additionally, a slower refresh rate should be selected if the customer is printing historical reports, archiving the daily data, or running any other process that increases the processor occupancy during normal working hours.

Refresh Rates on the 3B2/310 and 3B2/400 Computers

Generally, the refresh rate for real-time reports should be determined as follows:

$$p \geq 2\,T$$

In this equation, T is the number of terminals running real-time reports, and p is the refresh rate in seconds.

Table 1-3 shows some examples of refresh rates for terminals connected to a 3B2/ 310 or 3B2/ 400 computer based on the number of terminals used to display real-time reports.

> **NOTE** For the maximum number of terminals supported by the 3B2/ 310 and 3B2/ 40-0 computers running the 3B CMS software, see Chapter 3 in the *3B Planning, Configuration, and Implementation* (5-85-215-601) document.

If a custom report containing "quads" is used to display real-time information, each quadrant in the report should be counted as a terminal when determining refresh rates.

A terminal cannot refresh faster than 10 seconds regardless of how many terminals are used to display real-time reports.

Table 1-3   **Terminal Refresh Rates for 3B2/310 and 3B2/400 Computers**

No. Terminals	Refresh Rate/Terminal
2-10	
4-10	
6-12	
8-16	
1-0	20
1-2	24
1-4	28
1-6	32
1-8	36
2-0	40

Refresh Rates on the 3B2 500, 522, 600, and 1-000 Model 70 Computers

Generally, the refresh rate for real-time reports should be determined as follows:

$$p \quad T$$

In this equation, T is the number of terminals running real-time reports, and p is the refresh rate in seconds. (Notice that $p \quad T$.)

Table 1-4 shows some examples of refresh rates for terminals connected to a 3B2 500, 522, 600, or 1000 Model 70 computer based on the number of terminals used to display real-time reports.

> **NOTE** For the maximum number of terminals supported by the 3B2 500, 522, 600, and 1000 Model 70 computers running the 3B CMS software, see Chapter 3 in the *3B Planning, Configuration, and Implementation* (5-85-215-601) document.

If a custom report containing ''quads'' is used to display real-time information, each quadrant in the report should be counted as a terminal when determining refresh rates.

A terminal cannot refresh faster than 10 seconds regardless of how many terminals are used to display real-time reports.

Table 1-4   Terminal Refresh Rates for 3B2 500, 522, 600, and 1000 Model 70 Computers

No. Terminals	Refresh Rate/ Terminal
2-10	
4-10	
6-10	
8-10	
1-0	10
1-2	12
1-4	14
1-6	16
1-8	18
2-0	20

Different Refresh Rates for Different Terminals

Some customers may want to have the data for their real-time reports refreshed at different rates for different terminals. The following equations provide the constraints on refresh rates for such customers.

For customers using a 3B2/ 310 or 3B2/ 400 host computer, use the following equation:

$$\frac{2 \, T_i}{p_i} \quad 1$$

Where T_i is the number of terminals that request a refresh period of p_i, and the sum includes all such groups of different terminals.

For customers using a 3B2 500, 522, 600, or 1000 Model 70 host computer, use the following equation:

$$\frac{T_i}{p_i} \quad 1$$

Refresh Rate Example 1:

A-3B2 CMS customer wishes to have 1 terminal refresh every 10 seconds, 2 every 20 seconds and 12 additional terminals to refresh as often as possible. How fast should the 12 terminals refresh? Inserting the known parameters into the above equation yields:

$$\frac{2 \cdot 1}{1\text{-}0} + \frac{2 \cdot 2}{2\text{-}0} + \frac{2 \cdot 1\text{-}2}{r} = 1$$

Multiplying the known values gives:

$$\frac{2}{1\text{-}0} + \frac{4}{2\text{-}0} + \frac{2\text{-}4}{r} = 1$$

Finding the common denominator results in:

$$\frac{1}{5} + \frac{1}{5} + \frac{2\text{-}4}{r} = 1$$

Subtracting the known value, $\frac{2}{5}$, from both sides of the equation gives:

$$\frac{2\text{-}4}{r} = \frac{3}{5}$$

Multiply each side of the equation by 5:

$$\frac{2\text{-}45}{r} = 3$$

Multiply each side of the equation by r:

$$2\text{-}45 = 3 \cdot r$$

Divide by 3 to isolate r:

$$\frac{2\text{-}45}{3} = r$$

Reduce the fraction:

$$4\text{-}0 = r$$

Express in terms of r:

$$r = 4\text{-}0 \text{ seconds}$$

Therefore, the 12 additional terminals can refresh at a maximum frequency of every 40 seconds.

Refresh Rate Example 2:

Can a 3B2 CMS customer refresh 1 terminal every 10 seconds, 3 terminals every 15 seconds, and 6 terminals every 25 seconds?

$$\frac{2 \cdot 1}{1\text{-}0} \qquad \frac{2 \cdot 3}{1\text{-}5} \qquad \frac{2 \cdot 6}{2\text{-}5} \qquad \frac{2 \cdot 7}{2\text{-}5}$$

Because the result is greater than 1, this configuration is not recommended. However, this configuration would be acceptable if the 6 terminals were refreshed every 30 seconds.

NOTE	Failure to provide adequate time between refreshes will increase processor occupancy which causes the performance of the 3B CMS software to slow down.

Refresh Rates for the Group Status Real-Time Report

The Group Status real-time report requires more processing time than any other real-time report. Therefore, the refresh rate equations in this section should be taken into consideration whenever terminals are used to monitor this real-time report.

For the 3B2/310 and 3B2/400 Computers:

If there are T_g terminals running the Group Status real-time report, T_o terminals running other types of real-time reports, and if both groups of terminals are refreshing with the *same* period p, the following equation should be used:

$$p \geq 2\,T_o + 2\text{-}2T_g$$

If there are T_g terminals running the Group Status real-time report with refresh period p_g, and T_o terminals running other types of real-time reports with refresh period p_o, the following equation should be used:

$$\frac{2\,T_o}{p_o} + \frac{2\text{-}2T_g}{p_g} \leq 1$$

If different refresh rates are used on different terminals, then the constraint becomes:

$$\frac{2\,T_{oi}}{p_{oi}} + \frac{2\text{-}2T_{gi}}{p_{gi}} \leq 1$$

The second sum in this equation includes all groups of terminals running Group Status real-time report, and the first sum includes all groups of terminals running other types of real-time reports.

For the 3B2 500, 522, 600, and 1000 Model 70 Computers:

The equations previously described can also be used for the 3B2 500, 522, 600, and 1000 Model 70 computers except that the constant multiplying the number of terminals running Group Status real-time report must be changed from 22 to 11, and the constant multiplying the number of terminals running other types of real-time reports must be changed from 2 to 1.

For example, the equation used for a 3B2/ 310 (the third equation above) becomes the following for a 3B2/ 500 computer:

$$\frac{T_{oi}}{p_{oi}} \quad 1\text{-}1\frac{T_{gi}}{p_{gi}} \quad 1$$

Refresh Rate for Group Status Real-Time Report, Example 1:

A customer has three terminals running the Group Status real-time report and six terminals running other types of real-time reports. The customer wants to use the same refresh rate for each terminal. What is the smallest refresh period that should be requested?

For a 3B2/ 400 computer, use the following equation:

$$p \quad 2(6) \quad 22(3) \quad 78 \; seconds$$

For a 3B2/ 600 computer, use the following equation:

$$p \quad 1(6) \quad 11(3) \quad 39 \; seconds$$

Refresh Rate for Group Status Real-Time Report, Example 2:

A customer has two terminals running the Group Status real-time report, and four terminals running other types of reports. The terminals running other types of reports have a 30-second refresh rate. What should the refresh rate be for the terminals running the Group Status real-time report?

For a 3B2/ 310, use the following equation:

$$\frac{2(4)}{3\text{-}0} \quad \frac{2\text{-}2(2)}{p_g} \quad 1$$

$$p_g \quad 60 \ seconds$$

For a 3B2/ 500 computer, use the following equation:

$$\frac{1(4)}{3\text{-}0} \quad \frac{1\text{-}1(2)}{p_g} \quad 1$$

$$p_g \quad 2\text{-}5.4 \ seconds$$

(A refresh rate of at least 26 seconds should be requested on a 3B2/ 500 computer.)

The CMS Remote Alarming System

The CMS Remote Alarming System is an on-line connection between each CMS and a remote maintenance center operated by AT&T service personnel. This alarming system monitors CMS 2-4 hours a day and notifies AT&T personnel of problems in CMS hardware or software. AT&T personnel can then solve the problems quickly by remotely logging into your system.

NOTE	The CMS Remote Alarming System is optional on 3B2 computers and is dependent on installation of the Silent Knight* Autodialer. However, the *remote dial-up line* is a requirement for the CMS Remote Maintenance and is paid for by the customer.

The alarming system works as follows:

1   The system detects an alarm condition through a failure in hardware or software.

2   The alarming hardware on the 3B computer (called an AIC — Alarm Interface Circuit) alerts the Silent Knight Autodialer.

3   The autodialer, programmed with the remote maintenance center's phone number and your customer ID, places a phone call to the remote maintenance site.

4   The receiving hardware at the maintenance site has a read-out that shows your customer number and the severity of the failure.

5   The remote AT&T personnel can dial into your 3B computer and check for the source of the problem. In all likelihood, the problem can be resolved without your ever knowing about it.

Software conditions that cause alarms to be sent are of three classes:

UNIX operating system alarms called "panics," caused by internal errors occurring within the operating system on the 3B.

Alarms sent by CMS, which are caused by CMS receiving notification of errors from internal subsystems like INFORMIX, the UNIX system, Interprocess Communication (IPC), and so on.

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* Registered trademark of Silent Knight Security Systems

"Sanity time-out" alarms which are issued by the Alarm Interface Circuit (AIC). The AIC's sanity checker expects an "I'm OK" message from the UNIX system on a regular basis. If it fails to get normal assurance, an alarm is issued. This class of alarm is present on the 3B2 only.

Hardware alarms are caused by power failures and fan failures.

NOTE	No alarm is sent for temporary link-down conditions between the switch and the 3B.

At the remote site, for CMS-generated alarms, the maintenance personnel look in the *exp alarm* file in the */cms/maint/text* database for the pegging of alarm conditions. They then cross-check pegs found in the *exp alarm* file with Error Log entries and the error-log text files to get more information about the alarm condition.

Escalation Procedures

Who to Contact

If the problem is purely informational, contact your AT&T Account Team, i.e., call your Systems Consultant (SC). If necessary, members of the account team can contact technical experts who can provide an explanation or other consultation. Be prepared to describe your problem as exactly as possible.

If the problem is with 3B CMS software, call the **AT&T Call Center Helpline** on 1-800-344-9670 to report the problem and obtain a trouble ticket number to escalate the problem through the services organization.

NOTE	The Call Center Helpline number is staffed by trained 3B CMS technicians located at the Technical Service Center (TSC). The technicians at the TSC will try to fix the problem in a timely manner. If they cannot fix the problem, they will escalate the problem to a higher level of customer support.

Be prepared to give the following information:

Your full name, your organization, and a phone number where AT&T can contact you concerning the trouble

The problem as a "3B2 Call Management System (3B CMS) problem"

The Installation Location (IL) number

This is 10-digit number from an AT&T database that helps service personnel look up the details of your CMS installation and environment.

The phone number that off-site technicians can use to remotely dial into your system

The password for the *root* login ID

The 3B CMS version (load) number

This number appears in the form of a digit, a decimal point, and another digit, and is pronounced as "x dot x." For example, 2.10 is pronounced "two dot ten." When you log into the CMS system as an ordinary user, the so called "dot load" number appears just before the CMS main menu appears on your terminal screen.

Your 3B computer model, switch model, and any unique characteristics of your 3B-switch environment you think might be relevant

The type and symptoms of the problem — describe exactly

The type of service contract your organization has with AT&T, if any.

If the trouble report is not covered by warranty or service contract, you will be invoiced for the work done to troubleshoot your system. Service contracts can be for business hours only or 24-hours a day, 7 days a week, or they can provide a dedicated technician for your installation.

After the Initial Contact

When you report the trouble to AT&T, you should receive a **trouble-ticket number.** Be sure to get this number from the person you are talking to. Use this number when you talk to an AT&T representative about the problem after the initial report.

According to AT&T's internal rules, the trouble ticket must be *cleared.* This means that *you* must receive notification that the trouble has been cleared up, and agree that it has. If you receive no such notification in a reasonable period, call 1-800-344-9670 again and ask for a resolution on your trouble ticket number.

NOTES

General Information

This chapter is for a new CMS administrator. The information is presented in a step-by-step sequence with worksheets and a checklist to help you through the beginning phase of CMS administration. This chapter also refers you to the appropriate chapter, main menu item, and submenu item when completing any given task. The information covered includes:

Information required before you log into CMS

How to log in and read mail

How to change your password

A ''Getting Started Checklist'' and worksheets to help you initially administer the CMS

Information on generating reports, configuring splits, administering CMS users, and maintaining CMS

Information on error messages and error help

Training agents on voice terminals.

Pre-CMS Login Information Worksheet

After your system has been installed by an AT&T technician, complete the following worksheet before you begin administering CMS. If you have questions, contact the AT&T technician who installed your system and get the needed information. For system security, **passwords should not be written down.** If they are, put them in a secured area.

The password for the *root* login ID. (Also passwords for the system login IDs if they were assigned.) 1.

The CMS administrator login ID and password. (This login ID is *acd1*.) 2.

Additional CMS-administrator login IDs and passwords 3.

The default CMS printer name 4.

Additional system printer names 5.

How many splits were assigned? 6.

How many agents were assigned? 7.

How many trunk groups were assigned? 8.

How many trunks were assigned? 9.

How many VDNs were assigned? 10.
(DEFINITY Communications System, Generic 2
and System 85, R2V4)

The printer output* from a command called *df -t* 1-1.

---

* The printer output contains the names of disk partitions on which different portions of the UNIX system and CMS files reside. It also contains information on the number of blocks being used and still remaining available in given areas of the UNIX system and CMS file structure. You should keep this information for reference.

How to Log Into CMS

CMS is a menu-driven system that is operated through a series of interactive screens. In order to use the screens to administer CMS, you must first log into the system.

You are given an ID during the initial CMS installation. (Get this information from the "Pre-CMS Login Information Worksheet.")

NOTE	The first time you log into CMS, you are placed in the Password screen and will be required to create a password. See the sections on "Changing Your Password" and "Entering Your Password the First Time" later in this chapter.

For the login procedures on the 6500 display terminals, see Appendix B.

To log into CMS, do the following:

1   Turn on your terminal or press the RETURN key if your terminal is already on. The following prompt appears:

```
login:
```

2   Type your login ID and press RETURN.

```
password:
```

Your password must contain at least six characters. Also, at least one character must be a number or special character, and at least two characters must be alphabetic.

3   Type your password (it will not appear on the screen) and press [RETURN] again.

NOTE   You must enter 615**c** as your terminal type if you want color with the Graphics package.

[You will then see one of the following two screens:]

```
     UNIX System V Release  x.x.x AT&T 3B2
     unix
     Copyright (c) 1984, 1986, 1987, 1988 AT&T
     All Rights Reserved
     Call Management System 600 SCSI   (Version 2.n, Issue 1.z)
     you have mail

     Select the terminal you will use from the following list:

            605      4410      5410      6528

            610      4425      5425      6529

            615                          6538

            620                          6539

     Enter selection:
```

or

```
If your terminal type is 4425, press RETURN.

Otherwise, enter the new terminal name:
```

The *x* will vary with the UNIX System version.

The *n* and *z* will vary with the CMS software load.

The mail message refers to UNIX system mail from CMS.

The first message appears the first time a new user logs into the system, after which the second message appears.

4   If you received the first message, enter your terminal type and press [RETURN]. If the second message appears, just press [RETURN].

[You will see the message `Do you want to read your mail now? (y or n)`]

5   Enter *y* or *n* and press [RETURN].

[At this point, you will receive your mail (if you typed *y*) and then see the CMS main menu. See the "How to Read Mail" section in this chapter.]

6   If your system is in working order, but your login attempt was unsuccessful, you may have entered your user ID or password incorrectly or check your user ID and password to make sure they are valid.

How to Read Mail

CMS saves UNIX system mail messages from CMS processes that have been completed. These messages tell you that system activities are complete, and whether they ran successfully or unsuccessfully.

To receive these messages, you can choose to read mail when logging in, choose the MAIL option in the CMS main menu, or press the MAIL SLK on any screen that has it. The following message appears on the MAIL screen along with which keys to press to save or delete the messages.

```
          Basic Mail Command Options:

          d <return> = delete this mail item and go
                          to the next one

            <return> = save this mail item and go to the
                          next one

          q <return> = exit from MAIL

          * <return> = list mail command summary
```

		DELETE		PREV MSG	NEXT MSG		EXIT		

The SLKs have the following meanings:

DELETE   Discard the currently displayed mail message.

PREV MSG   Display the previous mail message (works only if you have pressed NEXT MSG for a given mail message — in other words, if you have saved it).

NEXT MSG   Save the current mail and go on to the next message.

EXIT   Return to the prior CMS screen.

How to Receive Failure Messages Only

If you want MAIL on only the CMS processes that failed, do the following:

1 Select the UNIX system option from the main menu, and press return.

2 Enter the following command:

```
$ echo "yes" >failures_only
```

| NOTE | This procedure only applies to scheduled reports or reports sent to a file. |

Changing Your Password

```
┌─────┐
│NOTE │  For system security, passwords are recommended for all CMS user login IDs.
│     │
└─────┘
```

To change your password, select PASSWORD from the CMS Main Menu. When the Password
screen appears, follow the directions on the screen.

```
        You are prompted below for a password.
        As you enter the password, it will not appear
        on your terminal.  Therefore, to be sure you
        have entered it correctly, you will be asked
        to enter it again.

        Changing password for <username>
        Old password:
```

Passwords have the following restrictions:

> A password must have at least six characters and no more than eight.
>
> A password must have at least one number or special character and at least two
> alphabetic characters.
>
> When changing a password, you must change at least three characters.

Entering Your Password the First Time

If you have never had a password on CMS, CMS is not expecting an existing password from
you. You will be asked to enter a new password.

Getting Started Checklist

Use this checklist as a guide when you first use your CMS. This checklist gives you the task to be completed and the appropriate chapter, main menu item, and submenu item to select. The submenu item is in italics.

Task	Chapter	Main Menu Item and *Submenu* **Item**
1. Complete the Pre-CMS Login Worksheet.	2	
2. Do you know how to login and read mail?	2	
3. Have you changed your password?	2	
4. Verify the link between the 3B and the switch is up.	11	Maintenance *Session Status*
If the link is not up and the session is not established, go to Chapter 11, "Connecting the 3B and the Switch" and perform the steps.		
5. Verify the number of measured splits, agents, trunks and trunk groups.	11	Maintenance *Session Status*
If the number of measured splits is incorrect, go to Chapter 11, "Administering the Number of Measured Splits" and perform the steps.		
6. Verify that the AT&T technicians backed up the UNIX file systems before turning the system over to you.	11	Maintenance
7. Assign agent names to agent login IDs.	5	Dictionary
Using zero-length login IDs (possible for Generic 1 and System 75 switches) prevents the collection of agent data from the switch.		
8. Schedule Daily Data Archive and the Forecast Manager to run daily.	11 7	Maintenance Schedule
9. Assign CMS login IDs and printers for split supervisors and their access permissions.	10	Administration *System Access* *Split Access* *Trunk Group Access*

Getting Started Checklist (Contd)

Task	Chapter	Main Menu Item and *Submenu* Item
1-0. Make sure your archive parameters match your system design.	11	Maintenance *Archive Parameters*
If disk space is expected to be a problem, consider changing the Archive Parameters.		
1-1. Send a report to the default printer to verify that the printer is working.	1	
This can be done by pressing the PRINT SCREEN SLK while viewing any screen or by pressing the RETURN key at the end of an historical-report-ordering sequence.		
1-2. Schedule CMS data backup for each ACD.	11 7	Maintenance Schedule
Optional: Assign responsibility for manual daily CMS backups.		
1-3. Train agents on voice terminal login procedures.	2	
1-4. Give agents their assigned login IDs.		
1-5. Train split supervisors and other CMS users on CMS.		

OPTIONAL TASKS

Task	Chapter	Main Menu Item and *Submenu* Item
1-6. Schedule the daily historical reports.	4 7	Historical Reports Schedule
1-7. Schedule the weekly/ monthly historical reports.	4 7	Historical Reports Schedule
1-8. Establish synonyms for splits and trunk groups.	5	Dictionary
1-9. Assign agents to Agent Groups or extensions to Extension Groups.	5	Dictionary

CMS Split Supervisor Login IDs/Access Permissions/Printer Worksheet

Split Supervisor Name:

CMS User ID:

Room Number:

Telephone Number:

Printer Name:

System Access   Read?   Write?

REPORTS:
DICTIONARY:
CONFIGURATION:
SCHEDULER:
FORECAST:
EXCEPTIONS:
CUSTOM REPORTS CREATION:
ADMINISTRATION:
MAINTENANCE:
UNIX:
MAIL:
PASSWORD:

Split Access:

Trunk Access:

VDN Access:
(Generic 2 and R2V4 only)

CMS Agent Login ID/Extension Worksheet

Agent Name	Login ID	Extension

Using CMS

Although CMS is divided into 11 subsystems, you use the subsystems to perform 4 overall functions:

1   Generating reports from call data collected from your call center's ACD(s)

2   Configuring the splits in your call center

3   Administering the access permissions for CMS users, usually split supervisors or telecommunications managers. Each CMS user must have a login ID and (optionally) a password for increased security.

4   Maintaining the CMS.

Generating Reports

CMS collects data from ACD activity and stores it in one of the CMS databases. The data reflects the activity involving your splits, trunks, trunk groups, agents, and agent or extension groups. You can view this data by accessing the various CMS reports:

Reports	Ordered	Administered
Standard Real-Time	Reports	Configuration (Call Profile)
Standard Historical	Reports	Configuration (Call Profile)
Custom Real-Time	Reports	Custom Report Creation Dictionary (Calculations, Constants)
Custom Historical	Reports	Custom Report Creation Dictionary (Calculations, Constants)
Exceptions	Exception	Exception
Forecast	Forecast	Forecast
Agent Trace Report	Configuration	Configuration

NOTE   See the *3B Call Management System Custom Reports* (5-85-215-503) document for information on Custom Reports.

The screens in various CMS subsystems are used to administer data and generate reports. Administering your reports comprises a major portion of the CMS procedures. The procedures can be categorized as:

Administering collection and storage of report data

Ordering and scheduling report output

Assigning synonyms to agent login IDs, splits, and trunk groups to replace switch identifiers in reports for more meaningful displays.

Configuring Splits

Splits, extensions, and trunk groups are initially created and assigned at the switch. However, once they have been created, you can control the configuration of your splits in CMS by performing the following tasks:

If you want to:	Select Main Menu Item	Then Submenu Item/Screen
Move extensions to other splits	Configuration	Split Extension-Assignments
Move trunk groups to other splits **Note:** Not available on Generic 1 and System 75.	Configuration	Split Trunk-Group-Assignments
Setup call forwarding (intraflow) from a split to other destinations **Note:** Not available on Generic 1 and System 75.	Configuration	Split Parameter-Administration
Setup delay times for announcements to calls queued to a split **Note:** Not available on Generic 1 and System 75.	Configuration	Split Parameter-Administration
Change the number of measured splits*	Maintenance	Session Status
Create special reporting groups — Agent Groups or Extension Groups that are reported independently of existing split assignments	Dictionary	Agent Group Extension Groups

*If the upper limit in the number of measured splits has been exceeded on the switch side, you will have to execute the *swsetup* command first. See Chapter 12, "UNIX System."

NOTE | If your system has the CMS Vectoring feature, your CMS configuration tasks will be considerably different from those listed here. Refer to the *3B Call Management System Vectoring Administration (585-215-502)* document for information about configuration tasks with Vectoring.

Administering CMS Users

CMS provides you with an Administration subsystem that you can use to limit access by CMS users on a need-to-know or need-to-do basis. To control user access, do the following:

To control user access:	Select Main Menu Item	Then Submenu Item/Screen
Create CMS login IDs	Administration	System Access
Designate password usage	Administration	System Access
Set read and write permissions for CMS subsystems	Administration	System Access
Set read and write permissions for measured splits	Administration	Split Access
Set read and write permissions for trunk groups	Administration	Trunk Group Access

NOTE | If your system has the CMS Vectoring feature, you will also assign vector access permissions. See the *3B Call Management System Vectoring Administration* (5-85-215-5-02) document for more information.

Maintaining CMS

CMS provides additional tools with which to maintain your system (including tools to protect your data and software). Using the Maintenance subsystem or UNIX system, you can perform the following tasks:

If you want to:	Select Main Menu Item	Then Submenu Item/Screen
Create backup copies of CMS data files	Maintenance	Data Backup
Restore lost CMS data to the system	Maintenance	Data Restore
Create backup copies of CMS software	UNIX system	
Investigate system errors	Maintenance	Error Log
Connect and disconnect the link to the switch before making configuration changes.	Maintenance	Session Status
Administer the connection of printers and terminals to the system	UNIX system	

Training Agents on Voice Terminals

Agents in a call center handle calls using voice terminals that are connected to the switch. For CMS to record agent activity, agents must log into their voice terminals using login IDs assigned to them by the CMS administrator. The CMS administrator can determine what agent login IDs are available from the Dictionary subsystem. Also, in the Dictionary subsystem, the CMS administrator can assign agent names to login IDs.
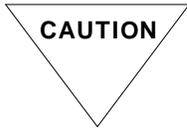
▽ CAUTION Agents should avoid logging in and out other than at the beginning and ending of their shifts. Agents should use AUX WORK for short periods away from their positions. This alternative will keep the half hour agent files from becoming overfilled with logout/ login pegs, and it will save disk space.

Agent Login and Logout Procedures (Generic 2/System 85/DIMENSION PBX)

To log into an ACD agent position, follow these steps on the voice terminal:

1   Press any idle call-appearance button.

    [You will hear a dial tone.]

2   Dial the agent login access code number, or press the LOGIN button. The login access code is available from the switch administrator.

    [You will hear a dial tone.]

3   Dial your login identification number twice. Any 4-digit number — where the first digit is not zero — is valid, but the login ID assignment is a CMS responsibility.

    [You will hear a confirmation tone, or you will hear an intercept tone if:]

        — Login ID is not the same both times.

        — Login ID has already been used as a current login.

        — Login ID is out of range.

4   Press the appropriate button to disconnect your voice terminal from the line.

    [Your position is now in the AUX state.]

To log out from an agent position:

1   Go off-hook on an idle appearance.

    [You will hear a dial tone.]

2   Dial the log-out access code (this is also available from switch administration), or press the LOG-OUT button.

    [You will hear a confirmation tone. An intercept tone means the position was already logged out.]

3   Press the RELEASE button or go on-hook.

    [Your position is now in the UNSTAFFED state.]

Inadvertent logging off might consist of unstaffing the position, including:

    Pressing the STAFF button

    Dialing the staff access code

    Going on-hook during the AUTOMATIC ANSWERING operation

    Disconnecting the headset during AUTOMATIC ANSWERING operation.

Agent Login and Logout Procedures (Generic 1/System 75)

To log into an ACD agent position, follow these steps:

1   Go off-hook on an idle appearance.

    [You will a hear dial tone.]

2   Dial the agent login access code number, or press the LOGIN button. The login access code is available from the switch administrator.

    [You will hear a dial tone.]

3   Dial the split number.

4   Dial your login identification number.

    [You will hear a confirmation tone.]

        Any 1- to 9-digit number is valid for CMS. A 0-digit login, which means that no logins are required, may be specified at the switch, but CMS will not be able to collect data for these login IDs.

5   Press the RELEASE button or go on-hook.

[The agent position is now in the AUX state. See Appendix C, ''ACD Basics,'' for more information.]

To log out from an agent position:

1   Go off-hook on an idle appearance.

[You will hear a dial tone.]

2   Dial the log-out access code (this is also available from switch administration), or press the LOG-OUT button.

3   Dial the split number.

[You will hear a confirmation tone. The intercept tone means the agent was already logged out.]

4   Press the RELEASE button or go on-hook.

[The agent position is now in the UNSTAFFED state.]

Inadvertent logging off might consist of unstaffing the position, including:

Going on-hook during AUTOMATIC ANSWERING operation

Unplugging a headset during AUTOMATIC ANSWERING operation.

Temporarily Leaving a Headset-Equipped Position

If you want to leave your position temporarily, taking your headset with you, follow this procedure.

1   Press AUX WORK.

2   Pull out your headset from the voice terminal.

[This places the position in AUX WORK, and no ACD call will be distributed there.]

NOTE   With Generic 3i, Generic 1 and System 75 using CALLMASTER   voice terminals with auto-in and auto-answer, unplugging the headset logs the agent out.

However, the agent can go into AUX, then unplug the *Quick-Disconnect* plug and will not be logged out. Internal calls will still connect to the extension. The agent must activate call forwarding or send all calls to redirect the non-ACD calls.

NOTE	Unstaffing the position or pulling the headset out without going into AUX WORK are not recommended procedures. The first action creates an unnecessary record in the agent file; the second can leave the position staffed.

General Information

You use standard real-time reports to check the current status of ACD activity. Real-time reports display current and previous half-hour data for various agent, split, or trunk group activities, such as number of ACD calls, abandoned calls, average talk time, average speed of answer, and so on.

CMS real-time reports offer the following capabilities:

> Selection of reports for specific agents, agent groups, extension groups, splits, or trunk groups

> Definition of automatic update intervals, by which the system updates data as you are viewing it

> Automatic on-line calculation of totals, averages, and percentages

> Immediate exception notification.

Menus Used to Order Standard Real-Time Reports

You select standard real-time reports by first accessing the Reports Menu (Figure 3-1).

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │ Call Management  System                    Switch_Name:Up or Down   Time │ │
│  └──────────────────────────────────────────────────────────────────┘    │
│                                                                           │
│   ──────────                                                              │
│                                    REPORTS                                │
│                                                                           │
│                          Standard                                         │
│                          [ ] Real-Time                                    │
│                          [ ] Historical                                   │
│                                                                           │
│                          Custom                                           │
│                          [ ] Real-Time                                    │
│                          [ ] Historical                                   │
│  ┌──────────────────────────────────────────────────────────┐           │
│  │   Error and confirmation messages appear in this field.   │           │
│  └──────────────────────────────────────────────────────────┘           │
│  ┌─────┐ ┌─────┐ ┌─────┐  ┌─────┐ ┌─────┐   ┌──────┐ ┌──────┐ ┌──────┐   │
│  │     │ │     │ │     │  │     │ │     │   │EXIT  │ │PRINT │ │HELP  │   │
│  │     │ │     │ │     │  │     │ │     │   │      │ │SCREEN│ │KEYS  │   │
│  └─────┘ └─────┘ └─────┘  └─────┘ └─────┘   └──────┘ └──────┘ └──────┘   │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 3-1   **The Reports Menu**

You then access the Real-Time Reports menu (Figure 3-2), which lists the standard real-time reports available to you. Each of these reports is described in detail later in this chapter.

```
Call Management System                        Switch_Name:Up           Time

                              REAL-TIME REPORTS

 _____

                         [ ] Split Status
                         [ ] Group Status
                         [ ] System Status
                         [ ] Agent/Split Comparison
                         [ ] Split Summary
                         [ ] Call Profile
                         [ ] Trunk Group Summary
                         [ ] Split Performance
                         [ ] Split Event Count Summary

   Error and confirmation messages appear in this field.

                                                    EXIT   PRINT    HELP
                                                           SCREEN   KEYS
```

Figure 3-2   The Real-Time Reports Menu

NOTE If you have the Vectoring feature, your menu will be different. See the *3B Call Management System Vectoring Administration* (5-85-215-502) document.

The Report Parameters Screen

A Report Parameters screen, similar to Figure 3-3, will appear after you select the report you want and before the report is actually displayed. You must use the Report Parameters screen to select the specific agent, agent group, extension group, split, or trunk group you want the report to cover. You can also specify on the Report Parameters screen how often you want CMS to update the data in the report.

```
Call Management  System                            Switch_Name:Up              Time

                              INTERVAL: 00                              Quad: 1

                           REPORT PARAMETERS

               1  SPLIT = Sales_____
               2  UPDATE_INTERVAL (10 - 300) = 30



       Error and confirmation messages appear in this field.

                                                          EXIT    PRINT    HELP
                                                                  SCREEN   KEYS
```

Figure 3-3   Sample Report Parameters Screen (for a Real-Time Split Report)

Definition of Fields

Field 1 Split, Trunk Group, Agent ID, or Group

The number or name of the agent, group, split, or trunk group you want the report to cover.

Field 2 Update Interval

The length of time, in seconds, between on-line updates of the report data.

NOTE	The fastest update interval possible is 10 seconds. However, the update interval rate is also limited by the number of terminals currently logged into the CMS. To determine the fastest update possible for the number of CMS terminals currently logged in, see the ''Terminal Refresh Rates for Real-Time Reports'' section in Chapter 1.

Ordering a Standard Real-Time Report

1   In the Reports menu, select the `Standard [ ] Real-Time` option, and press `RETURN`.

    [The `REAL-TIME REPORTS` menu appears.]

2   Select the desired report and press `RETURN`.

    [The Report Parameters screen appears.]

3   In field 1, type the number or synonym for the specific agent, group, split, or trunk group you want the report to cover.

4   In field 2, type the number or seconds you want between each data update, or leave the default value of 30 seconds in the field.

5   Press `RETURN`.

    [The report will be displayed on your terminal.]

Introduction to Report Descriptions

Each report description in this chapter contains:

An illustration of the report's output with sample data

A table describing each **report item** (each piece of output data in the report), including:

— A definition of each item

— The units the output values represent (for example, calls, seconds, percent)

— The database item or calculation for the report item

— The formula for each calculation as defined in the Dictionary.

Database items, formulas, and calculations are presented in the report descriptions for quick reference should you decide to create custom reports.

Database items   Database items are the basic units for storage and retrieval of data that appear in the records of agents, groups, splits, and trunk groups. Examples are: ACWINTIME (total time on After-Call-Work for incoming calls), ACDCALLS (total number of ACD calls), and ACDTIME (total time on ACD calls). You cannot change data base items, but you can use them in the creation of custom reports.

Formulas   Formulas consist of database items plus arithmetic operators such as *, ( ), and / . These create more meaningful information about agents, splits, trunk groups, and trunks. An example of a formula is ACWOUTTIME - ACWINTIME)/ ACDCALLS, which is the formula for average length of after-call work sessions.

Calculations   Calculations are shorthand notations for formulas and are defined in the Dictionary. For custom reports, you can create custom calculations based on standard formulas listed in this section. Then, if you use these custom calculations instead of formulas, you can use the Dictionary to make quick global changes (in more than one report) to report-output.

> **NOTE**   You cannot change a standard report, nor can you delete a standard calculation.
>
> Some real-time reports contain averages and totals. These are for current half-hour intervals, and are reset to zero at the beginning of each 3B computer clock half-hour.

Event counts are not available as a standard feature on Generic 1 or System 75. However, event count software can be provided as a Custom Software option.

Format of a Standard Real-Time Report

The following screen shows a sample real-time report—a Split Status report.

```
Call Management  System                              Switch_Name:Up           Time

                           INTERVAL: 36  PAGE 1 of 1              QUAD:1
                               SPLIT STATUS
         SPLIT: 1                                TRUNK GROUP STATUS
                                              TRUNK GROUP  NO. BUSY  TOTAL NO.
         NUMBER OF CALLS WAITING        5
         OLDEST CALL WAITING            6           21        12        12
         AVERAGE SPEED OF ANSWER     5.01           22         6         6
                                                    23-1              1
         NUMBER OF ABANDONED CALLS     60           24        33        34
         AVERAGE TIME TO ABANDON    11.00           27         4         4

         NUMBER OF ACD CALLS          349
         AVERAGE ACD TALK TIME      26.12
         AVERAGE AFTER CALL WORK TIME 11.02

         NUMBER OF OUTGOING CALLS       1
         AVERAGE OUTGOING TALK TIME 89.93

         NUMBER AGENTS STAFFED        20    NUMBER OF AGENTS AVAILABLE     0
         NUMBER ON ACD CALLS         17    NUMBER IN AFTER CALL WORK      3
         NUMBER IN AUX WORK           0    NUMBER ON OUTGOING CALLS       0
Confirmation, error, and exception messages appear in this line

  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐
  │      │ │UPDATE│ │REPORT│ │      │ │      │ │EXIT  │ │PRINT │ │      │
  │      │ │      │ │PARAMS│ │      │ │      │ │      │ │SCREEN│ │      │
  └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘
```

Figure 3-4   Sample Real-Time Report

Real-Time Report Header Information

INTERVAL   The current half hour interval number. Table 3-1 is useful for converting intervals to clock times.

Table 3-1   Time Interval Table

Interval		Clocktime		Interval
1	AM	12:00-12:30	PM	25
2	AM	12:30-01:00	PM	26
3	AM	01:00-01:30	PM	27
4	AM	01:30-02:00	PM	28
5	AM	02:00-02:30	PM	29
6	AM	02:30-03:00	PM	30
7	AM	03:00-03:30	PM	31
8	AM	03:30-04:00	PM	32
9	AM	04:00-04:30	PM	33
1-0	AM	04:30-05:00	PM	34
1-1	AM	05:00-05:30	PM	35
1-2	AM	05:30-06:00	PM	36
1-3	AM	06:00-06:30	PM	37
1-4	AM	06:30-07:00	PM	38
1-5	AM	07:00-07:30	PM	39
1-6	AM	07:30-08:00	PM	40
1-7	AM	08:00-08:30	PM	41
1-8	AM	08:30-09:00	PM	42
1-9	AM	09:00-09:30	PM	43
2-0	AM	09:30-10:00	PM	44
2-1	AM	10:00-10:30	PM	45
2-2	AM	10:30-11:00	PM	46
2-3	AM	11:00-11:30	PM	47
2-4	AM	11:30-12:00	PM	48

PAGE   The number of the page within the real-time report.

QUAD   The quad location within the real-time report. The quad is always 1 in standard real-time reports. This field only applies to Custom reports, which can be larger than standard reports and may have up to four adjacent screens (quads) of data.

Quad reports are not recommended with current CMS software releases.

Screen-Labeled Keys in Real-Time Reports

The [UPDATE] key refreshes the display with the latest call data.

The [REPORT PARAMS] key returns you to the Report Parameters screen.

The [NEXT PAGE] and [PREV PAGE] keys allow you to page through multipage reports.

The [EXIT] key returns you to the Real-Time Reports menu.

The [PRINT SCREEN] key prints the screen's contents on the system printer.

The [EXCEPT] SLK (which appears only after an exception occurs) provides a list of the exceptions that occurred during the current session while viewing a real-time report. A new list is created any time you exit from and reaccess the real-time report. Press [EXIT] from the exceptions display to return to the real-time report.

Split Status Report

Report File Name	SPLIT (SPLITV if vectoring active)
Files Used	/CURRENT/SPLIT, /CURRENT/TRKGRP
	If vectoring is active, does not use / CURRENT/ TRKGRP file.
Comments	The only trunk group data for individual splits in any report.
	If vectoring is active, this report does not display Trunk Group Status data.

The Split Status report shows, for the current interval, call processing activities of the selected split and the status of the split's assigned trunk groups.

The Split Status report may momentarily show a call waiting with agents available if the report updates while the call is still ringing at an agent's voice terminal.

However, if your switch is a Generic 2 with the ring-state enabled, the "Number of Agents Available" item does **not** include agents whose voice terminals are ringing. That is, an agent whose voice terminal is ringing is not counted as available. Conversely, the "Number of Calls Waiting" item **does** include calls that are ringing.

You may customize this report to show the number of calls ringing (which also represents agents with calls ringing) or additional ring-state data. See "Ring State Reports" later in this chapter for a complete list of ring-state database items and calculations. Also, see the 3B CMS Custom Reports document (585-215-503) for custom report creation information.

NOTE	If you have the Vectoring feature, your report will **not** display trunk group data. With vectoring, trunk groups are not assigned directly to splits. See the *3B Call Management System Vectoring Administration* (5-85-215-502) document.

Split Status Report

```
┌─────────────────────────────────────────────────────────────────────────┐
│ ╭─────────────────────────────────────────────────────────────────────╮  │
│ │                                                                     │  │
│  ┌──────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System                Switch_Name:Up          Time   │ │
│  └──────────────────────────────────────────────────────────────────────┘ │
│                                                                           │
│                    INTERVAL: 36  PAGE 1 of 1            QUAD:1             │
│                         SPLIT STATUS                                      │
│     SPLIT: 1                        TRUNK GROUP STATUS                     │
│                                 TRUNK GROUP  NO. BUSY  TOTAL NO.           │
│     NUMBER OF CALLS WAITING          5                                     │
│     OLDEST CALL WAITING              6           21       12       12      │
│     AVERAGE SPEED OF ANSWER       5.01           22        6        6      │
│                                                  23-1      1               │
│     NUMBER OF ABANDONED CALLS       60           24       33       34      │
│     AVERAGE TIME TO ABANDON      11.00           27        4        4      │
│                                                                           │
│     NUMBER OF ACD CALLS            349                                     │
│     AVERAGE ACD TALK TIME        26.12                                     │
│     AVERAGE AFTER CALL WORK TIME 11.02                                     │
│                                                                           │
│     NUMBER OF OUTGOING CALLS         1                                     │
│     AVERAGE OUTGOING TALK TIME   89.93                                     │
│                                                                           │
│     NUMBER AGENTS STAFFED           20   NUMBER OF AGENTS AVAILABLE    0   │
│     NUMBER ON ACD CALLS             17   NUMBER IN AFTER CALL WORK     3   │
│     NUMBER IN AUX WORK               0   NUMBER ON OUTGOING CALLS      0   │
│  ┌──────────────────────────────────────────────────────────────────────┐ │
│  │ Confirmation, error, and exception messages appear in this line      │ │
│  └──────────────────────────────────────────────────────────────────────┘ │
│                                                                           │
│  ┌─────┐  ┌────────┐ ┌────────┐ ┌─────┐  ┌─────┐  ┌────────┐ ┌────────┐ ┌─────┐ │
│  │     │  │ UPDATE │ │ REPORT │ │     │  │     │  │ EXIT   │ │ PRINT  │ │     │ │
│  │     │  │        │ │ PARAMS │ │     │  │     │  │        │ │ SCREEN │ │     │ │
│  └─────┘  └────────┘ └────────┘ └─────┘  └─────┘  └────────┘ └────────┘ └─────┘ │
│ ╰─────────────────────────────────────────────────────────────────────╯  │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 3-5   Split Status Real-Time Report

Table 3-2   Item Reference for the Split Status Real-Time Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
SPLIT	Split number or synonym.		SYN(SPLIT)
NUMBER OF CALLS WAITING	Number of calls in this split's queue.	Calls	QUECALLS
OLDEST CALL WAITING	Time the first call in queue has been waiting.	Seconds	OCW
AVERAGE SPEED OF ANSWER	Average time to answer all calls that have been answered in the current half-hour.	Seconds	AVG ANSWER SPEED `ANSDELAY/ANSWERED`
NUMBER OF ABANDONED CALLS	Number of queued calls in which the caller hangs up before being answered during the current half-hour.	Calls	ABANDONS
AVERAGE TIME TO ABANDON	The average time a caller who hung up without receiving an answer waited before doing so.	Seconds	AVG ABANDON TIME `ABANTIME/ABANDONS`
NUMBER OF ACD CALLS	ACD calls answered by this split's agents during this half hour. (The count includes intraflowed and interflowed calls answered in this split.)	Calls	ACDCALLS
AVERAGE ACD TALK TIME	Average length of ACD calls handled by this split's agents in the current half-hour.	Seconds	AVG COM TALK TIME `CUMTALK/NUMTALK`
AVERAGE AFTER CALL WORK TIME	Average length of after-call work sessions by agents in this split for current half-hour.	Seconds	AVG COMP ACW TIME `CUMACW/NUMACW`

Table 3-2   Item Reference for the Split Status Real-Time Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
NUMBER OF OUTGOING CALLS	Number of outdialed calls by this split's agents in this half hour.	Calls	NUM CALL OUT2 ACWOUTCALLS + AUXOUTCALLS
AVERAGE OUTGOING TALK TIME	Length of average extension-out calls for this split in this half hour.	Seconds	AVG TALK TIME OUT (ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)
NUMBER OF AGENTS STAFFED	Number of agents logged in to this split.	Agents	STAFCOUNT
NUMBER ON ACD CALLS	Agent positions currently connected to ACD calls.	Agents	ACDCOUNT
NUMBER IN AUX WORK	Agents currently in the auxiliary work state.	Agents	AUXCOUNT
NUMBER OF AGENTS AVAILABLE	Agents available for ACD calls. On Generic 2 with ring-state enabled, does not include agents whose terminals are ringing.	Agents	INPOOL
NUMBER IN AFTER CALL WORK	Agents currently in the ACW state.	Agents	ACWCOUNT
NUMBER ON OUTGOING CALLS	Agents making extension-out calls. Includes agents in AVAIL mode.	Agent	AGENT CALL OUT ACWOUTCOUNT + AUXOUTCOUNT
TRUNK GROUP	Numbers or synonyms of the trunk groups assigned to this split.	Trunk group number	SYN(TRKGRP)
NO. BUSY	Number of trunks in this group that are seized, connected, or queued.	Trunks	TRKSINUSE
TOTAL NO.	Total number of trunks in each trunk group.	Trunks	GROUPSIZE

Group Status Report

Report File Name   GROUP
Data Files Used   /CURRENT/AGENT

The Group Status report displays the current composition of up to two specified agent groups, the state of each agent in the group, and the time that state was entered. Groups can comprise agent positions associated by extension number (Extension Groups) or by agent login ID (Agent Groups) and can be separate and independent from a particular split's organization.

| NOTE | If you have a Generic 2 switch with the ring-state enabled, the STATE column will show RING when a call is ringing at an agent's voice terminal. |

Prerequisite Information

You must create either type of group (Extension or Agent Group) using the Dictionary (see Chapter 5). Groups are not created at the switch.

Group reports require more processing time that any other real-time report. Therefore, you should consider how many terminals will be running group reports and the refresh rates for those terminals. See "Refresh Rates for the Group Status Real-Time Reports" in Chapter 1 for more information.

Group Status Report

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────┐   │
│  │ Call Management System                    Switch_Name:Up     Time │   │
│  └──────────────────────────────────────────────────────────────────┘   │
│                    INTERVAL: 36  PAGE 1 of 1            QUAD:1            │
│                            GROUP STATUS                                   │
│                                                                          │
│           GROUP: Team A                         GROUP: Team B            │
│        AGENT           EXT    STATE  TIME    AGENT        EXT   STATE  TIME│
│                                                                          │
│        Patsy You       1201   ACD    15:00   Gene Green   1301  ACW    15:01│
│        Barry McGee     1203   ACD    15:01   Bob McCaw    1304  AUX    15:20│
│        Elinore McClusk 1209   ACW    15:06   Katsu Masada 1401  AVAIL  15:06│
│        April Lucelli   1490   ACD    15:01   Terry Overly 1450  AVAIL  15:01│
│        Bing Gretsch    1509   ACD    15:01   Kern Salida  1512  AVAIL  15:12│
│        Talullah Screen 1506   ACD    15:05   12099        1503  AVAIL  15:04│
│                                                                          │
│                                                                          │
│  ┌──────────────────────────────────────────────────────────────────┐   │
│  │Confirmation, error, and exception messages appear in this line    │   │
│  └──────────────────────────────────────────────────────────────────┘   │
│  ┌──────┐ ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐│
│  │      │ │UPDATE│ │REPORT│   │      │ │      │   │EXIT  │ │PRINT │ │      ││
│  │      │ │      │ │PARAMS│   │      │ │      │   │      │ │SCREEN│ │      ││
│  └──────┘ └──────┘ └──────┘   └──────┘ └──────┘   └──────┘ └──────┘ └──────┘│
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 3-6   Group Status Report

Table 3-3 Item Reference for the Reporting Group Real-Time Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
GROUP	The name of the groups selected for this report.	Group name	GROUP
AGENT	Synonym or ID of agent-members of the group (if the group is based on agents) or agents logged in at extensions (if the group is based on extensions).	Synonym or login ID	SYN(LOGID)
EXT	Extension number where the agent is logged in.	The extension number	EXTENSION
STATE*	Current state this agent is in (UNSTAF, AVAIL, RING†, ACD, ACW, AUX, ACWOUT, ACWIN, AUXOUT, AUXIN, INIT). (See Appendix C, "ACD Basics," for a description of agent states.)	Agent state name	ASTATE
TIME	Time agent entered this state.	Military notation time, hours and minutes.	TIMEMARK

*If an agent changes from one AUX-TIME state to another AUX-TIME state, the TIME report item (i.e., the TIMEMARK database item) does not change to show the new state.

† The RING state is available only if your switch is a Generic 2 with the ring-state enabled.

Split Summary Report

Report File Name	SAGENT
Data Files Used	/CURRENT/SPLIT, /CURRENT/AGENT

The Split Summary report displays the current activities of all agents assigned to a split. It shows status information as well as the number of ACD and other calls handled by each agent during the current half-hour. It also summarizes the split's current staffing and activity, showing queue status, abandoned calls, and averages for speed-of-answer and talk time. You can view a maximum of ten agents at a time on the Split Summary report.

NOTE	The Split Summary report may momentarily show a call waiting with agents available if the report updates while the call is still ringing at an agent's voice terminal.

If your switch is a Generic 2 with the ring-state enabled, the STATE column will show RING if a call is ringing at the agent's voice terminal. Also, on the Generic 2 with the ring-state, the item "Number of Agents Available" does **not** include agents whose voice terminals are ringing. "Number of Calls Waiting" **does** include calls ringing.

A special Split Summary report is available as a global custom report in the Real-Time Custom Reports submenu to see the number of calls ringing (which also represents the number of agents with calls ringing). See "Ring State Reports" later in this chapter for more information.

```
Call Management System                          Switch_Name:Up            Time

                         INTERVAL: 36  PAGE 1 of 1            QUAD:1
                                SPLIT SUMMARY
        SPLIT: 1 (Sales)
                                              ACD       EXT IN    EXT OUT
        AGENT NAME          EXT   STATE  TIME  CALLS     CALLS     CALLS

        Larry O'Leary       1299  ACD    08:20  19        0         0
        Neal  Patruski      1278  ACD    08:21  20        3         3
        Allerdyce Nichol    1340  ACW    08:21  22        1         1
        Pete Ohshima        1290  ACD    08:21  21        2         4
        Ellen Rubin         1277  ACD    08:21  22        4         5
        Patsy You           1201  ACD    08:21  19        3         1




        NUMBER OF AGENTS STAFFED   20       NUMBER OF AGENTS AVAILABLE    0
        NUMBER ON ACD CALLS        18       AVERAGE ACD TALK TIME    26.16
        NUMBER OF CALLS WAITING     2       AVERAGE SPEED OF ANSWER   5.00
        OLDEST CALL WAITING         0       AVERAGE TIME TO ABANDON  11.00
    Confirmation, error, and exception messages appear in this line
```

	UPDATE	REPORT PARAMS			EXIT	PRINT SCREEN	

Figure 3-7   Split Summary Real-Time Report

Table 3-4   Item Reference for the Split Summary Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
SPLIT	Split number or synonym.		SYN(SPLIT)
AGENT	Split member login ID or synonym.	Synonym, login ID	SYN(LOGID)
EXT	Extension at which the agent is logged in.	Extension number	EXTENSION
STATE*	Current state this agent is in (UNSTAF, AVAIL, RING†, ACD, ACW, AUX, ACWOUT, ACWIN, AUXOUT, AUXIN, INIT). (See Appendix C, ''ACD Basics,'' for a description of agent states.)	Agent state name	ASTATE
TIME	Time agent entered the current state.	Military notation time	TIMEMARK
ACD CALLS	Number of ACD calls answered by this agent in the current half hour. The count includes intraflowed and interflowed calls answered by this agent in this split.	Calls	ACDCALLS
EXT IN CALLS	Direct dialed calls to this agent (extension) in the current half-hour.	Calls	EXT CALL IN ACWINCALLS + AUXINCALLS
EXT OUT CALLS	Extension-out calls placed by this agent (extension) during the current half-hour	Calls	NUM CALL OUT2 ACWOUTCALLS + AUXOUTCALLS
NUMBER OF AGENTS STAFFED	Currently logged-in agents in this split.	Agents	STAFCOUNT

*If an agent changes from one AUX-TIME state to another AUX-TIME state, the TIME report item (i.e., the TIMEMARK database item) does not change to show the new state.

† The RING state appears only if your switch is a Generic 2 with the ring-state enabled.

Table 3-4 **Item Reference for the Split Summary Report (Contd)**

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
NUMBER ON ACD CALLS	Current number of split's agents on ACD calls.	Agents	ACDCOUNT
NUMBER OF CALLS WAITING	Number of unanswered calls in this split's queue.	Calls	QUECALLS
OLDEST CALL WAITING	Time that the first call in queue has been waiting.	Seconds	OCW
NUMBER OF AGENTS AVAILABLE	Agents available for ACD calls. On Generic 2 with ring-state enabled, does not include agents whose terminals are ringing.	Agents	INPOOL
AVERAGE ACD TALK TIME	Average length of ACD calls handled by this split's agents in the current half-hour.	Seconds	AVG COM TALK TIME `CUMTALK/NUMTALK`
AVERAGE SPEED OF ANSWER	Average time to answer all calls that have been answered in the current half-hour.	Seconds	AVG ANSWER SPEED `ANSDELAY/ANSWERED`
AVERAGE TIME TO ABANDON	The average wait time for callers who hung up before connecting with an agent.	Seconds	AVG ABANDON TIME `ABANTIME/ABANDONS`

System Status Report

Report File Name   SYSTEM
Data File Used   /CURRENT/SPLIT

The System Status report displays real-time call-handling information on up to five splits simultaneously. It allows the supervisor to evaluate and compare each split's workload and call-handling performance and determine agent reassignment or other system configuration alternatives to balance workloads and/or reduce abandoned calls.

> **NOTE**   The System Status report may momentarily show a call waiting with agents available if the report updates while the call is still ringing at an agent's voice terminal.
>
> If your switch is a Generic 2 switch with the ring-state enabled, the STATE column will show RING if a call is ringing at the agent's voice terminal. Also, on a Generic 2 with the ring-state, the item "Number of Agents Available" does **not** include agents whose voice terminals are ringing. "Number of Calls Waiting" **does** include calls ringing.
>
> A special System Status report is available as a global custom report in the Real-Time Custom Reports submenu to see the number of calls ringing (which also represents the number of agents with calls ringing). See "Ring State Reports" later in this chapter for more information.

```
┌─────────────────────────────────────────────────────────────────────────┐
│ ┌───────────────────────────────────────────────────────────────────┐   │
│ │ Call Management System                    Switch_Name:Up      Time │   │
│ └───────────────────────────────────────────────────────────────────┘   │
│                                                                           │
│                     INTERVAL: 36  PAGE 1 of 1           QUAD:1            │
│                            SYSTEM STATUS                                   │
│                                                                           │
│         SPLIT              1 (sales) 2 (servc) 3 (admin) 4 (wrnty)   5 () │
│                                                                           │
│         NO. OF CALLS WAITING       3       5       3       3       3     │
│         OLDEST CALL WAITING        5      12      15      18      18     │
│         AVERAGE SPEED OF ANSWER  5.04    6.40   10.31   15.27   17.37    │
│                                                                           │
│         NO. ABANDONED CALLS       73      35      18      10       9     │
│         AVERAGE TIME TO ABANDON 11.00   15.06   20.00   25.00   30.00    │
│                                                                           │
│         NO. OF ACD CALLS         423     208     143     108      86     │
│         AVERAGE ACD TALK TIME  26.17   57.52   81.12  107.55  144.47     │
│         AVG. AFTER CALL WORK TIME 11.01 16.00  24.00   36.00   34.00     │
│                                                                           │
│         NO. OF AGENTS AVAILABLE    0       0       0       0       0     │
│         NO. OF AGENTS ON ACD      18      19      18      19      19     │
│         NO. IN AFTER CALL WORK     1       1       2       1       1     │
│         NO. IN AUX WORK            1       0       0       0       0     │
│         NO. ON OUTGOING CALLS      0       0       0       0       0     │
│ ┌───────────────────────────────────────────────────────────────────┐   │
│ │Confirmation, error, and exception messages appear in this line    │   │
│ └───────────────────────────────────────────────────────────────────┘   │
│  ┌────┐ ┌──────┐ ┌──────┐ ┌────┐ ┌────┐ ┌────┐ ┌──────┐ ┌────┐          │
│  │    │ │UPDATE│ │REPORT│ │    │ │    │ │EXIT│ │PRINT │ │    │          │
│  │    │ │      │ │PARAMS│ │    │ │    │ │    │ │SCREEN│ │    │          │
│  └────┘ └──────┘ └──────┘ └────┘ └────┘ └────┘ └──────┘ └────┘          │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 3-8   System Real-Time Standard Report

Table 3-5   Item Reference for the System Status Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
SPLIT	Split numbers or synonyms for selected splits.		SYN(SPLIT)
NO. OF CALLS WAITING	Number of unanswered calls in the splits' queues.	Calls	QUECALLS
OLDEST CALL WAITING	Length of time the first unanswered call in each queue has been waiting.	Seconds	OCW
AVERAGE SPEED OF ANSWER	Average wait time for calls that have been answered in the current half-hour.	Seconds	AVG ANSWER SPEED `ANSDELAY/ANSWERED`
NO. OF ABANDONED CALLS	For current half-hour, total of queued calls for each split in which the caller hangs up before being answered.	Calls	ABANDONS
AVERAGE TIME TO ABANDON	The average wait time for callers who hung up before connecting with an agent.	Seconds	AVG ABANDON TIME `ABANTIME/ABANDONS`
NO. OF ACD CALLS	Queued calls that connected to an agent during this half-hour. (The count includes intraflowed/ interflowed calls answered in this split.)	Calls	ACDCALLS
AVERAGE ACD TALK TIME	Length of the average ACD call during this half-hour in each split.	Seconds	AVG COM TALK TIME `CUMTALK/NUMTALK`
AVG. AFTER CALL WORK TIME	Average length of session in after-call work for agents in each split.	Seconds	AVG COMP ACW TIME `CUMACW/NUMACW`

Table 3-5   Item Reference for the System Status Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
NO. OF AGENTS AVAILABLE	Agents available for ACD calls in each split. On Generic 2 with ring-state enabled, does not include agents whose terminals are ringing. Agents that are currently available to receive ACD calls in each split.	Agents	INPOOL
NO. OF AGENTS ON ACD	Agents currently connected to ACD calls in each split.	Agents	ACDCOUNT
NO. IN AFTER CALL WORK	Agents now in ACW in each split.	Agents	ACWCOUNT
NO. IN AUX WORK	Agents now in auxiliary work in each split.	Agents	AUXCOUNT
NO. ON OUTGOING CALLS	Agents currently engaged in extension-out calls in each split.	Agents	AGENT CALL OUT ACWOUTCOUNT + AUXOUTCOUNT

Agent/Split Comparison (Previous Half Hour) Report

Report File Name	AGENT
Comments	Data is for previous half-hour; request by agent login and split number. Agent must be currently staffed.
Data Files Used	/PREVIOUS/SPLIT, /PREVIOUS/AGENT

The Agent/ Split Comparison report (Figure 3-9) summarizes the activities of a specific agent during the previous half-hour and compares that activity to the "average agent" in that split for the same time period. This data can help you evaluate an agent's performance.

> **NOTE** Depending on your needs, you may want to change several formulas used to calculate report items. To change a formula, you need to create a custom calculation in the Dictionary subsystem, and then create a custom report the uses the new calculation. See the *3B CMS Custom Reports* document (585-215-503) for this information.

AVERAGE AFTER CALL WORK does not include non-ACD phone calls agents made or received. If after-call-work in your call center often involves non-ACD phone work, you may want to include non-ACD calls.

PERCENT OF STAFFED TIME — ACD includes after-call-work. If your call center has very little after-call-work specifically associated with ACD calls, you may want to exclude it from Percent of Staffed Time.

TIME IN AUX WORK does not include time on non-ACD calls. If your call center seldom requires phone work associated with ACD calls, you may want to include non-ACD phone time in this item.

```
┌────────────────────────────────────────────────────────────────────────┐
│ ┌──────────────────────────────────────────────────────────────────┐   │
│ │ Call Management System                    Switch_Name:Up      Time │   │
│ └──────────────────────────────────────────────────────────────────┘   │
│                                                                          │
│                    INTERVAL: 36  PAGE 1 of 1            QUAD:1           │
│                  AGENT/SPLIT COMPARISON (PREVIOUS HALF HOUR)             │
│                                                                          │
│        AGENT:  charlie_o                       SPLIT: 1 (sales)          │
│                                                                          │
│                              AGENT               SPLIT AVERAGE           │
│                          ACD      OUT           ACD       OUT            │
│                                                                          │
│        NUMBER OF CALLS            59        0        59.30     0.00      │
│        AVERAGE TALK TIME       27.88     0.00       26.31     0.00      │
│        AVERAGE AFTER CALL WORK  2.61                 3.92                │
│        PERCENT OF STAFFED TIME 99.94     0.00       99.59     0.00      │
│                                                                          │
│                              AGENT                  SPLIT                │
│                                                                          │
│        TIME IN AUX WORK           0                    134              │
│        PERCENT AUX WORK TIME   0.00                   0.37              │
│        NO. EXTENSION CALLS IN     0                      0              │
│        NO. ASSIST CALLS           1                      9              │
│        TOTAL TIME STAFFED      1800                                     │
│ ┌──────────────────────────────────────────────────────────────────┐   │
│ │ Confirmation, error, and exception messages appear in this line   │   │
│ └──────────────────────────────────────────────────────────────────┘   │
│  ┌─────┐ ┌─────────┐ ┌─────────┐ ┌─────┐ ┌─────┐ ┌──────┐ ┌───────┐ ┌─────┐│
│  │     │ │ UPDATE  │ │ REPORT  │ │     │ │     │ │ EXIT │ │ PRINT │ │     ││
│  │     │ │         │ │ PARAMS  │ │     │ │     │ │      │ │ SCREEN│ │     ││
│  └─────┘ └─────────┘ └─────────┘ └─────┘ └─────┘ └──────┘ └───────┘ └─────┘│
└────────────────────────────────────────────────────────────────────────┘
```

Figure 3-9   Agent/ Split Comparison Report

Table 3-6   Item Reference for the Agent/ Split Comparison Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
AGENT	Agent login ID or name.		SYN(LOGID)
SPLIT	Split number or synonym.		SYN(SPLIT)
NUMBER OF CALLS	AGENT ACD = number of ACD calls to agent. (Some of the calls counted may have intraflowed/ interflowed into the agent's split.)	Calls	ACDCALLS
	AGENT OUT = number of extension-out calls made by agent.	Calls	NUM CALL OUT2 `ACWOUTCALLS + AUXOUTCALLS`
	SPLIT AVERAGE ACD = average number of ACD calls per agent in the split.	Average number of calls	NUM CALL IN `ACDCALLS/MAXAGENT`
	SPLIT AVERAGE OUT = average number of extension-out calls per agent in this split.	Average number of calls	NUM CALL OUT1 `1-800*((AUXOUTCALLS +ACWOUTCALLS) / (STAFTIME-AUXTIME))`
AVERAGE TALK TIME	AGENT and SPLIT ACD = the average ACD-call length for the agent; the average single-call duration for the split.	Seconds	AVG ACD TALK TIME `ACDTIME/ACDCALLS`
	AGENT and SPLIT OUT = the average length of an extension-out call for an agent; the average length of a single extension-out call for the split.		AVG TALK TIME OUT `(ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)`

Table 3-6   Item Reference for the Split-Agent Comparison Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
AVERAGE AFTER CALL WORK	AGENT and SPLIT = average length of ACW per ACD call.	Seconds	AVG ACW TIME (ACWTIME – ACWOUTTIME – ACWINTIME) / ACDCALLS
PERCENT OF STAFFED TIME	AGENT and SPLIT AVERAGE ACD = percent of staffed (logged in) time on ACD calls and related after-call work.	Percent of time	PERCENT STAFF IN 1-00 * ((ACDTIME + ACWTIME – ACWINTIME – ACWOUTTIME) / STAFTIME)
	AGENT and SPLIT AVERAGE OUT = percent of staffed time on extension-out calls.	Percent of time	PERCENT STAFF OUT 1-00 * ((ACWOUTTIME + AUXOUTTIME) / STAFTIME)
TIME IN AUX WORK	AGENT = agent time in auxiliary work in half-hour; SPLIT = total time the split's agents combined spent in auxiliary work in the previous half-hour. Call time accumulated within the AUX WORK state is deducted from AUX WORK totals.	Seconds	AUX WORK TIME AUXTIME – AUXOUTTIME – AUXINTIME

Table 3-6   Item Reference for the Split-Agent Comparison Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
PERCENT AUX WORK	AGENT = percentage of staffed time spent in AUX WORK for previous half-hour; SPLIT = percentage of the split members' staffed time spent in AUX WORK during the previous half hour.	Percent	PERCENT AUX WORK 1-00 * (AUXTIME/STAFTIME)
NO. EXTENSION CALLS IN	AGENT = direct dialed (non-ACD) calls to agent in half-hour; SPLIT = total direct dialed calls to split members in half-hour.	Calls	EXT CALL IN ACWINCALLS + AUXINCALLS
NO. ASSIST CALLS	AGENT = number of calls referred to split supervisor by agent in half-hour; SPLIT = number of calls referred to split supervisor by split agents during the half-hour.	Calls	ASSISTS
TOTAL TIME STAFFED	AGENT = total time agent was logged in in half-hour.	Seconds	STAFTIME

Call Profile Report

Report File Name	CALL_PROF
Comments	Set the interval lengths in the Call Profile Administration screen.
Data File Used	/CURRENT/SPLIT

The Call Profile report (Figure 3-10) shows the wait times of incoming calls handled and abandoned in a split during the current half-hour period. Calls are displayed in ten columns, with each column representing a progressively longer wait time. The uniform increase in time (1 to 180 seconds) between columns is established on the Call Profile Parameters screen (see Chapter 6, "Configuration"). Also shown in the report is the percentage of calls answered within the acceptable time limits (service level objective), also established on the Call Profile Parameters screen.

Since this report shows you how long it takes for calls to be handled or abandoned, it can tell you how long a caller is willing to wait for an agent before hanging up and what answering speed is required to reduce abandoned calls.

NOTE

In this report, the PERCENT ABANDONED formula has a denominator that includes intraflowed-out calls. However, the formula for PERCENT ANSWERED does not include intraflowed-out calls in the denominator. To change the formula, access the associated calculation in the Dictionary subsystem and create a custom calculation. Then create a custom report that uses the new calculation. See the *3B CMS Custom Reports* document (585-215-503) for custom report creation information.

NOTE

If you change the call profile parameters within a half-hour interval, data will be distorted.

CMS deletes the call profile data already collected for that half-hour and only keeps the call profile data that occurred in the half-hour after the change.

CMS also tries to combine the call profile data gathered both before and after the change into a single daily record of call profile data. As a result, some data is placed in the wrong time intervals.

To avoid distorted call profile data, change time intervals early in the day, preferably before agents begin staffing splits and before a large amount of data has been gathered.

Call Profile Report

```
┌────────────────────────────────────────────────────────────────────────────┐
│  ╭──────────────────────────────────────────────────────────────────────╮   │
│                                                                              │
│   ┌──────────────────────────────────────────────────────────────────┐      │
│   │ Call Management System                    Switch_Name:Up      Time │      │
│   └──────────────────────────────────────────────────────────────────┘      │
│                                                                              │
│                        INTERVAL: 36  PAGE 1 of 1           QUAD:1            │
│                              CALL PROFILE                                    │
│          SPLIT: 1 ()                        PARAMETERS CHANGED: NO           │
│                                                                              │
│        TIME                                                                  │
│        INTERVAL   00---0005---0010---0015---0020---0025---0030---0035---0040---0045+ │
│                                                                              │
│                                                                              │
│        NUMBER                                                                │
│        ANSWERED   315    194    28     0      0      0      0      0      0  │
│                                                                              │
│                                                                              │
│        NUMBER                                                                │
│        ABANDONED   0      0     94     0      0      0      0      0      0  │
│                                                                              │
│                                                                              │
│        NUMBER OF CALLS CARRIED       631                                     │
│        NUMBER OF CALLS ABANDONED      94    PERCENT ABANDONED      14.90%    │
│        NUMBER OF CALLS ANSWERED      537    PERCENT ANSWERED       85.10%    │
│                                                                              │
│        AVERAGE TIME TO ABANDON     11.01    SERVICE LEVEL             20     │
│        AVERAGE TIME TO ANSWER       4.91    % WITHIN SERVICE LEVEL  85.10%   │
│   ┌──────────────────────────────────────────────────────────────────┐      │
│   │Confirmation, error, and exception messages appear in this line    │      │
│   └──────────────────────────────────────────────────────────────────┘      │
│                                                                              │
│   ┌─────┐ ┌────────┐ ┌────────┐ ┌─────┐ ┌─────┐ ┌──────┐ ┌────────┐ ┌─────┐  │
│   │     │ │ UPDATE │ │ REPORT │ │     │ │     │ │ EXIT │ │ PRINT  │ │     │  │
│   │     │ │        │ │ PARAMS │ │     │ │     │ │      │ │ SCREEN │ │     │  │
│   └─────┘ └────────┘ └────────┘ └─────┘ └─────┘ └──────┘ └────────┘ └─────┘  │
│  ╰──────────────────────────────────────────────────────────────────────╯   │
└────────────────────────────────────────────────────────────────────────────┘
```

Figure 3-10   **Call Profile Real-Time Report**

Table 3-7 Item Reference for the Call Profile Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
SPLIT	Split number or synonym.		SYN(SPLIT)
PARAMETERS CHANGED	Administrative changes in service level that affect this report. If any parameters were changed during the current half-hour, this half-hour's data is zeroed out.	NO/YES	CALLPROFCHG
TIME INTERVAL	Time after entering the queue. The intervals are specified in the Configuration—Call Profile Parameters screen.	Seconds	WINDOW, WINDOW*2. . .WINDOW*9
NUMBER ANSWERED	Calls connecting to an agent in this interval.	Calls	CALLS1. . .CALLS10
NUMBER ABANDONED	Callers hanging up before receiving an answer in this interval.	Calls	ABANDON1. . .ABANDON10
NUMBER OF CALLS CARRIED	Total calls entering this split's queue in the current half hour.	Calls	CALLS OFFERED ANSWERED + ABANDONS + OUTFLOW *
NUMBER OF CALLS ABANDONED	Callers hanging up in this interval.	Calls	ABANDONS
NUMBER OF CALLS ANSWERED	ACD calls connecting to an agent in the current half-hour.	Calls	ANSWERED
PERCENT ABANDONED	Percentage of calls that abandon before connecting to an agent.	Percent	PERCENT CALL ABAN 1-00 * (ABANDONS / (ANSWERED + ABANDONS + OUTFLOW*))

*With a Generic 3i switch, you could have more OUTFLOW calls counted because of the Multiple Split Queuing feature. See the *3B CMS Vectoring Administration (585-215-502)* document for more information.

Table 3-7   Item Reference for the Call Profile Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA

PERCENT ANSWERED	Percentage of queued calls connecting to an agent.	Percent	PERCENT CALL ANS
			`1-00 * (ACDCALLS /`
			`(ACDCALLS + ABANDONS))`

AVERAGE TIME TO ABANDON	The average wait time for callers who hung up before connecting with an agent.	Seconds	AVG ABANDON TIME `ABANTIME / ABANDONS`
AVERAGE TIME TO ANSWER	Average time a queued call takes to connect to an agent in this half-hour.	Seconds	AVG ANSWER SPEED `ANSDELAY / ANSWERED`
SERVICE LEVEL	Time in which calls are expected to be answered. You specify this time in the Configuration—Call Profile Parameters screen.	Seconds	SVCLVL

PERCENT WITHIN SERVICE LEVEL	Percentage of calls answered within the Service Level.	Percent	PERCENT SERV LEVL
			`1-00 * (TRAFFIC /`
			`(ANSWERED + ABANDONS +`
			`OUTFLOW*))`

*With a Generic 3i switch, you could have more OUTFLOW calls counted because of the Multiple Split Queuing feature. See the *3B CMS Vectoring Administration* (5-85-215-502) document for more information.

Trunk Group Summary Report

<pre>
Report File Name   TGROUP
Data File Used   /CURRENT/TRUNK, /CURRENT/TRKGRP
</pre>

The Trunk Group Summary report (Figure 3-11) displays the current status of each trunk in a selected trunk group and lists each trunk's physical location within the ACD. This information is useful in identifying overused or underused facilities and in general troubleshooting.

<pre>
Call Management System   Switch_Name:Up   Time

                              INTERVAL: 36   PAGE 1 of 1   QUAD:1
                              TRUNK GROUP SUMMARY

         TRUNK GROUP: 22   NO. OF TRUNKS: 20

         TRUNK   TRUNK
         NUMBER   LOCATION   STATE   TIME   DIRECTION   EXT/SPLIT

         91-00.0.0.11.03   IDLE   17:57   --   NONE
         92-00.0.0.11.04   CONN   17:56   IN   4445
         93-00.0.0.11.05   QUEUED   17:57   IN   4
         94-00.0.0.12.00   SEIZED   17:57   IN   NONE
         95-00.0.0.12.01   CONN   17:57   IN   2087
         96-00.0.0.12.02   IDLE   17:57   --   NONE
         97-00.0.0.12.03   QUEUED   17:57   IN   4
         98-00.0.0.12.04   QUEUED   17.57   IN   4

Confirmation, error, and exception messages appear in this line

  [   ] [UPDATE] [REPORT] [   ] [   ] [EXIT] [PRINT] [   ]
                      [PARAMS]   [SCREEN]
</pre>

Figure 3-11   Trunk Group Summary Real-Time Report

The trunk states have the following meanings:

IDLE   Waiting for call.

SEIZED   The trunk is seized (incoming or outgoing). ACD calls go to QUEUED, then CONN, ABAN, or FWRD. Non-ACD calls remain SEIZED.

QUEUED   An ACD caller has the trunk and is waiting for an agent to answer.

CONN   Agent and caller are connected in an ACD call.

ABANDONED A queued caller just abandoned the call.

FWRD A queued call has been intraflowed outside the ACD or interflowed.

MBUSY Maintenance Busy, out of service for maintenance purposes.

HOLD The agent has put a call on hold (available with Generic 2 and System 85, R2V4 only).

INIT The link is down or an error has been detected. INIT remains until the condition is cleared (link comes up) *and* the current ACD call and associated ACW are complete.

Table 3-8   Item Reference for the Trunk Group Summary Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
TRUNK GROUP	Number or synonym of the trunk group selected.	Trunk group number or synonym.	SYN(TRKGRP)
NO. OF TRUNKS	Number of trunks assigned to this group.	Trunks	GROUPSIZE
TRUNK NUMBER	Internal trunk number from the switch.	Internal trunk number	TRK NDX
TRUNK LOCATION	Physical location of trunk in the switch. The digits represent module, cabinet, carrier, slot, and circuit. This number is used in switch administration. Shown in the sample report is the Generic 2/ System 85/ DIMENSION PBX format. The Generic 1, Generic 2 Universal Module, and System 75 format uses a letter to represent the carrier.	The numeric sequence that identifies the trunk's equipment location in the switch.	EQLOCATION
STATE	One of eight conditions that are possible for a trunk.	State name	TSTATE
TIME	Time when the trunk entered the current state.	Military notation time	TIMEMARK
DIRECTION	The direction of the current call — incoming or outgoing.	IN, OUT, or -- if none	DIRECTION
EXT/ SPLIT	Extension number if CONN; Split number if QUEUED; "NONE" if anything else. See state list above.	Extension or split number	ASSOCIATION

Split Performance Report

Report File Name   SPERFORM
Covers   One split, comparing current and previous half-hour's data.
Data Files Used   /CURRENT/SPLIT, /PREVIOUS/SPLIT

The Split Performance report (Figure 3-12) displays current and previous half-hour call handling data for a selected split. This data is useful in gauging immediate call-handling efficiency and the need for adjusting agent work assignments. By comparing the previous and current half-hour intervals on the report, you can also check immediate results of changes to a split's configuration.

For example, if you have reassigned extensions or intraflowed calls in hopes of reducing average speed of answer, view this report to see if average speed of answer changes within the current half-hour as compared to the previous interval.

The Split Performance report also displays status information on agents in the split. You can use this information to identify agents for reassignment to other splits or agents available to handle overflow calls from other splits.

CMS transfers data from the current half-hour interval to the previous half-hour interval each half hour according to the switch clock time.

| NOTE | The Split Performance report may momentarily show a call waiting with agents available if the report updates while the call is still ringing at an agent's voice terminal. |

If your switch is a Generic 2 with the ring-state enabled, the STATE column will show RING if a call is ringing at the agent's voice terminal. Also, on Generic 2 with the ring-state, the item "Number of Agents Available" does **not** include agents whose voice terminals are ringing. "Number of Calls Waiting" **does** include calls ringing.

If you want to customize this report to show the number of calls ringing (which also represents the number of agents with calls ringing) or additional ring-state data, see "Ring State Reports" for a list of ring-state database items and calculations.

```
Call Management System                          Switch_Name:Up          Time

                        INTERVAL: 36  PAGE 1 of 1            QUAD:1
        SPLIT: 1                     SPLIT PERFORMANCE

                                    CURRENT         PREVIOUS
        NUMBER OF CALLS WAITING          5
        OLDEST CALL WAITING              6
        AVERAGE SPEED OF ANSWER         4.86            4.94

        NUMBER OF ABANDONED CALLS        99             202
        AVERAGE TIME TO ABANDON        11.01           10.86

        NUMBER OF ACD CALLS             578            1186
        AVERAGE ACD TALK TIME          26.13           26.35
        AVERAGE AFTER CALL WORK TIME   11.01           11.00

        NUMBER OF OUTGOING CALLS         0               0
        AVERAGE OUTGOING CALL TALK TIME 0.00            0.00


        NUMBER AGENTS STAFFED    20   NUMBER AGENTS AVAILABLE      0
        NUMBER ON ACD CALLS      17   NUMBER IN AFTER CALL WORK    3
        NUMBER IN AUX WORK        0   NUMBER ON OUTGOING CALLS     0

Confirmation, error, and exception messages appear in this line
```

| | UPDATE | REPORT PARAMS | | | EXIT | PRINT SCREEN | |

Figure 3-12   Split Performance Real-Time Report

Table 3-9   Item Reference for the Split Performance Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
SPLIT	Split number or synonym.		SYN(SPLIT)
NUMBER OF CALLS WAITING	Number of calls in the split's queue.	Calls	QUECALLS
OLDEST CALL WAITING	Time the call at the beginning of the queue has been waiting.	Seconds	OCW
AVERAGE SPEED OF ANSWER	Time the average, answered call waited before receiving an answer.	Seconds	AVG ANSWER SPEED ANSDELAY / ANSWERED
NUMBER OF ABANDONED CALLS	Queued calls in which the caller hangs up before receiving an answer.	Calls	ABANDONS
AVERAGE TIME TO ABANDON	The average wait time for callers who hung up before connecting with an agent.	Seconds	AVG ABANDON TIME ABANTIME / ABANDONS
NUMBER OF ACD CALLS	Queued calls that received an answer from an agent in the split in this half-hour. The count includes intraflowed/ interflowed calls answered in this split.	Calls	ACDCALLS
AVERAGE ACD TALK TIME	Length of the average ACD call in this split in this half hour.	Seconds	AVG COM TALK TIME CUMTALK / NUMTALK
AVERAGE AFTER CALL WORK TIME	Length of average session in ACW state.	Seconds	AVG COMP ACW TIME CUMACW / NUMACW

Table 3-9   Item Reference for the Split Performance Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
NUMBER OF OUTGOING CALLS	Count of extension-out calls by this split's agents in this half hour. This count includes calls placed by agents while in the AVAIL state.	Calls	NUM CALL OUT2 ACWOUTCALLS + AUXOUTCALLS
AVERAGE OUTGOING TALK TIME	Length of average outgoing calls made by this split's agents.	Seconds	AVG TALK TIME OUT (ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)
NUMBER OF AGENTS STAFFED	Number of agents currently logged in at this split's extensions.	Agents	STAFCOUNT
NUMBER ON ACD CALLS	Agents currently connected to ACD calls.	Agents	ACDCOUNT
NUMBER IN AUX WORK	Agents currently in auxiliary work state.	Agents	AUXCOUNT
NUMBER OF AGENTS AVAILABLE	Number of agents able to accept an ACD call; idle agents. On Generic 2 with the ring-state enabled, does not include agents whose terminals are ringing.	Agents	INPOOL
NUMBER IN AFTER CALL WORK	Agents doing call-related work.	Agents	ACWCOUNT
NUMBER ON OUTGOING CALLS	Agents currently on extension-out calls.	Agents	AGENT CALL OUT ACWOUTCOUNT + AUXOUTCOUNT

Split Event Count Summary Report

Comments	Event counts can be any event agreed upon within the split.
Limitation	**Event Counts (stroke counts) require Special Development software on Generic 1 and System 75 only.**
Data File Used	`/CURRENT/SPLIT, /CURRENT/AGENT`

The Split Event Count Summary report (Figure 3-13) displays the number of times during the current half-hour each agent in a split has pressed each of nine Event Count buttons. The agent must be logged into the split and off-hook to record the event count button depression. The report also summarizes the event count for the split.

Because you can define event buttons to represent any kind of event, this report can show quantities of certain types of calls coming to a split (for example, the number of calls generated from an ad, promotion, or demographic group).

> **NOTE** When agents log out from a split, they will no longer appear in the "Agent" column. However, their event counts will remain in the "Split Total" until the half-hour interval changes.

```
Call Management System                              Switch_Name:Up           Time

                            INTERVAL: 36  PAGE 1 of 1              QUAD:1
                            SPLIT EVENT COUNT SUMMARY
        SPLIT:  1 ()                          NUMBER OF AGENTS STAFFED: 7

        -----AGENT--------   ACD    ----------------EVENT COUNT---------------
                             CALLS    1   2   3   4   5   6   7   8   9

        Terry Finley          23     1   1   0   0  10   0   0   7   5
        Max Van Quiller       13     1   2   0   0   4   0   5   3   1
        Imogene Last          29     4   0   0   0   5   1   3   3   1
        O'Neill Laslo         18     1   0   0   0   6   0   9   2   0
        Quentin McCaslin      19     4   0   0   0   4   0   0   0   1
        Jerry Twill           87     1   0   0   0   5   1   1   2   0
        Trish Vanderjagt      45     0   0   0   0   0   0   0   0   0

        SPLIT TOTAL:         234    12   3   0   0  34   2  18  17   8

Confirmation, error, and exception messages appear in this line


    |    | | UPDATE | | REPORT  | |   | |   | | EXIT | | PRINT  | |   |
    |    | |        | | PARAMS  | |   | |   | |      | | SCREEN | |   |
```

Figure 3-13   Split Event Count Real-Time Report

Table 3-10   **Item Reference for the Split Event Count Real-Time Report**

REPORT ITEM	WHAT IT MEASURES	UNITS	DATABASE ITEM OR CALCULATION FORMULA
SPLIT	Split number or synonym.		SYN(SPLIT)
NUMBER OF AGENTS STAFFED	Agents logged in at this split's extensions.	Agents	STAFCOUNT
AGENT	Agent's name or login ID.	Synonym or login ID	SYN(LOGID)
ACD CALLS	ACD calls received by each agent and the total for the split in the current half-hour.	Calls	ACDCALLS
EVENT COUNTER	Each agent's subtotal for each EVENT COUNT button, and the splits total.	Button presses	STROKE1. . .STROKE9

Ring State Reports

If you have a Generic 2 switch with the ring-state enabled, CMS collects real-time information on calls that are ringing. For example, CMS can tell you which agents are in the RING state (that is, which agents currently have calls ringing at their voice terminals) or how long a particular agent has been letting calls ring before picking up the calls. For a split, CMS can also tell you things like:

How long calls ring before agents answer.

The time callers wait in queue before ringing an agent.

The number of calls that abandon while ringing at an agent's terminal.

The number of calls that abandon before ringing at an agent's terminal.

> **NOTE** Historical data on ringing calls is **not** available.

From the CMS Custom Reports menu, you can select two ring state reports (Split Summary and System Status) that give you some of this information. Specifically, these real-time reports track calls ringing at agent voice terminals separately from calls in queue.

These reports use some, but not all, of the database items (and calculations) associated with ringing calls. All ring state database items (Table 3-11) and calculations (Table 3-12) are listed on the following pages, as well as in Appendix A.

> **CAUTION** If you do not have a Generic 2 switch with the ring-state enabled, do not use the ring-state reports or any of the ring-state database items. Your data will be incomplete and inaccurate.

> **CAUTION** If an agent goes into AUX work while an call is ringing, the agent's voice terminal will stop ringing. However, the caller will still hear the ringing tone. As a result, an agent should **not** make or take extension calls while calls are ringing at the agent's voice terminal.

The ring state database items are listed in Table 3-11.

Table 3-11   RING State Database Items

Database Item	Description
ASTATE	Shows the RING state, in addition to the other standard states such as ACD and AVAIL states. Standard reports, such as Agent reports and Split Summary reports, will show the RING state if your switch is a Generic 2 with the ring-state enabled.
CUMRING	The cumulative time any agent was in the ring-state (Agent file), or the time all agents in the split were in the ring-state (Split file). If an agent goes into AUX work while a call is ringing at the agent's voice terminal, CUMRING will count the time ringing up to the point when the agent goes into AUX work.
NUMRING	The number of ACD calls that rang at an individual agent's voice terminal (Agent file), or the number of calls that rang at voice terminals for the whole split (Split file). If an agent goes into AUX work while a call is ringing at the agent's voice terminal, NUMRING will still count the call.
RINGABANDON	Number of ACD calls that abandoned while ringing at an individual agent's voice terminal (Agent file), or the number of calls, for the whole split, that abandoned while ringing at agent voice terminals (Split file).
RINGABNTIME	The cumulative time abandoned calls spent ringing at the agent's terminal before abandoning (Agent file), or the cumulative time abandoned calls to the whole split spent ringing at agent terminals before abandoning (Split file).
RINGANSWER	The number of ACD calls an individual agent answered (Agent file), or the number of calls a split's agents answered (Split file). `RINGANSWER` equals `ACDCALLS`.
RINGANSTIME	The cumulative time all ACD calls rang at an individual agent's voice terminal (Agent file), or the time all ACD calls to the split rang at voice terminals (Split file). Includes only time for calls that were **answered**.
RINGASSOC	Agent extension that an ACD call on the trunk is ringing. (Trunk file only).
RINGCALLS	The cumulative number of ACD calls that rang at an agent's voice terminal (Agent file) or that rang for the whole split (Split file). If an agent goes into AUX work while a call is ringing at the agent's voice terminal, RINGCALLS will still count the call.
RINGCOUNT	The cumulative number of ACD calls currently ringing at split agent voice terminals (Split file only).
RINGTIME	The cumulative time the agent was in the ring-state (Agent file), or the time all agents in the split were in the ring-state (Split file). If an agent goes into AUX work while a call is ringing at the agent's voice terminal, RINGTIME will count the time ringing up to the point when the agent goes into AUX work.

> **NOTE** If an agent goes into AUX work while a call is ringing at the agent's voice terminal, RINGTIME and CUMRING will peg the time the call spent ringing up to the point where the agent went into AUX work. Likewise, RINGCALLS and NUMRING will peg a ringing call when the agent goes into AUX work. For these database items, the agent is no longer considered in the ring-state when the agent goes into AUX work.
>
> However, even though the agent goes into AUX work, the caller will continue to hear ringing until the agent answers the call or the caller hangs up. So, CMS has other database items to collect ring-state data based on how long the caller continues to hear ringing. These database items are RINGANSWER, RINGANSTIME, RINGABANDON, and RINGABNTIME. RINGANSWER and RINGANSTIME peg the call and the time spent ringing respectively when the agent answers the call — **even if** the agent went into AUX work first and then later answered the call. Similarly, RINGABANDON and RINGABNTIME peg the call and the time spent ringing respectively when the caller hangs up (because the agent never answered).

The ring-state calculations are as follows:

Table 3-12   RING State Calculations

Calculation	Formula	Description
AVG HUNTANS TIME	(ANSDELAY/ANSWERED) - (RINGANSTIME) / RINGANSWER	Average time ACD calls waited in a split queue before ringing at an agent voice terminal.
AVG INIT RING TIME	RINGTIME/RINGCALLS	Average ring time for all ACD calls that rang at the agent's voice terminal (agent data) or at all agent voice terminals in a split (split data). Interval-based.
AVG RINGABN TIME	RINGABNTIME/RINGABANDON	Average ring time for calls that abandoned while ringing at the agent's voice terminal (agent data) or at all agent voice terminals in a split (split data).
AVG RINGANS TIME	RINGANSTIME/RINGANSWER	Average ring time for all ACD calls that the agent answered (agent data) or were answered by all agents in a split (split data).

Table 3-12   RING State Calculations (Contd)

Calculation	Formula	Description
AVG TERM RING TIME	CUMRING/NUMRING	Average ring time for all ACD calls that rang at the agent's voice terminal (agent data) or at all agent voice terminals in a split (split data).
HUNTABANDON	ABANDONS-RINGABANDON	Total number of calls that abandoned while in the split queue (before ringing at an agent voice terminal).
HUNTANSTIME	ANSDELAY-RINGANSTIME	Total time ACD calls waited in the split queue before ringing an agent's voice terminal.

How the Ring-State Affects Other Data

The real-time database item `INPOOL`, which is the number of agents available in a split, does not include agents who are in the ring-state. In addition, the real-time database item `IDLETIME`, which is the total time agents in a split have been in the available (AVAIL) state, does not include time in which agents are in ther ring-state.

However, the historical database item `IDLETIME` includes the time agents spent in the ring-state, as well as the time they were available.

Ring-State Split Summary Report

Data Files Used   /CURRENT/SPLIT, /CURRENT/AGENT

The ring-state Split Summary report differentiates between calls in queue and calls ringing at an agent's terminal. This report is listed in the Custom Real-Time Reports submenu under the Reports Main Menu option. On the Custom Real-Time Reports submenu, select the SPLIT_RING global report name.

```
Call Management System                        Switch_Name:Up            Time

                        INTERVAL: 36  PAGE 1 of 1          QUAD:1
                               SPLIT SUMMARY
       SPLIT: 1 (Sales)
                                          ACD      EXT IN    EXT OUT
       AGENT NAME         EXT   STATE   TIME   CALLS    CALLS     CALLS

       Larry O'Leary      1299  ACD     08:20   19       0         0
       Neal  Patruski     1278  ACD     08:21   20       3         3
       Allerdyce Nichol   1340  ACW     08:21   22       1         1
       Pete Ohshima       1290  ACD     08:21   21       2         4
       Ellen Rubin        1277  ACD     08:21   22       4         5
       Patsy You          1201  ACD     08:21   19       3         1



       NUMBER OF AGENTS STAFFED    20       NUMBER OF AGENTS AVAILABLE    0
       NUMBER ON ACD CALLS         18       AVERAGE ACD TALK TIME      26.16
       NUMBER OF CALLS RINGING      1       AVERAGE RING TIME TO ANSWER 3.20
       NUMBER OF CALLS WAITING      2       AVERAGE SPEED OF ANSWER     5.00
       OLDEST CALL WAITING         11       AVERAGE TIME TO ABANDON    11.00
    ┌──────────────────────────────────────────────────────────────────┐
    │ Confirmation, error, and exception messages appear in this line   │
    └──────────────────────────────────────────────────────────────────┘

    ┌─────┐  ┌────────┐ ┌────────┐ ┌─────┐ ┌─────┐ ┌────────┐ ┌────────┐ ┌─────┐
    │     │  │ UPDATE │ │ REPORT │ │     │ │     │ │ EXIT   │ │ PRINT  │ │     │
    │     │  │        │ │ PARAMS │ │     │ │     │ │        │ │ SCREEN │ │     │
    └─────┘  └────────┘ └────────┘ └─────┘ └─────┘ └────────┘ └────────┘ └─────┘
```

Figure 3-14   Split Summary Real-Time Report

NOTE   Extensions assigned to a split, but currently unstaffed, will appear in the report, with "UNSTAF" in the STATE column. To prevent these extensions from showing up, you can create a custom report and assign the following criteria statement to each data item in the report: ASTATE NE 0 (0 represents the "UNSTAF" state).

Table 3-13   Item Reference for the Ring-State Split Summary Report

Report Item	What It Measures	Units	Database Item Or Calculation Formula
SPLIT	Split number or synonym.		SYN(SPLIT)
AGENT	Split member login ID or synonym.	Synonym, login ID	SYN(LOGID)
EXT	Extension at which the agent is logged in.	Extension number	EXTENSION
STATE	Current state this agent is in (UNSTAF, AVAIL, RING, ACD, ACW, AUX, ACWOUT, ACWIN, AUXOUT, AUXIN, INIT).	Agent state name	ASTATE
TIME	Time agent entered the current state.	Military notation time	TIMEMARK
ACD CALLS	Number of ACD calls answered by this agent in the current half hour. Some of the calls counted may have intraflowed/ interflowed into the agent's split.	Calls	ACDCALLS
EXT IN CALLS	Direct dialed calls to this agent (extension) in the current half-hour.	Calls	EXT CALL IN ACWINCALLS + AUXINCALLS
EXT OUT CALLS	Extension-out calls placed by this agent (extension) during the current half-hour	Calls	NUM CALL OUT2 ACWOUTCALLS + AUXOUTCALLS
NUMBER OF AGENTS STAFFED	Currently logged-in agents in this split.	Agents	STAFCOUNT

Table 3-13   Item Reference for the Ring-State Split Summary Report (Contd)

Report Item	What It Measures	Units	Database Item Or Calculation Formula
NUMBER ON ACD CALLS	Current number of split's agents on ACD calls.	Agents	ACDCOUNT
NUMBER OF CALLS RINGING	Number of agents currently in the ring-state.	Calls	RINGCOUNT
NUMBER OF CALLS WAITING	Number of unanswered calls in this split's queue. Includes calls ringing.	Calls	QUECALLS
OLDEST CALL WAITING	Time that the first call in queue has been waiting.	Seconds	OCW
NUMBER OF AGENTS AVAILABLE	Agents available for ACD calls; idle agents. **Does not** include agents with calls ringing.	Agents	INPOOL
AVERAGE ACD TALK TIME	Average length of ACD calls handled by this split's agents in the current half-hour.	Seconds	AVG COM TALK TIME CUMTALK/NUMTALK
AVERAGE RING TIME TO ANSWER	Average ring time for calls to the split.	Seconds	AVG RINGANS TIME RINGANSTIME/RINGANSWER
AVERAGE SPEED OF ANSWER	Average time to answer all calls that have been answered in the current half-hour.	Seconds	AVG ANSWER SPEED ANSDELAY/ANSWERED
AVERAGE TIME TO ABANDON	The average wait time for callers who hung up before connecting with an agent.	Seconds	AVG ABANDON TIME ABANTIME/ABANDONS

Ring-State System Status Report

Data File Used   /CURRENT/SPLIT

The ring-state System Status report differentiates between calls in queue and calls ringing at an agent's terminal. This report is listed in the Custom Real-Time Reports submenu under the Reports Main Menu option. On the Custom Real-Time Reports submenu, select the SYS_RING global report name.

```
Call Management System                              Switch_Name:Up          Time

                          INTERVAL: 36  PAGE 1 of 1            QUAD:1
                                  SYSTEM STATUS

        SPLIT                   1 (sales) 2 (servc) 3 (admin) 4 (wrnty)    5 ()

        NO. OF CALLS WAITING        3         5         3         3         3
        OLDEST CALL WAITING         5        12        15        18        18
        AVERAGE SPEED OF ANSWER    5.04      6.40     10.31     15.27     17.37

        NO. ABANDONED CALLS        73        35        18        10         9
        AVERAGE TIME TO ABANDON   11.00     15.06     20.00     25.00     30.00

        NO. OF ACD CALLS          423       208       143       108        86
        AVERAGE ACD TALK TIME     26.17     57.52     81.12    107.55    144.47
        AVG. AFTER CALL WORK TIME 11.01     16.00     24.00     36.00     34.00

        NO. OF AGENTS AVAILABLE     0         0         0         0         0
        NO. OF CALLS RINGING        1         0         0         0         1
        NO. OF AGENTS ON ACD       18        19        18        19        19
        NO. IN AFTER CALL WORK      1         1         2         1         1
        NO. IN AUX WORK             1         0         0         0         0
        NO. ON OUTGOING CALLS       0         0         0         0         0

 Confirmation, error, and exception messages appear in this line


 ┌──────┐  ┌──────┐  ┌──────┐  ┌──────┐  ┌──────┐  ┌──────┐  ┌──────┐  ┌──────┐
 │      │  │UPDATE│  │REPORT│  │      │  │      │  │EXIT  │  │PRINT │  │      │
 │      │  │      │  │PARAMS│  │      │  │      │  │      │  │SCREEN│  │      │
 └──────┘  └──────┘  └──────┘  └──────┘  └──────┘  └──────┘  └──────┘  └──────┘
```

Figure 3-15   Ring-State System Status Real-Time Report

Table 3-14   Item Reference for the Ring-State System Status Report

Report Item	What It Measures	Units	Database Item Or Calculation Formula
SPLIT	Split numbers or synonyms for selected splits.		SYN(SPLIT)
NO. OF CALLS WAITING	Number of unanswered calls in the splits' queues.	Calls	QUECALLS
OLDEST CALL WAITING	Length of time the first unanswered call in each queue has been waiting.	Seconds	OCW
AVERAGE SPEED OF ANSWER	Average wait time for calls that have been answered in the current half-hour.	Seconds	AVG ANSWER SPEED ANSDELAY/ANSWERED
NO. OF ABANDONED CALLS	For current half-hour, total of queued calls for each split in which the caller hangs up before being answered.	Calls	ABANDONS
AVERAGE TIME TO ABANDON	The average wait time for callers who hung up before connecting with an agent.	Seconds	AVG ABANDON TIME ABANTIME/ABANDONS
NO. OF ACD CALLS	Queued calls that connected to an agent during this half-hour. (This item also contains intraflowed/interflowed calls answered in this split.)	Calls	ACDCALLS
AVERAGE ACD TALK TIME	Length of the average ACD call during this half-hour in each split.	Seconds	AVG COM TALK TIME CUMTALK/NUMTALK
AVG. AFTER CALL WORK TIME	Average length of session in after-call work for agents in each split.	Seconds	AVG COMP ACW TIME CUMACW/NUMACW

Table 3-14   Item Reference for the Ring-State System Status Report (Contd)

Report Item	What It Measures	Units	Database Item Or Calculation Formula
NO. OF AGENTS AVAILABLE	Agents that are currently available to receive ACD calls in each split. **Does not** include agents whose voice terminals are ringing.	Agents	INPOOL
NO. OF CALLS RINGING	Number of agents currently in the ring-state.	Calls	RINGCOUNT
NO. OF AGENTS ON ACD	Agents currently connected to ACD calls in each split.	Agents	ACDCOUNT
NO. IN AFTER CALL WORK	Agents now in ACW in each split.	Agents	ACWCOUNT
NO. IN AUX WORK	Agents now in auxiliary work in each split.	Agents	AUXCOUNT
NO. ON OUTGOING CALLS	Agents currently engaged in extension-out calls in each split.	Agents	AGENT CALL OUT ACWOUTCOUNT+AUXOUTCOUNT

Report-Item Cross-Reference

Table 3-15 will help you find out which data items are in which standard reports.

> **NOTE** Some nonstatistical items such as agent name, time, and ID number are not shown in this table.

Table 3-15   Report Items/ Real-Time Report Cross-Reference

REPORT ITEMS	Split Status	Group Status	Agent/ Split Compari- son	System Status	Split Summary	Call Profile	Trunk Group Summary	Split Perform- ance	Split Event Count Summary
Number of Calls Waiting	X			X	X			X	
Oldest Call Waiting	X			X	X			X	
Average Speed of Answer (Average Time to Answer)	X			X	X	X		X	
Number of Abandoned Calls	X			X		X		X	
Average Time to Abandon	X			X	X	X		X	
Number of ACD Calls	X		X	X	X			X	X
Average ACD Talk Time	X		X	X	X			X	
Average After Call Work	X		X	X				X	
Number of Outgoing Calls	X							X	
Average Outgoing Talk Time	X		X					X	
Number of Agents Staffed	X				X			X	X
Number on ACD Calls (No. of Agents on ACD)	X			X	X			X	
Number in AUX Work	X			X				X	

> **NOTE** The report items No. of Calls Ringing and No. of Calls Queued appears in the special Split Summary and System Status Reports. These global custom reports are found in the Custom Real-Time Reports submenu under the Reports Main Menu option.

Table 3-15   Report Items/ Real-Time Report Cross-Reference (Contd)

REPORT ITEMS	Split Status	Group Status	Agent/ Split Compari- son	System Status	Split Summary	Call Profile	Trunk Group Summary	Split Perform- ance	Split Event Count Summary
Number of Agents Available	X			X	X			X	
Number in After Call Work	X			X				X	
Number on Outgoing Calls	X			X				X	
Agent State		X			X				
Ext In Calls (No. of Ext. Calls In)			X		X				
Number of Calls -- ACD			X						
Number of Calls -- OUT			X		X				
Average Talk Time -- ACD			X						
Percent of Staffed Time (ACD or Out Calls)			X						
Time in AUX Work			X						
Percent AUX Work Time			X						
Number of Calls Carried						X			
Number of Calls Answered						X			
Percent Abandoned						X			
Percent Answered						X			
Service Level						X			
% Within Service Level						X			
Trunk Group State							X		
Number of Assist Calls			X						
Total Time Staffed			X						
Event Count (1 - 9)									X
Number of Busy Trunks	X								
Total Number of Trunks	X						X		

NOTE The report items No. of Calls Ringing and No. of Calls Queued appears in the special Split Summary and System Status Reports. These global custom reports are found in the Custom Real-Time Reports submenu under the Reports Main Menu option.

NOTES

General Information

Historical reports are used to check the past performance of any measured subset of the ACD. Historical reports display past data for various agent, split, or trunk group activities, such as number of ACD calls, abandoned calls, average talk time, average speed of answer, etc.

Historical reports include:

> Daily reports, which contain half-hour breakdowns of data
>
> Weekly and monthly reports (and the Daily System report), which contain daily summary data
>
> Summary reports, which contain a summary of one day's results, broken down by agents in a split or group, or trunks in a trunk group. *Unlike* most Daily reports, Summary reports use data from the **daily**, not the half-hour, historical database.
>
> Daily-Only reports, which includes three reports, each with a different format:
>
> > — The Daily Login and Logout Report, which contains a list of logins and logouts in a split. Logins are sorted by extension numbers, and logouts are sorted by time.
> >
> > — The Daily Call Profile Report, which contains daily summary data.
> >
> > — The Daily Trunk Report, which contains half-hour breakdowns of data.

CMS can store daily summary data for up to 387 days, and it can store half-hour data for up to 3-1 days. These maximums are the default storage parameters for CMS, but you can reduce the length of time that CMS stores data (thereby saving disk storage space) using the Archive Parameters screen (see Chapter 11, ''Maintenance'').

Though data in the half-hour database is archived automatically, data in the daily database is archived according to the schedule you set using the Daily Data Archive screen (see Chapter 11, ''Maintenance''). This archive schedule (which can run every day, every other day, on demand, or however you choose) will determine which days are contained in the weekly, monthly, and summary reports. Therefore, for complete reports you should schedule the daily data archive to occur every work day.

You can, either on demand or according to a selected schedule (see Chapter 7, "Schedule"), print the reports, display them on your terminal, or send them to a designated file. You should normally schedule historical reports to run at night during off-peak hours to avoid interfering with normal business computer time.

NOTE	To order a report, you must have **read** permission for the Reports subsystem and the particular split or trunk group you want. This requirement includes read permission for the split containing a particular agent or a particular agent/ extension group and read permission for the trunk group containing a particular trunk.

Menus Used to Select Standard Historical Reports

You select standard historical reports by first accessing the Reports Menu (Figure 4-1).

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌───────────────────────────────────────────────────────────────────┐  │
│  │ Call Management  System                    Switch_Name:Up     Time │  │
│  └───────────────────────────────────────────────────────────────────┘  │
│                                                                          │
│                        REPORTS                                           │
│                                                                          │
│                    Standard                                              │
│                    [ ] Real-Time                                         │
│                    [ ] Historical                                        │
│                                                                          │
│                    Custom                                                │
│                    [ ] Real-Time                                         │
│                    [ ] Historical                                        │
│                                                                          │
│  ┌───────────────────────────────────────────────────────────────┐      │
│  │   Error and confirmation messages appear in this field.        │      │
│  └───────────────────────────────────────────────────────────────┘      │
│  ┌─────┐ ┌─────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐  │
│  │     │ │     │ │      │ │      │ │      │ │EXIT  │ │PRINT │ │HELP  │  │
│  │     │ │     │ │      │ │      │ │      │ │      │ │SCREEN│ │KEYS  │  │
│  └─────┘ └─────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘  │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 4-1   The Reports Menu

You then access the Standard Historical Reports menu (Figure 4-2), which lists the standard historical reports available to you. Each of these reports is described in detail later in this chapter.

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌─────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System              Switch_Name:Up          Time    │ │
│  └─────────────────────────────────────────────────────────────────────┘ │
│                                                                           │
│                        STANDARD HISTORICAL REPORTS                        │
│                                                                           │
│          _____                               │
│                                                                           │
│          Split       Split Event   System       Summary                   │
│          [ ] Daily   [ ] Daily     [ ] Daily     [ ] Split                 │
│          [ ] Weekly  [ ] Weekly    [ ] Weekly    [ ] Group                 │
│          [ ] Monthly [ ] Monthly   [ ] Monthly   [ ] Trunk Group           │
│                                                                           │
│          Agent       Agent Event   Trunk Group   Daily-Only                │
│          [ ] Daily   [ ] Daily     [ ] Daily     [ ] Login Logout          │
│          [ ] Weekly  [ ] Weekly    [ ] Weekly    [ ] Call Profile          │
│          [ ] Monthly [ ] Monthly   [ ] Monthly   [ ] Trunk                 │
│  ┌─────────────────────────────────────────────────────────────────┐     │
│  │  Error and confirmation messages appear in this field.          │     │
│  └─────────────────────────────────────────────────────────────────┘     │
│  ┌─────┐ ┌─────┐ ┌───────┐ ┌───────┐ ┌─────┐ ┌──────┐ ┌──────┐ ┌──────┐  │
│  │     │ │     │ │       │ │       │ │     │ │ EXIT │ │PRINT │ │HELP  │  │
│  │     │ │     │ │       │ │       │ │     │ │      │ │SCREEN│ │KEYS  │  │
│  └─────┘ └─────┘ └───────┘ └───────┘ └─────┘ └──────┘ └──────┘ └──────┘  │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 4-2   The Standard Historical Reports Menu

The Report Parameters Screens

A Report Parameters screen, like the one below, will appear after you select the report you want and before the report is actually generated. You will use the Report Parameters screen to select the specific agent, agent group, split, or trunk group you want the report to cover. You also specify the day(s) and/ or half-hour intervals you want the report to cover.

Daily Report Parameters Screen

The Report Parameters screen for **daily** reports contains the fields as shown below. (This Report Parameters screen is identical to the Report Parameters screen for the Daily-Only Trunk Report.)

```
Call Management  System                          Switch_Name:Up            Time

                              REPORT PARAMETERS

                         Daily [Type of Report]

             1   REPORT_DAY= -1
             2   [item_choice]=
             3   FIRST_INTERVAL= 1
             4   LAST_INTERVAL= 48
```

Definition of Field

Field ⬚1 Report Day

The day covered by the report. The entry can have a relative day or an MM/ DD/ YY format. Data for daily reports are available up to 31 days in the past. An entry of "-0" is acceptable and will generate a report for today starting at midnight and continuing up to the most recent half-hour archive.

Field ⬚2 [item choice]

The number or synonym of the agent, group, split, trunk, or trunk group you want covered in the report. Your entry must be identical in upper- and lower-case lettering to the ID established in the database.

Field ☐3 First Interval

The number of the first half-hour interval that you want the report to cover. (See Table 4-1, Time Interval Table, that follows.)

Field ☐4 Last Interval

The number of the last half-hour interval that you want the report to cover. (See Table 4-1, Time Interval Table, that follows.)

Half-hour intervals you specify on the Report Parameters screen correspond to records in the half-hour historical database. Table 4-1 defines CMS half-hour interval numbers:

Table 4-1   Time Interval Table

Interval		Clocktime		Interval
1	AM	12:00-12:30	PM	25
2	AM	12:30-01:00	PM	26
3	AM	01:00-01:30	PM	27
4	AM	01:30-02:00	PM	28
5	AM	02:00-02:30	PM	29
6	AM	02:30-03:00	PM	30
7	AM	03:00-03:30	PM	31
8	AM	03:30-04:00	PM	32
9	AM	04:00-04:30	PM	33
1-0	AM	04:30-05:00	PM	34
1-1	AM	05:00-05:30	PM	35
1-2	AM	05:30-06:00	PM	36
1-3	AM	06:00-06:30	PM	37
1-4	AM	06:30-07:00	PM	38
1-5	AM	07:00-07:30	PM	39
1-6	AM	07:30-08:00	PM	40
1-7	AM	08:00-08:30	PM	41
1-8	AM	08:30-09:00	PM	42
1-9	AM	09:00-09:30	PM	43
2-0	AM	09:30-10:00	PM	44
2-1	AM	10:00-10:30	PM	45
2-2	AM	10:30-11:00	PM	46
2-3	AM	11:00-11:30	PM	47
2-4	AM	11:30-12:00	PM	48

Weekly/Monthly Report Parameters Screen

The Report Parameters screen for **weekly** and **monthly** reports contains the following fields.

```
┌─────────────────────────────────────────────────────────────────────┐
│ Call Management  System                       Switch_Name:Up    Time │
└─────────────────────────────────────────────────────────────────────┘

                           REPORT PARAMETERS

                  Weekly [or Monthly] [type of report]

          1  [item_choice]=
          2  START_DAY= -7 [-31]
          3  NUMBER_OF_DAYS= 7 [31]
```

Definition of Fields

Field 1 [item choice]

The number or synonym of the agent, group, split, or trunk group you want covered in the report. Your entry must be identical in upper- and lower-case lettering to the ID established in the database.

Field 2 Start Day

The earliest day you want the report to cover. Use either the relative day or MM/ DD/ YY format. The earliest day you can specify is -387. The default values (-7 and -31) would generate reports beginning a week and a month ago, respectively.

Field 3 Number of Days

The number of days you want the report to include. Seven and 31 are the default values for weekly and monthly reports, respectively. A single report should cover no more than 120 days.

Summary Report Parameters Screen

The Report Parameters screen for **summary** reports contains the following fields. (This Report Parameters screen is also identical to the Report Parameters screens for the Daily-Only Login and Logout Report and Daily-Only Call Profile Report.)

```
Call Management  System                              Switch_Name:Up           Time



                              REPORT PARAMETERS

                              [item]   Summary

                  1  REPORT_DAY= -1
                  2  [item_choice]=
```

Definition of Field

Field 1 Report Day

The day you want the report to cover. Use either a relative day or an MM/DD/YY format. The default value (-1) specifies a report for yesterday, but you can enter up to -387 in the field. Entering ''0'' for today will not generate a report because the daily data will not have been archived yet.

Field 2 [item choice]

The number or synonym of the agent, group, split, or trunk group you want covered in the report. Your entry must be identical in upper- and lower-case lettering to the ID established in the database.

Report Destination Screen

When you order any Standard Historical, Custom Historical, Forecast, Exception, Agent Trace, or Error Log report, CMS displays the Report Destination screen (Figure 4-3). Use this screen to determine where your report will go — to a printer, to a terminal, or to a UNIX system file.

| NOTE | If you are scheduling a report to be generated at a later time, the screen will **not** give you the option of sending the report to a terminal. |

```
Call Management System                              Switch_Name:Up          Time


Please enter the report destination: p
(''p'' for printer, ''t'' for terminal or ''f'' for file)
```
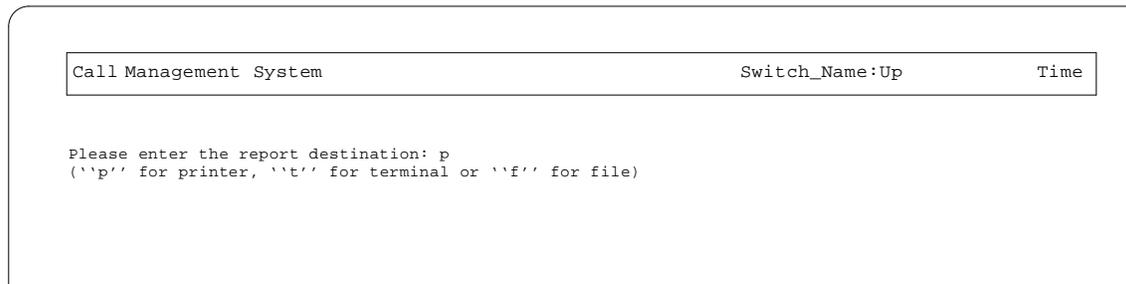
Figure 4-3   The Report Destination Screen

If you type *t* at the prompt and press RETURN, the report will appear on your terminal. If you type *p* at the prompt and press RETURN, the prompts in Figure 4-4 will appear. Your default printer name will appear; only enter a printer name if different than the default printer. The default number of copies is "1."

```
Call Management  System                             Switch_Name:Up          Time


 Please enter the report destination: p
 (''p'' for printer, or ''f'' for file; for your command

 Please enter the printer name/class: printer1

 Please enter the number of copies: 1
```
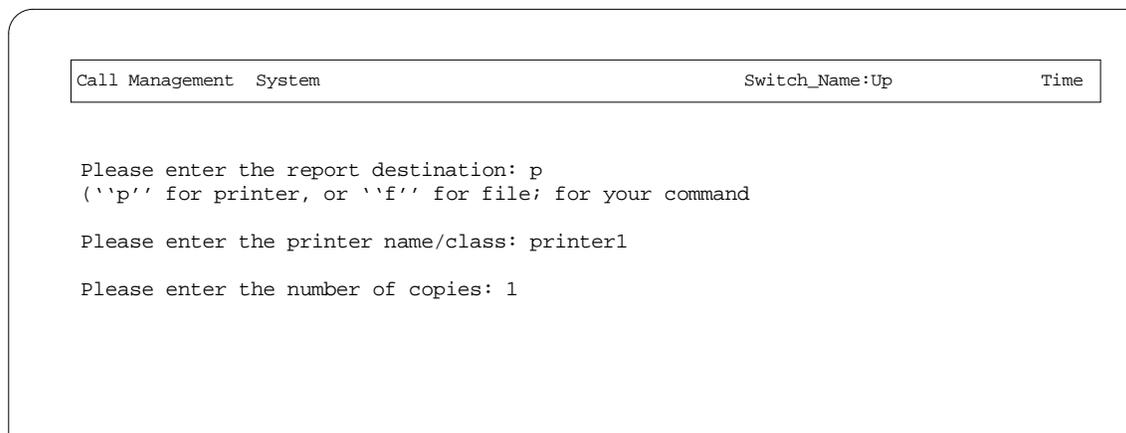
Figure 4-4   The Report Destination Screen for Printer Selection

You may choose to send a report to a file for three reasons:

> You do not want to print the report, but you want to have the report available for viewing at any time.

> You want to indefinitely delay printing of the report (perhaps because of printer problems); in which case, you can manually print the report at a later time.

> You want to send a copy of the report to another computer.

If you type *f* at the prompt and press [RETURN], the prompt in Figure 4-5 will appear. You can type a filename for your report or accept the default name. You can also type the full UNIX system path name e.g., */usr/tmp/myrep*. You can then access this report in the UNIX system (see Chapter 12).

```
┌─────────────────────────────────────────────────────────────────────────┐
│ Call Management  System                          Switch_Name:Up      Time │
└─────────────────────────────────────────────────────────────────────────┘


   Please enter the report destination: f
   (''p'' for printer, or ''f'' for file; for your command

   Please enter the file name/path: RPTDSPLIT

```

Figure 4-5   The Report Destination Screen for File Selection

Ordering a Standard Historical Report
Ordering a Daily Report

You order most of the "daily" reports to display data for each half-hour in a day. However, the Daily System report displays daily summary data, and you order it in a slightly different manner from that of the other daily reports.

1   On the `REPORTS` menu, select `[ ] Historical` under the `Standard` heading and press [RETURN].

    [The Standard Historical Reports menu appears.]

2   Select the desired reports and press [RETURN].

    [A Report Parameters screen appears.]

3   In the space next to `REPORT_DAY=`, type the day covered by the report. This can be in *relative day* format (such as is used for the default [-1]) or in MM/ DD/ YY format. Depending on your archive parameters, reports using half-hour data are available for up to 31 days in the past, and the Daily System report, which uses daily data, is available for up to 387 days in the past. A specification of "-0" is acceptable and will generate a report for today starting at midnight and continuing up to the most recent archiving of half-hour data.

    > **NOTE**   Go to Step 6 if you are ordering a Daily System report.

4   In the space next to `[item_choice]=`, type the number or synonym of the item (individual agent, split, etc.) you want covered. Capitals and lower-case letters are *different* for synonyms and agent Dictionary names.

5   In the spaces next to `FIRST_INTERVAL=` and `LAST_INTERVAL=`, type the number of the beginning and ending half-hour intervals you want covered in the report.

6   Press [RETURN] to generate the report immediately, or press [COMMAND LINE] to schedule the report for a later time.

    [The Report Destination screen appears.]

7   Follow the directions on the Report Destination screen to finish ordering the report, and press [RETURN] again.

[If you pressed RETURN in Step 6, the report is generated immediately. If you pressed COMMAND LINE in Step 6, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Ordering a Weekly or Monthly Report

You order the weekly and monthly reports to display daily summary data for the day(s) specified.

1   On the REPORTS menu, select [ ] Historical under the Standard heading and press RETURN.

    [The Standard Historical Reports menu appears.]

2   Select the desired report and press RETURN.

    [A Report Parameters screen appears.]

    | NOTE | Go to Step 6 if you are ordering a weekly or monthly **System** report. |

3   In the space next to [item_choice]=, type the number or synonym of the item you would like the report based on (that is, an agent ID, trunk number, etc.).

4   In the space next to START_DAY = , type the relative or MM/ DD/ YY-format date that will be the earliest data contained in the report. Reports using daily data are available up to 387 days in the past (depending on where the Archive Parameters are set).

    > The -7 and -31 are the defaults for weekly and monthly reports, respectively. A specification of "-0" would *not* be acceptable for any report using daily data files, as there are no daily data files for today (which is what -0 means) until Daily Data Archive executes for today (sometime tomorrow morning).

5   In the space next to NUMBER_OF_DAYS=, type an integer representing the number of days to be covered by the report.

    > The 7 and 31 are the defaults for the weekly and monthly reports, respectively. It is recommended that a single report cover no more than 1-20 days.

6   Press RETURN to generate the report immediately, or press COMMAND LINE to schedule the report for a later time.

[The Report Destination screen appears.]

7   Follow the directions on the Report Destination screen to finish ordering the report, and press RETURN again.

[If you pressed RETURN in Step 6, the report is generated immediately. If you pressed COMMAND LINE in Step 6, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Ordering a Summary Report

Reports listed under the Summary heading are similar to daily reports in that they cover one day. However, like the Daily System report, they use daily (not half-hour) data.

1   On the REPORTS menu, select [ ] Historical under the Standard heading and press RETURN.

[The Standard Historical Reports menu appears.]

2   Select the desired report and press RETURN.

[A ''Report Parameters'' screen appears.]

3   In the space next to REPORT_DAY=, type the day to be covered by the report. This entry can be a relative day (the format used for the default [-1]) or an MM/ DD/ YY-format date. Data are available up to 387 days in the past, as the daily data files are used for these reports. Specifying "-0" will not work here.

4   Next to [item_choice]=, type the number or synonym of the split, group, or trunk group you want covered in the report.

5   Press RETURN to generate the report immediately, or press COMMAND LINE to schedule the report for a later time.

[The Report Destination screen appears.]

6   Follow the directions on the Report Destination screen to finish ordering the report, and press RETURN again.

[If you pressed RETURN in Step 5, the report is generated immediately. If you pressed COMMAND LINE in Step 5, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Introduction to Report Descriptions

Each report description in this chapter contains:

An illustration of the report's output with sample data

A table describing each **report item** (each piece of output data in the report), including:

— A definition of each item

— The units the output values represent (for example, calls, seconds, percent)

— The database item or calculation for the report item (standard reports only).

— The formula for each calculation as defined in the Dictionary.

Database items, formulas, and calculations are presented in the report descriptions for quick reference should you decide to create custom reports.

Database items   Database items are the basic units for storage and retrieval of data that appear in the records of agents, groups, splits, and trunk groups. Examples are ACWINTIME (total time on After-Call-Work for incoming calls), ACDCALLS (total number of ACD calls), and ACDTIME (total time on ACD calls). You cannot change data base items, but you can use them in the creation of custom reports.

Formulas   Formulas consist of database items plus arithmetic operators such as *, ( ), and / . These create more meaningful information about agents, splits, trunk groups, and trunks. An example of a formula is ACWOUTTIME - ACWINTIME)/ ACDCALLS, which is the formula for average length of after-call work sessions.

Calculations   Calculations are shorthand notations for formulas and are defined in the Dictionary. For custom reports, you can create custom calculations based on standard formulas listed in this section. Then, if you use these custom calculations instead of formulas, you can use the Dictionary to make quick global changes (in more than one report) to report-output.

NOTE	You **cannot** change a standard report, nor can you **delete** a standard calculation.

For all **formulas** (averages and percentages) that contain division operators, the formula for the summary line item is of the form SUM(numerator) / SUM (denominator). Other summary line items have the form SUM(item).

Why Reports May Not Add Up

If you try to compare data in two reports, or compare data within a single report, the numbers may not add up the way you think they should. These report data discrepancies occur because data is collected in different ways **and**, when communication between the switch and the 3B is interrupted in some way, the numbers for various report items may not add up.

Call-Based Versus Interval-Based Items

Interval-based items are database items that either record time of events during and up to the end of an interval or record event occurrences when the events begin. For example, say an agent answers a call during Interval 17. The call lasts 4 minutes in this interval. The call continues into Interval 18, lasts 3 minutes, and ends in Interval 18. For this agent, one call is recorded in Interval 17 by the interval-based item ACDCALLS. No call is recorded in Interval 1-8. Four minutes of call time is recorded in Interval 17 by the interval-based item ACDTIME, and 3 minutes of call time is recorded in Interval 18 by ACDTIME.

Call-based items are database items that record event occurrences when the events end or record total time for events within the intervals in which the events end: they do not split up time between two intervals. In the preceding example, the call-based item NUMTALK would record the call in Interval 18. No call would be recorded in Interval 17. The call-based item CUMTALK would record 7 minutes of call time in Interval 18.

Communication Between the Switch and the 3B

At times, the link between the switch and the 3B may be interrupted or messages from the switch may be disregarded because of software audit corrections or protocol violations. When these lapses in communication occur, an interval-based item may collect data, while a call-based item does not. Or the reverse may be true. You can ensure that, when comparing your custom reports, data is consistent if you do not alternate call-based and interval-based database items that collect the same type of data.

Asterisks on Historical Reports

You will receive asterisks in some fields on historical reports if your data is out of range.

Split Report

Report File Names	`DSPLIT, WSPLIT, MSPLIT`
Data Files Used	`/HHOUR/SPLIT` for Daily Report;
	`/DAILY/SPLIT` for Weekly and Monthly Reports
Dependencies	Read permission for split.

A Split Report summarizes the activities of a split as a unit. The report can be used to analyze the overall performance of a split or to compare splits doing comparable work. See Figures 4-6 and 4-7.

> **NOTE** `Average Speed of Answer` reports the average time callers waited in queue before connecting to an agent. However, abandoned calls are not included in forming this average. `ACD Time` includes both the time on ACD calls and the time in after-call work.

> **NOTE** The time an agent spends waiting for an ACD call (idle time) is not included in any of the calculations for the Split Report; therefore, the times might not add up. You can create a custom report to add the idle time to this report. See the *3B CMS Custom Reports* document (585-215-503).

Split Report

4/22/89   DAY: 04/01/89

SPLIT: 1 ()

TIME	AVG SPEED ANS	AVG ABAN TIME	NO ACD CALLS	NO ABAN CALLS	MAX DELAY	FLOW IN	FLOW OUT	AVG TALK TIME	AVG AFTER CALL	% AUX	NO OUT CALLS	AVG OUT TIME	AVG POS STAFF	% ACD TIME	% ANS	CALLS/ POS STAFF
0-8:00-08:30AM	3.46	10.97	1183	203	11	0	0	26.15	4.13	0.40	0	0.00	20.00	99.45	85.35	59.15
0-8:30-09:00AM	3.54	10.92	1177	204	11	0	0	26.22	4.05	0.43	0	0.00	20.00	99.44	85.23	58.85
0-9:00-09:30AM	3.82	10.88	1188	204	11	0	0	26.31	3.96	0.40	0	0.00	20.00	99.53	85.34	59.40
.																
0-5:30-06:00PM	3.73	10.83	1190	206	12	0	0	26.43	3.83	0.40	0	0.00	20.00	99.52	85.24	59.50
	3.75	10.90	56799	9788		0	0	26.27	4.00	0.41	0	0.00		99.49	85.30	

2/11/89

SPLIT: 1 ()

DAY	AVG SPEED ANS	AVG ABAN TIME	NO. ACD CALLS	NO. ABAN CALLS	MAX DELAY	FLOW IN	FLOW OUT	AVG TALK TIME	AVG AFTER CALL WRK	% AUX	NO EXT OUT CALLS	AVG EXT OUT TIME	% ACD TIME	% ANS
0-1/28/89	40.83	78.00	644	33	407	0	0	141.99	0.41	55.47	1213	60.70	32.57	95.13
0-1/29/89	22.01	58.04	670	27	214	0	0	137.01	0.77	49.38	1119	57.62	34.38	96.13
0-2/01/89	36.61	35.91	2053	67	191	0	0	118.06	1.15	19.62	667	54.60	69.38	96.84
0-2/02/89	43.09	30.65	2613	100	328	0	0	109.75	1.59	23.80	887	51.92	73.16	96.31
0-2/03/89	27.80	26.83	2126	47	228	0	0	112.13	1.28	22.75	754	54.05	66.89	97.84
SUMMARY	35.52	39.68	8106	274		0	0	117.30	1.24	32.19	4640	56.32	57.85	96.73

2/11/89

SPLIT: 1 ()

DAY	AVG SPEED ANS	AVG ABAN TIME	NO. ACD CALLS	NO. ABAN CALLS	MAX DELAY	FLOW IN	FLOW OUT	AVG TALK TIME	AVG AFTER CALL WRK	% AUX	NO EXT OUT CALLS	AVG EXT OUT TIME	% ACD TIME	% ANS
0-1/11/89	25.86	43.31	625	13	448	0	0	156.50	0.03	24.93	576	58.61	49.10	97.96
0-1/12/89	39.46	74.38	511	32	415	0	0	179.87	0.32	23.41	380	53.11	57.05	94.11
0-1/13/89	11.49	77.88	462	8	235	0	0	154.65	1.22	41.52	988	60.29	33.46	98.30
.														
0-2/10/89	7.90	49.70	999	10	194	1	0	133.18	1.56	30.01	841	63.66	43.16	99.01
SUMMARY	31.96	41.53	23295	839		1	0	128.88	1.46	41.13	26018	58.76	44.73	96.52

Figure 4-6   Examples of Split Reports

Table 4-2   Item Reference for Split Reports

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-4/ 22/ 89	Date report was generated.	MM/ DD/ YY format date	DATE(D)
DSPLIT, WSPLIT, MSPLIT	UNIX system file name of report.		Label
DAY (Daily only)	Day selected in the Report Parameters screen to be reported on.	MM/ DD/ YY format date	DATE(J)
SPLIT	Split selected in Report Parameters screen to be covered by the report.	Split number or synonym	SYN(SPLIT)
TIME or DAY	Intervals or days selected for report in the Report Parameters screen.	a.m./ p.m. format time, half-hour intervals or MM/ DD/ YY format dates	INTERVAL for Daily Report; DATE(DAY) for Weekly and Monthly.
AVG SPEED ANS	Average speed of answer: the average wait time for callers that connected to an agent.	Seconds	AVG ANSWER SPEED ANSDELAY/ANSWERED
AVG ABAN TIME	Average abandon time: the average wait time for callers who hung up before connecting with an agent.	Seconds	AVG ABANDON TIME ABANTIME/ABANDONS
NUMBER ACD CALLS	ACD calls connected to agents in this split during the period covered. The count includes intraflowed/ interflowed calls answered in this split.	Calls	ACDCALLS

Table 4-2   Item Reference for Split Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
NO. ABAN CALLS	Number of abandoned calls: queued calls in which the caller hung up before connecting with an agent.	Calls	ABANDONS
MAX DELAY	Maximum delay: the longest wait in queue by any call, regardless of whether the call connected to an agent or was abandoned.	Seconds	MAXOLDCW
FLOW IN	Intraflowed/ interflowed calls accepted into this split during the period covered. The count includes intraflowed/ interflowed calls that were answered, abandoned, or flowed out of the split.	Calls	INFLOW*
FLOW OUT	Intraflowed and interflowed calls sent to another destination by this split during the period covered.	Calls	OUTFLOW*
AVG TALK TIME	Average talk time: average length of ACD calls for the period covered.	Seconds	AVG ACD TALK TIME HH (Daily) CUMTALK/NUMTALK AVG ACD TALK TIME (Weekly, monthly) ACDTIME/ACDCALLS
AVG AFTER CALL WORK	Average after-call work time: the average session in the ACW state	Seconds	AVG ACW TIME <(AWCTIME - ACWINTIME - ACWOUTTIME / ACDCALLS>
% AUX	Percent of time in AUX work: time spent in auxiliary work.	Percent	PERCENT AUX WORK <100 * (AUXTIME/STAFTIME>

* With a Generic 3i switch, you could have more INFLOW/ OUTFLOW calls counted because of the Multiple Split Queuing feature. See the *CMS Vectoring Administration* (5-85-215-502) document for more information.

Table 4-2   Item Reference for Split Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
NO. EXT OUT CALLS	Number of extension-out calls: number of outgoing calls placed from within this split during the period covered.	Calls	NUM CALL OUT2 `<ACWOUTCALLS + AUXOUTCALLS>`
AVG EXT OUT TIME (weekly and monthly reports only)	Average length of extension-out calls.	Seconds	AVG TALK TIME OUT `<(ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)>`
AVG POS STAFFED (Daily only)	The average number of agents staffing the split during a given half-hour. Calculated by logged-in seconds accumulated during the half-hour.	Agent equivalents	FULLTIME AGENT `<STAFTIME/1800>`
% ACD TIME	Percent ACD time: percent of staffed time spent on ACD calls and in after call work.	Percent	PERCENT ACD TIME `<100 * ((ACDTIME + ACWTIME) / STAFTIME)>`
% ANS	Percent of queued calls that connect to an agent	Percent	PERCENT CALL ANS `<100 * ((ACDCALLS / (ACDCALLS + ABANDONS)>`
CALLS/ POS STAFF (Daily only)	Average number of calls handled by an agent position	Calls	FULL AG NUM CALL `<1800*(ACDCALLS/ STAFTIME)>`

Split Event Count Report

Report File Name	`DSEVENT, WSEVENT, MSEVENT`
Coverage	The event count for one split COUNT buttons on agent phones
Data Files Used	`/HHOUR/SPLIT` for the Daily Report; `DAILY/SPLIT` for the Weekly and Monthly Reports.
Dependencies	Read permission for the split.

A Split Event Count Report shows the combined number of times agents in a split pressed the Event Count buttons. An Event Count button can represent any call event, including a successful sale, a call from a certain demographic category, or a response to a promotion. CMS records an event occurrence each time a logged in and off-hook agent presses an Event Count button.

NOTE	Event Counts (stroke counts) require Custom Work Group Software on Generic 1 and System 75.

```
                    DAILY SPLIT EVENT COUNT REPORT              ( MENU:  DSEVENT)
 4/ 22/ 89                                                      DAY:  04/ 01/ 89
SPLIT:  1  ()

              ACD - - - - - - - - - - - - - - - - - - - - - - EVENT  COUNT- - - - - - - - - - - - - - - - - - - - - - - - -
   TIME      CALLS    1       2       3       4       5       6       7       8       9
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

0-8: 00- 08: 30AM  1183    0       0       0       0      12       0       0       0       0
0-8: 30- 09: 00AM  1177    0       0       0       0      12       0       0       0       0
0-9: 00- 09: 30AM  1188    0       0       0       0      12       0       0       0       0
    .
    .
0-5: 30- 06: 00PM  1190    0       0       0       0      12       0       0       0       0
              - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
              5-6799     0       0       0       0     560       0       0       0       0



                    WEEKLY  SPLIT  EVENT  COUNT  REPORT          ( MENU:  WSEVENT)
 2/ 11/ 89
SPLIT:  1  ()

              ACD - - - - - - - - - - - - - - - - - - - - - - - EVENT  COUNT- - - - - - - - - - - - - - - - - - - - - - - - -
DAY           CALLS    1       2       3       4       5       6       7       8       9
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

0-2/ 04/ 89    1928    5       0       0       0       0       0       0       0       0
0-2/ 05/ 89    1635    1       0       1       0       0       0       0       0       0
0-2/ 08/ 89    1686    6       0       0       0       2       0       0       0       0
0-2/ 09/ 89    1552    2       0       0       0       1       0       0       0       0
0-2/ 10/ 89     999    7       4       6       5       3       0       0       0       0
              - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
              7-800    21       4       7       5       6       0       0       0       0



                    MONTHLY  SPLIT  EVENT  COUNT  REPORT         ( MENU:  MSEVENT)
 2/ 11/ 89
SPLIT:  1  ()

              ACD - - - - - - - - - - - - - - - - - - - - - - - EVENT  COUNT- - - - - - - - - - - - - - - - - - - - - - - - -
DAY           CALLS    1       2       3       4       5       6       7       8       9
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

0-1/ 11/ 89     625    8       0       0       0       0       0       0       0       0
0-1/ 12/ 89     511    8       0       0       0       0       0       0       0       0
0-1/ 13/ 89     462    3       1       0       0       0       0       0       0       0
    .
    .
0-2/ 10/ 89     999    7       4       6       5       3       0       0       0       0
              - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
              2-3295  116       8      10      10      13       0       0       0       0
```

Figure 4-7   Examples of Split Event Count Reports

Table 4-3   Item Reference for the Split Event Count Reports

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-4/ 22/ 89	Date report was output.	MM/ DD/ YY format date	DATE(D)
DAY	The day or days covered by the report.	MM/ DD/ YY format	DATE(J), Daily; DATE(DAY) Weekly, Monthly
SPLIT	The split number or synonym selected in the Report Parameters screen.	Number or synonym	SYN(SPLIT)
TIME (Daily report only)	The half-hour intervals selected in the Report Parameters screen.	a.m./ p.m. format time	INTERVAL
ACD CALLS	Number of ACD calls answered by this split in the period covered. The count includes intraflowed/ interflowed calls answered in this split.	Calls	ACDCALLS
EVENT COUNTS	The number of button presses of the various EVENT COUNT buttons by this split's agents during the period covered.	Event counts	STROKEn for half-hour data; SUM(STROKEn) for summary data, where "n" is the number of an EVENT COUNT button.

Agent Report

Report File Names	`DAGENT, WAGENT, MAGENT`
Data Files Used	`/HHOUR/AGENT` for Daily; `/DAILY/AGENT` for Weekly and Monthly
Dependencies	Read permission for split to which agent is assigned

An Agent Report shows the activities and performance of an individual agent. Though an agent could log into more than one split in the course of a day or week, an Agent Report lists the first split the agent logged into for the date covered by the daily report and the first split logged into for the first date covered in the weekly/ monthly reports.

Even though an agent can log into more than one split, all agent activity is recorded under the first split listed in the Agent Report. If the agent logs in using more than one login ID, that activity is recorded under each login ID.

You can use the report to evaluate the work of individuals and the appropriateness of individual work assignments. See examples in Figure 4-8.

NOTE	Depending on your needs, you may want to change the formula used to calculate `ACDTIME`. This item currently includes after-call-work.

Agent Report

2/16/89

DAY: 02/02/89

AGENT: 7002 ()
SPLIT: 1 ()

TIME	NUMBER OF ACD CALLS	AVERAGE ACD TALK TIME	AVERAGE AFTER CALL WORK	WEIGHTED CALL VALUE	NO. OF EXT OUT CALLS	AVG EXT OUT TALK TIME	NO. OF EXT IN CALLS	AVG EXT IN TALK TIME	% AUX WORK	% ACD TIME	TOTAL MIN STAFFED	NUMBER OF ASSISTS
1-1:00-11:30AM	7	175.43	0.00	175.43	0	0.00	0	0.00	0.08	99.84	20.50	0
1-1:30-12:00PM	17	87.00	0.00	87.00	1	1.00	0	0.00	15.92	83.80	29.42	0
1-2:00-12:30PM	2	845.00	0.00	845.00	0	0.00	0	0.00	1.49	97.01	29.03	0
.												
0-3:30-04:00PM	14	88.71	0.00	88.71	1	1.00	0	0.00	27.29	69.74	29.68	0
SUMMARY	91	119.55	0.00	119.55	2	1.00	0	0.00	14.84	84.37	214.90	0

2/11/89

AGENT: 7002 ()
SPLIT: 1 ()

DAY	NUMBER OF ACD CALLS	AVERAGE ACD TALK TIME	AVERAGE AFTER CALL WORK	WEIGHTED CALL VALUE	NO. OF EXT OUT CALLS	AVG EXT OUT TALK TIME	NO. OF EXT IN CALLS	AVG EXT IN TALK TIME	% AUX WORK	% ACD TIME	TOTAL HOURS STAFFED	NUMBER OF ASSISTS
0-2/04/89	98	121.36	0.00	121.36	6	2.00	0	0.00	25.67	61.63	5.36	0
0-2/05/89	70	105.49	0.00	105.49	2	1.50	0	0.00	16.25	68.50	2.99	0
0-2/08/89	54	142.69	0.00	142.69	2	1.00	0	0.00	18.85	75.87	2.82	0
0-2/09/89	85	119.56	0.00	119.56	3	1.00	0	0.00	26.30	64.81	4.36	0
0-2/10/89	48	146.54	0.00	146.54	3	1.00	0	0.00	18.66	57.17	3.42	0
SUMMARY	355	124.45	0.00	124.45	16	1.44	0	0.00	22.05	64.76	18.95	0

2/11/89

AGENT: 7002 ()
SPLIT: 1 ()

DAY	NUMBER OF ACD CALLS	AVERAGE ACD TALK TIME	AVERAGE AFTER CALL WORK	WEIGHTED CALL VALUE	NO. OF EXT OUT CALLS	AVG EXT OUT TALK TIME	NO. OF EXT IN CALLS	AVG EXT IN TALK TIME	% AUX WORK	% ACD TIME	TOTAL HOURS STAFFED	NUMBER OF ASSISTS
0-1/11/89	14	193.50	0.00	193.50	2	1.00	0	0.00	9.46	63.26	1.19	0
0-1/12/89	26	195.42	0.00	195.42	1	1.00	0	0.00	9.28	70.55	2.00	0
0-1/13/89	12	277.33	0.00	277.33	1	2.00	0	0.00	0.16	89.15	1.04	0
.												
0-2/10/89	48	146.54	0.00	146.54	3	1.00	0	0.00	18.66	57.17	3.42	0
SUMMARY	909	149.82	0.00	149.82	46	1.43	0	0.00	15.52	68.79	54.99	0

Figure 4-8   Examples of Agent Reports

Table 4-4   Item Reference on Agent Reports

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/16/89	Date the report was printed.	MM/DD/YY format date	DATE(D)
DAGENT, WAGENT, MAGENT			
File names of the reports.	UNIX system file names.	Label	
DAY (Daily only)	Date covered in a daily report; beginning date of weekly or monthly reports.	MM/DD/YY format date	DATE(J)
AGENT	ID or synonym of the agent selected in the Report Parameters screen.	Synonym or Login ID	SYN(LOGID)
SPLIT	Number or synonym of the agent's split.	Number or synonym	SYN(SPLIT)
TIME (Daily report only)	Half-hour intervals selected for this report in the Report Parameters screen.	a.m./p.m. format time	INTERVAL
DATE (Weekly, Monthly)	Days selected for this report via the Report Parameters screen.	MM/DD/YY format date	DATE(DAY)
NUMBER OF ACD CALLS	ACD calls answered by this agent during the period covered. (Some of the calls counted may have intraflowed/interflowed into the agent's split.)	Calls	SUM(ACDCALLS)*(Daily) ACDCALLS (Weekly,monthly)
AVERAGE ACD TALK TIME	Average length of this agent's ACD calls during the period covered.	Seconds	AVG ACD TALK TIME SUM (Daily) SUM(ACDTIME) / SUM(ACDCALLS) AVG ACD TALK TIME (Weekly, Monthly) ACDTIME/ACDCALLS

Table 4-4   Item Reference on Agent Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
AVERAGE AFTER CALL WORK	Average length of ACW sessions by this agent.	Seconds	AVG ACW TIME SUM (Daily) `SUM(ACWTIME - ACWOUTTIME - ACWINTIME) / SUM(ACDCALLS)` AVG ACW TIME (Weekly,monthly) `(ACWTIME - ACWOUTTIME - ACWINTIME) / ACDCALLS`
WEIGHTED CALL VALUE	The average combined length of ACD calls and after-call work for this agent. The total elapsed time from the beginning of one call to the beginning of the next, assuming the agent's work is an unbroken series of ACD calls and ACW sessions.	Seconds	AVG WORK TIME SUM (Daily) `SUM(ACDTIME + ACWTIME - ACWOUTTIME - ACWINTIME) / SUM(ACDCALLS)` AVG WORK TIME (Weekly,Monthly) `(ACDTIME + ACWTIME - ACWOUTTIME - ACWINTIME) / (ACDCALLS)`
NO. OF EXT OUT CALLS	Number of extension-out calls by this agent in the period.	Calls	SUM(NUM CALL OUT2) (Daily) `SUM(ACWOUTCALLS + AUXOUTCALLS)` NUM CALL OUT2 (Weekly,monthly) `(ACWOUTCALLS + AUXOUTCALLS)`
AVG EXT OUT TALK TIME	The length of the average extension-out call.	Seconds	AVG TALK TIM OUT SUM (Daily) `SUM(ACWOUTTIME + AUXOUTTIME) / SUM(ACWOUTCALLS + AUXOUTCALLS)` AVG TALK TIME OUT (Weekly,monthly) `(ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)`
NO. OF EXT IN CALLS	The number of direct-dialed calls to the agent's extension during the period covered.	Calls	SUM(EXT CALL IN) (Daily) `SUM(ACWINCALLS + AUXINCALLS)` EXT CALL IN (Weekly,monthly) `(ACWINCALLS + AUXINCALLS)`

Table 4-4   Item Reference on Agent Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
AVG EXT IN TALK TIME	Length of the average direct-dialed call to this agent's extension during the period covered.	Seconds	AVG TALK TIME IN SUM (Daily) `SUM(ACWINTIME + AUXINTIME) / SUM(ACWINCALLS + AUXINCALLS)` AVG TALK TIME IN (Weekly,monthly) `(ACWINTIME + AUXINTIME) / (ACWINCALLS + AUXINCALLS)`
% AUX WORK	Percent auxiliary work: the percent of the agent's total logged-in time spent in the AUX-WORK state.	Percent	PERCENT AUX WORK SUM (Daily) `1-00 * SUM(AUXTIME) / SUM(STAFTIME))` PERCENT AUX WORK (Weekly,monthly) `1-00 * (AUXTIME) / (STAFTIME))`
% ACD TIME	Percent ACD time: the percent of the agent's total logged-in time actually spent on ACD calls and the associated after-call work.	Percent	PERCENT ACD TIME SUM (Daily) `1-00 * SUM(ACDTIME + ACWTIME) / SUM(STAFTIME)` PERCENT ACD TIME (Weekly,monthly) `1-00 * (ACDTIME + ACWTIME) / (STAFTIME)`
TOTAL MIN/ HOURS STAFFED	Total logged-in time by this agent in the period covered.	Minutes/ hours	SUM(MIN STAFF TIME (Daily) `STAFTIME / 60` HR STAFF TIME (Weekly,monthly) `STAFTIME / 3600`
NUMBER OF ASSISTS	Number of calls referred to the supervisor by the agent using the ASSIST button during the period covered.	Calls	SUM(ASSISTS) (Daily) ASSISTS (Weekly,monthly)

Agent Event Count Report

Report File Names	`DAVENT, WAVENT, MAVENT`
Data Files Used	`/HHOUR/AGENT` used in Daily report;
	`/DAILY/AGENT` used in Weekly and Monthly reports.
Dependencies	Read permission for split to which agent is assigned.

The Agent Event Count report shows the number of times an individual agent has pressed an **Event Count** (sometimes referred to as Stroke Count) button while logged in and off-hook.

An Event Count button can represent any call event, including a successful sale, a call from a certain demographic category, or a response to a promotion. CMS records an event occurrence each time an agent presses an Event Count button on his or her voice terminal. See Figure 4-9, Examples of Agent Event Count Reports.

NOTE	Event Counts (stroke counts) require Custom Work Group Software on Generic 1 and System 75.

```
                         DAILY AGENT EVENT COUNT REPORT              (MENU:  DAEVENT)
  2/16/89                                                            DAY:  02/02/89
AGENT:  7002 ()
```

	ACD					EVENT COUNT				
TIME	CALLS	1	2	3	4	5	6	7	8	9
1-1:00-11:30AM	7	0	0	0	0	0	0	0	0	0
1-1:30-12:00PM	17	0	0	0	0	0	0	0	0	0
1-2:00-12:30PM	2	0	0	0	0	0	0	0	0	0
.										
0-3:30-04:00PM	14	0	0	0	0	0	0	0	0	0
SUMMARY	91	0	0	0	0	0	0	0	0	0

```
                         WEEKLY AGENT EVENT COUNT REPORT             (MENU:  WAEVENT)
  2/11/89
AGENT:  7003 ()
```

	ACD					EVENT COUNT				
DAY	CALLS	1	2	3	4	5	6	7	8	9
0-2/04/89	89	0	0	0	0	0	0	0	0	0
0-2/05/89	114	0	0	0	0	0	0	0	0	0
0-2/08/89	158	0	0	0	0	0	0	0	0	0
0-2/09/89	155	0	0	0	0	0	0	0	0	0
0-2/10/89	54	0	0	0	0	0	0	0	0	0
SUMMARY	570	0	0	0	0	0	0	0	0	0

```
                         MONTHLY AGENT EVENT COUNT REPORT            (MENU:  MAEVENT)
  2/11/89
AGENT:  7002 ()
```

	ACD					EVENT COUNT				
DAY	CALLS	1	2	3	4	5	6	7	8	9
0-1/11/89	14	0	0	0	0	0	0	0	0	0
0-1/12/89	26	0	0	0	0	0	0	0	0	0
0-1/13/89	12	0	0	0	0	0	0	0	0	0
.										
0-2/10/89	48	0	0	0	0	0	0	0	0	0
SUMMARY	909	0	0	0	0	0	0	0	0	0

Figure 4-9   Examples of Agent Event Count Reports

Table 4-5 **Item Reference for the Agent Event Count Reports**

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/ 16/ 89	Date the report was generated.	MM/ DD/ YY format date	DATE(D)
DAEVENT, WAEVENT, MAEVENT	UNIX system file name of report name.	Label	
DAY	The day covered by the report.	MM/ DD/ YY format	DATE(J), Daily; DATE(DAY), Weekly, Monthly
AGENT	The agent ID number or name selected in the Report Parameters screen.	ID or synonym	SYN(LOGID)
TIME (Daily report only)	The half-hour intervals selected in the Report Parameters screen.	a.m./ p.m. format time	INTERVAL
ACD CALLS	Number of ACD calls answered by this agent in the period covered. (Some of the calls counted may have intraflowed/ interflowed into the agent's split.)	Calls	SUM(ACDCALLS) (Daily) ACDCALLS (Weekly, Monthly)
EVENT COUNT	The number of button presses of the various EVENT COUNT buttons by this agent during the period covered.	Event counts	SUM(STROKEn) where "n" is the number of the EVENT COUNT button (Daily) STROKEn (Weekly and monthly)

Trunk Group Report

Report File Name	`DTGROUP, WTGROUP, MTGROUP`
Data File Used	`/HHOUR/TRUNKGROUP /DAILY/TRUNKGROUP`
Dependencies	Read permissions for trunk group.

A Trunk Group report shows the level of incoming and outgoing call traffic for an individual trunk group. You can use this report to verify that the number of trunks available to your splits is appropriate and to monitor the number of outgoing calls. However, you can get a report on any measured trunk group, regardless of whether it is used for ACD calls. See Figure 4-10, Examples of Trunk Group Reports.

The report item Centum Call Seconds (CCS) is a measure of how many 100-second increments the trunk was busy during the half-hour interval. A trunk is "seized" while the call is both in queue and connected to an agent. Therefore, wait time for abandoned calls is figured into the CCS figures. Because a half-hour interval has 1800 seconds, the maximum CCS for each trunk in a trunk group is 18 CCS. Multiplying 18 CCS by the number of trunks in a trunk group will give you the maximum occupancy for the trunk group, which you can then compare with your actual CCS. A CCS example follows.

x = The trunk for this 100-second increment is busy.
(Trunk does not have to be busy for the entire 100-second increment.)

1st CCS	2nd CCS	3rd CCS		1-6th CCS	1-7th CCS	1-8th CCS		3-4th CCS	3-5th CCS	3-6th CCS
X	X		....	X		X	....			X
1-00 sec	1-00 sec	1-00 sec		1-00 sec	1-00 sec	1-00 sec		1-00 sec	1-00 sec	1-00 sec

1-800 seconds = 1/2 hour

3-600 seconds = 1 hour
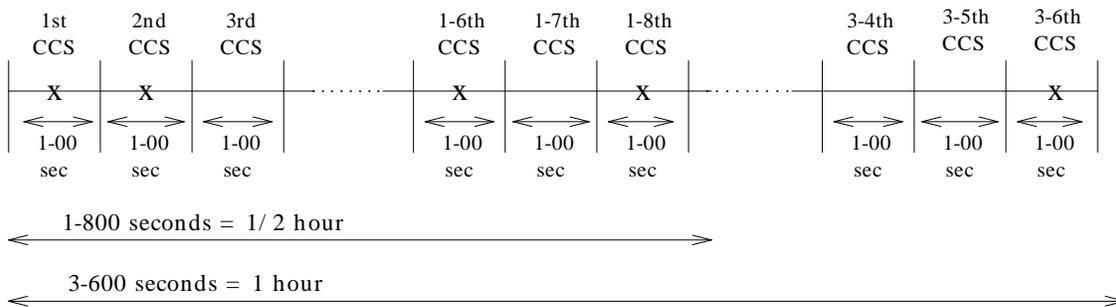
Figure 4-10   CCS Example

The report item "% All Trunks Busy," which is a good indicator of how many callers are being blocked (getting a busy signal), should be a relatively low figure in most call centers.

> **NOTE** The Weekly and Monthly Trunk Group Reports base the `% ALL TRUNKS BUSY` and the `% TIME MAINT BUSY` on a 24-hour day with 48 intervals; as a result, the summary values for these items shown in your Daily reports may not match the values shown in your Weekly/ Monthly reports. Depending on your needs, you may

want to create a custom report and change the denominator for these fields to reflect your actual hours of activity in a day. For example, for 8 hours of activity, use 1-6 intervals; for 12 hours of activity, use 24 intervals, etc.

NOTE The "Number of Calls Carried" item contains, in addition to the number of calls answered and abandoned, the number of non-ACD calls (if any) and calls lost due to hardware and software failures (if any); therefore, "Calls Carried" may not always match the total of "Calls Abandoned" and "Calls Answered." You can create a custom report to eliminate these additional calls. See the *3B CMS Custom Reports* (5-85-215-503) document.

DAILY TRUNK GROUP REPORT　　　　　　　　　　　　　　　　　（MENU: DTGROUP)
4/22/89　　　　　　　　　　　　　　　　　　　　　　　　　　DAY: 04/01/89

TRUNK GROUP: 22 ()
NUMBER OF TRUNKS: 20

| | -----------INCOMING----------- | | | | | ----------OUTGOING---------- | | | | |
TIME	NUMBER OF CALLS CARRIED	NUMBER OF CALLS ABANDONED	NUMBER OF CALLS ANSWERED	AVG HOLD TIME	TOTAL CCS	NUMBER OF OUT CALLS	AVG HOLD TIME	TOTAL CCS	% ALL TRUNKS BUSY	% TIME MAINT BUSY
0-8:00-08:30AM	223	21	202	148.48	331.12	0	0.00	0.00	15.61	0.00
0-8:30-09:00AM	223	21	202	146.92	327.64	0	0.00	0.00	7.61	0.00
0-9:00-09:30AM	220	18	202	149.41	328.70	0	0.00	0.00	12.17	0.00
.										
0-5:30-06:00PM	223	19	204	149.02	332.31	0	0.00	0.00	16.67	0.00
SUMMARY	10658	947	9710	148.94	15874.35	0	0.00	0.00	13.54	0.00

WEEKLY TRUNK GROUP REPORT　　　　　　　　　　　　　　　（MENU: WTGROUP)
3/01/89

TRUNK GROUP: 20 ()
NUMBER OF TRUNKS: 138

| | -----------INCOMING----------- | | | | | ----------OUTGOING---------- | | | | |
DAY	NUMBER OF CALLS CARRIED	NUMBER OF CALLS ABANDONED	NUMBER OF CALLS ANSWERED	AVG HOLD TIME	TOTAL CCS	NUMBER OF OUT CALLS	AVG HOLD TIME	TOTAL CCS	% ALL TRUNKS BUSY	% TIME MAINT BUSY
0-2/09/89	364	15	225	112.78	410.51	0	0.00	0.00	0.00	0.00
0-2/10/89	289	13	129	109.46	316.33	0	0.00	0.00	0.00	0.00
0-2/11/89	4	0	2	202.75	8.11	0	0.00	0.00	0.00	0.00
	6-57	28	356	111.86	734.95	0	0.00	0.00	0.00	0.00

MONTHLY TRUNK GROUP REPORT　　　　　　　　　　　　　　（MENU: MTGROUP)
3/01/89

TRUNK GROUP: 20 ()
NUMBER OF TRUNKS: 138

| | -----------INCOMING----------- | | | | | ----------OUTGOING---------- | | | | |
DAY	NUMBER OF CALLS CARRIED	NUMBER OF CALLS ABANDONED	NUMBER OF CALLS ANSWERED	AVG HOLD TIME	TOTAL CCS	NUMBER OF OUT CALLS	AVG HOLD TIME	TOTAL CCS	% ALL TRUNKS BUSY	% TIME MAINT BUSY
0-2/01/89	7221	129	2675	74.25	5361.44	0	0.00	0.00	0.00	0.00
0-2/02/89	9087	202	4377	89.85	8164.58	0	0.00	0.00	0.00	0.00
0-2/03/89	3208	79	1860	104.64	3356.84	0	0.00	0.00	0.00	0.00
.										
0-2/11/89	4	0	2	202.75	8.11	0	0.00	0.00	0.00	0.00
	2-6140	656	12153	90.45	23643.53	0	0.00	0.00	0.00	0.00

Figure 4-11　　Examples of Trunk Group Reports

Table 4-6   Item Reference for the Trunk Group Reports

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-4/ 22/ 89	Date when the report was generated.	MM/ DD/ YY format date	DATE(D)
DTGROUP	UNIX system file name of report.		Label
DAY	Day selected in the Report Parameters screen for the report to cover.	MM/ DD/ YY format date	DATE(J)(Daily)
TRUNK GROUP	The number of synonym of the trunk group covered in the report.	Trunk group number	SYN(TRKGRP)
NUMBER OF TRUNKS	Number of trunks in group.	Trunks	GROUPSIZE
TIME/ DATES	The half-hour intervals or days selected in the Report Parameters screen for the report to cover.	a.m/ p.m. format time	INTERVAL (Daily) DATE(DAY) (Weekly, Monthly)
INCOMING			
NUMBER OF CALLS CARRIED	Incoming calls that seized this trunk during the period covered.	Calls	INCALLS
NUMBER OF CALLS ABANDONED	Calls in which the caller hangs up before being connected to an agent during the period covered.	Calls	ABANDONS

Table 4-6   Item Reference for the Trunk Group Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
NUMBER OF CALLS ANSWERED	Calls that connected to an agent in this period.	Calls	ANSWERED
AVG HOLD TIME	Average length of time incoming calls last.	Seconds	AVG HOLD TIME IN `INTIME/INCALLS`
TOTAL CCS	The trunk occupancy by incoming calls that seize the trunk (includes all "carried" calls) in hundreds of call seconds.	CCS	INTIME/100
OUTGOING			
NUMBER OF OUT CALLS	Extension-out calls that seize this trunk during the period covered.	Calls	OUTCALLS
AVG HOLD TIME	Average holding time of all outgoing calls on this trunk.	Seconds	AVG HOLD TIME OUT `OUTTIME/OUTCALLS`
TOTAL CCS	Total outgoing-call trunk occupancy in hundreds of call seconds.	CCS	OUTGOING CCS `OUTTIME/100`
% ALL TRUNKS BUSY	The percentage of time all trunks are simultaneously busy.	Percent	PERCENT BUSY ALL (Daily) `ALLINUSE/18` SUM(PERCENT BUSY ALL) (Weekly,monthly) `ALLINUSE/18)/48`
% TIME MAINT BUSY	The percentage of time the trunk group has been busied out for maintenance.	Percent	PERCENT MAINT TIM (Daily) `MBUSYTIME/(18 * GROUPSIZE)` SUM(PERCENT MAINT TIM) (Weekly,monthly) `((MBUSYTIME) /(18 * GROUPSIZE)) / 48`

System Report

Report File Names	DSYSTEM, WSYSTEM, MSYSTEM
Data File Used	/DAILY/SPLIT
Dependencies	Read permission for splits.

A System report (Daily, Weekly, or Monthly) summarizes the activity of every split measured for an ACD. You can use this report to quickly compare split performance for splits performing similar functions. Unmeasured splits are not included in this report. See Figure 4-11, Examples of System Reports.

The ''Flow In'' and ''Flow Out'' columns of the report show the intraflow call forwarding picture for the system. ''Flow In'' represents the number of forwarded calls that were accepted by a split. ''Flow Out'' represents the number of calls forwarded to another destination. In many cases, the summary numbers for Flow In and Flow Out will be equal, because what was forwarded by one split will be accepted into another. If they are not equal, it may be because calls were intraflowed into unmeasured splits, extensions within the ACD, or elsewhere.

Statistics in the report such as ''% AUX'' (percent auxiliary work) and ''Number of Extension-Out Calls'' are indicators of activities not directly engaged in ACD traffic.

> **NOTE** The time agents were available and waiting for an ACD call (idle time) is not shown in the System reports. If you want to know the percentage of time agents were available to answer calls, you can create a report item with the following formula: 1-00*(IDLETIME/STAFTIME). See the *3B CMS Custom Reports* document (585-215-5-03) for more information.

DAILY SYSTEM REPORT   (MENU: DSYSTEM)

2/16/89   DAY: 02/02/89

SPLIT	AVG SPEED ANS	AVG ABAN TIME	NO. ACD CALLS	NO. ABAN CALLS	MAX DELAY	FLOW IN	FLOW OUT	AVG TALK TIME	AVG AFTER CALL WRK	% AUX	NO EXT OUT CALLS	AVG EXT OUT TIME	% ACD TIME	% ANS
1 ( )	43.09	30.65	2613	100	328	0	0	109.75	1.59	23.80	887	51.92	73.16	96.31
2 ( )	18.39	23.66	1670	32	170	0	0	109.62	0.00	30.41	28	4.61	54.40	98.12
3 ( )	62.46	34.83	2227	119	231	0	0	144.41	17.15	34.14	2135	52.51	60.84	94.93
.														
.														
3-1 ( )	3.36	0.00	192	0	197	0	0	452.38	0.00	56.18	351	102.94	14.64	100.00
SUMMARY	51.20	100.24	32954	1573		1123	1123	156.11	4.05	29.58	18871	65.63	45.94	95.44

WEEKLY SYSTEM REPORT   (MENU: WSYSTEM)

2/11/89   DAY: 02/04/89

SPLIT	AVG SPEED ANS	AVG ABAN TIME	NO. ACD CALLS	NO. ABAN CALLS	MAX DELAY	FLOW IN	FLOW OUT	AVG TALK TIME	AVG AFTER CALL WRK	% AUX	NO EXT OUT CALLS	AVG EXT OUT TIME	% ACD TIME	% ANS
1 ( )	30.40	32.93	7800	331	462	1	0	119.72	2.26	27.43	3488	58.92	59.36	95.93
2 ( )	28.95	53.01	4410	197	1783	60	0	126.43	0.06	30.41	101	6.90	50.71	95.72
3 ( )	34.48	41.70	7728	233	762	90	0	144.61	15.11	34.08	7200	61.40	55.81	97.07
.														
.														
3-1 ( )	6.55	129.56	781	16	618	0	0	418.49	0.00	63.34	3752	91.64	13.07	97.99
SUMMARY	33.93	61.87	128368	5173		5574	5567	166.88			98350	70.82	39.97	96.13

MONTHLY SYSTEM REPORT   (MENU: MSYSTEM)

2/11/89   DAY: 01/11/89

SPLIT	AVG SPEED ANS	AVG ABAN TIME	NO. ACD CALLS	NO. ABAN CALLS	MAX DELAY	FLOW IN	FLOW OUT	AVG TALK TIME	AVG AFTER CALL WRK	% AUX	NO EXT OUT CALLS	AVG EXT OUT TIME	% ACD TIME	% ANS
1 ( )	31.96	41.53	23295	839	556	1	0	128.88	1.46	41.13	26018	58.76	44.73	96.52
2 ( )	35.43	67.73	15153	558	1783	60	0	127.73	0.02	42.20	5554	50.94	38.87	96.45
3 ( )	42.28	52.40	24393	935	762	90	157	154.91	12.03	45.68	36443	60.63	44.90	96.31
.														
.														
3-1 ( )	3.13	248.00	3335	30	1182	0	0	473.87	0.00	45.21	11280	78.11	14.19	99.11
SUMMARY	35.04	79.89	565696	24569		34309	34302	167.09			566757	66.31	35.02	95.84

Figure 4-12   Examples of System Reports

Table 4-7   Item Reference for the System Reports

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/ 16/ 89	Date report was generated.	MM/ DD/ YY format date	DATE(D)
DSYSTEM, WSYSTEM, MSYSTEM	UNIX system file name of report.		Label
DAY (Daily report)	Date selected in the Report Parameters screen: day covered in the report.	MM/ DD/ YY format date	DATE(J)
FIRST DAY (Weekly and Monthly reports)	Beginning of the period covered in the report.	MM/ DD/ YY format date	DATE(J)
SPLIT	Numbers or synonyms of measured splits covered in the report.	Split number or synonym	SYN(SPLIT)
AVG SPEED ANS	Average speed of answer: the average time to answer all ACD calls that connected to an agent in all measured splits.	Seconds	AVG ANSWER SPEED (Daily) `ANSDELAY/ANSWERED` AVG ANSWER SPEED SUM (Weekly,monthly) SUM (ANSDELAY)/ SUM (ANSWERED) (Weekly,monthly)
AVG ABAN TIME	Average abandon time: the average time a caller who hung up without receiving an answer waited before doing so.	Seconds	AVG ABANDON TIME SUM (Daily) `ABANTIME/ABANDONS` AVG ABANDON TIME SUM (Weekly,monthly) `SUM (ABANTIME) / SUM (ABANDONS)`

Table 4-7   Item Reference for the System Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
NO. ACD CALLS	Number of ACD calls: queued calls that connected to agents during the period covered. The count also includes intraflowed/ interflowed calls answered in this split.	Calls	ACDCALLS (Daily) SUM(ACDCALLS) (Weekly,monthly)
NO. ABAN CALLS	Number of abandoned calls: queued calls in which the caller hung up before connecting to an agent during the period covered.	Calls	ABANDONS (Daily) SUM(ABANDONS) (Weekly,monthly)
MAX DELAY	Maximum delay: the longest queue time before being connected to an agent or being abandoned for any ACD call in the period covered.	Seconds	MAX(MAXOLDCW)
FLOW IN	Intraflowed/ interflowed calls accepted into measured splits or extensions during the period covered. The count also includes calls that were answered, abandoned, and flowed out.	Calls	INFLOW (Daily)* SUM(INFLOW) (Weekly,monthly)*
FLOW OUT	Intraflowed calls exported by measured splits during the period covered.	Calls	OUTFLOW (Daily)* SUM(OUTFLOW) (Weekly,monthly)*

* With a Generic 3i switch, you could have more INFLOW/ OUTFLOW calls counted because of the Multiple Split Queuing feature. See the *CMS Vectoring Administration* (5-85-215-502) document for more information.

Table 4-7   Item Reference for the System Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA

AVG TALK TIME	Average talk time: average length of ACD calls for the period covered.	Seconds	AVG ACD TALK TIME (Daily)
			`ACDTIME/ACDCALLS`
			AVG ACD TALK TIM SUM (Weekly, Monthly)
			`SUM(ACDTIME) / SUM(ACDCALLS)`

AVG AFTER CALL WORK	Average after-call work time: the average session in the ACW state.	Seconds	AVG ACW TIME (Daily)
			`(ACWTIME - ACWOUTTIME - ACWINTIME) / ACDCALLS`
			AVG ACW TIME SUM (Weekly,monthly)
			`SUM(ACWTIME - ACWOUTTIME - ACWINTIME) / SUM(ACDCALLS)`

% AUX	Percent of time in AUX work: time spent in auxiliary work, an agent state reached by pressing the AUX-WORK button.	Percent	PERCENT AUX WORK (Daily)
			`1-00 * (AUXTIME/STAFTIME)`
			PERCENT AUX WORK SUM (Weekly,monthly)
			`1-00 * (SUM(AUXTIME) / SUM(STAFTIME))`

NO. EXT OUT CALLS	Number of out calls: number of extension-out calls placed by agents in measured splits during the period covered.	Calls	NUM CALL OUT2 (Daily)
			`ACWOUTCALLS+AUXOUTCALLS`
			SUM (NUM CALL OUT2) (Weekly, Monthly)
			`SUM(ACWOUTCALLS + AUXOUTCALLS)`

AVG EXT OUT TIME	Average out time: average length of extension-out calls.	Seconds	AVG TALK TIME OUT (Daily)
			`(ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)`
			AVG TALK TIM OUT
			`SUM(ACWOUTTIME + AUXOUTTIME) / SUM(ACWOUTCALLS + AUXOUTCALLS)`

Table 4-7   Item Reference for the System Reports (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA

% ACD TIME	Percent ACD time: percent of staffed time spent by all measured agents on ACD calls.	Percent	PERCENT ACD TIME (Daily)
			`1-00 * ((ACDTIME + ACWTIME) / STAFTIME)`
			PERCENT ACD TIME SUM (Weekly,monthly)
			`1-00 * (SUM(ACDTIME + ACWTIME) / SUM(STAFTIME))`

% ANS	Percent of calls queued that receive an answer.	Percent	PERCENT CALL ANS (Daily)
			`1-00 * (ACDCALLS / (ACDCALLS + ABANDONS))`
			PERCENT CALL ANS SUM (Weekly,monthly)
			`1-00 * (SUM(ACDCALLS) / SUM(ACDCALLS+ABANDONS))`

Split Summary Report

Report File Name	SPLSUM
Comments	Agents covered can be any who were logged in
	at this split's extensions during the report's coverage period.
Data File Used	/DAILY/AGENT
Dependencies	Read permission for split.

A Split Summary report summarizes the daily activity of every agent in a split. Though an agent may log into more than one split in a day, the Split Summary Report for a particular split will capture an agent's activity for the entire day if the split was the first one the agent logged into for the day.

Even though an agent can log into more than one split, all agent activity is recorded under the first split listed in the Split Summary Report. If the agent logs in using more than one login ID, that activity is recorded under each login ID. This report uses the agents' names if the names were entered in the Dictionary.

You can use this report to quickly compare the performances of individual agents or an individual agent's contribution to the total split's performance. See Figure 4-1-2, Example of the Split Summary Report.

NOTE	Depending on your needs, you may want to change the formula used to calculate "% ACDTIME." This item currently includes after-call work. See the *3B CMS Custom Reports* document (585-215-503).

The time an agent spends waiting for an ACD call (idle time) is not included in any of the calculations for the Split Summary Report. Therefore, the times might not add up. You can create a custom report to add the idle time to this report. See the *3B CMS Custom Reports* (5-85-215-503) document.

```
                                            SPLIT  SUMMARY                                        (MENU:  SPLSUM)
  2/11/89                                                                                         DAY:  02/10/89

SPLIT:  1 ()
                    NUMBER   AVERAGE  AVERAGE WEIGHTED  NO.  OF  AVG EXT  NO.  OF  AVG EXT      %       %    TOTAL    NUMBER
                    OF ACD  ACD TALK   AFTER    CALL   EXT OUT  OUT TALK  EXT IN  IN TALK     AUX     ACD   HOURS      OF
AGENT         EXT.   CALLS    TIME   CALL WRK  VALUE    CALLS    TIME     CALLS    TIME      WORK    TIME  STAFFED  ASSISTS
-------------------------------------------------------------------------------------------------------------------------
4-025 ()      5013      0     0.00     0.00     0.00      221    68.32       0     0.00    100.00    0.00   5.73         0
4-026 ()      5012      0     0.00     0.00     0.00      198    67.65       0     0.00    100.00    0.00   4.95         0
7018 ()       5000     32   111.13     0.00   111.13        2     1.00       0     0.00     15.88   53.43   1.85         0
  .
  .
7042 ()       5001     71    75.37    19.42    94.79        2     1.00       0     0.00      5.11   50.54   3.70         0
-------------------------------------------------------------------------------------------------------------------------
SUMMARY                999   133.40     1.56   134.96      626    65.47       0     0.00     25.92   45.71  81.94         0
```

Figure 4-13   Example of the Split Summary Report

Table 4-8   Item Reference for the Split Summary Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/ 11/ 89	Date report was generated.	MM/ DD/ YY format	DATE(D)
SPLSUM	UNIX system file name of report.		Label
DAY	Day covered by the report.	MM/ DD/ YY format for day covered	DATE(J)
SPLIT	The number and (if created) the synonym of the split covered in the report.	Number and synonym	SYN(SPLIT)
AGENT	Agent synonym or login ID for members of the selected split.	Synonym or ID number	SYN(LOGID)
EXT	Extension to which the agent was logged on.	Extension Number	EXTENSION
NUMBER OF ACD CALLS	ACD calls connected to this agent during the period covered. The count also includes intraflowed/ interflowed calls answered in this split.	Calls	ACDCALLS
AVERAGE ACD TALK TIME	Average length of this agent's ACD calls during the period covered.	Seconds	AVG ACD TALK TIME `ACDTIME/ACDCALLS`
AVERAGE AFTER CALL WORK	Average length of ACW sessions by this agent. ACW is an agent state.	Seconds	AVG ACW TIME `(ACWTIME - ACWOUTTIME - ACWINTIME) / ACDCALLS`

Table 4-8   Item Reference for the Split Summary (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
WEIGHTED CALL VALUE	The average combined length of ACD calls and after-call work for this agent. The total elapsed time from the beginning of one call to the beginning of the next, assuming the agent's work is an unbroken series of ACD calls and ACW sessions.	Seconds	AVG WORK TIME (ACDTIME + ACWTIME - ACWOUTTIME - ACWINTIME) / ACDCALLS
NO. OF EXT OUT CALLS	Number of extension-out calls by this agent in the period covered.	Calls	NUM CALL OUT ACWOUTCALLS + AUXOUTCALLS
AVG EXT OUT TALK TIME	Average extension-out talk time: the length of the average extension-out call.	Seconds	AVG TALK TIME OUT (ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)
NO. EXT IN CALLS	The number of direct-dialed calls to the agent's extension during the period covered.	Calls	EXT CALL IN ACWINCALLS + AUXINCALLS
AVG EXT IN TALK TIME	Length of the average direct-dialed call to this agent's extension during the period covered.	Seconds	AVG TALK TIME IN (ACWINTIME + AUXINTIME) / ACWINCALLS + AUXINCALLS)
% AUX WORK	Percent auxiliary work: the percent of the agent's total logged-in time spent in the AUX-WORK state.	Percent	PERCENT AUX WORK 1-00 * (AUXTIME/STAFTIME)

Table 4-8 Item Reference for the Split Summary (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
% ACD TIME	Percent ACD time: the percent of the agent's total logged in time actually spent on ACD calls and the associated ACW time.	Percent	PERCENT ACD TIME 1-00 * ((ACDTIME + ACWTIME) / STAFTIME
TOTAL HOURS STAFFED	Total logged-in time by this agent in the period covered.	Hours	HR STAFF TIME STAFTIME/3600
NUMBER OF ASSISTS	Number of calls referred to the supervisor by the agent using the ASSIST button during the period covered.	Calls	ASSISTS

Group Summary Report

Report File Name	GRPSUM
Data File Used	/DAILY/AGENT
Dependencies	Read permission for splits to which agents are assigned.

A Group Summary report summarizes the daily activities of every agent within an agent or extension group. Agents in an agent group or extension group may share characteristics, such as being newly-hired or top performing, or they may simply be part of a more manageable subdivision of a split. You can use this report to quickly compare individuals within a group. See Figure 4-13, Example of the Group Summary Report.

> **NOTE** Groups are not created at the switch. You must define them in the Dictionary subsystem (Chapter 5).

```
                                        GROUP  SUMMARY                                    (MENU: GRPSUM)
 2/11/89                                                                                  DAY: 02/10/89

GROUP: west
                 NUMBER    AVERAGE   AVERAGE WEIGHTED  NO. OF  AVG EXT  NO. OF  AVG EXT      %      %    TOTAL   NUMBER
                 OF ACD   ACD TALK   AFTER    CALL   EXT OUT OUT TALK EXT IN  IN TALK     AUX    ACD    HOURS      OF
AGENT            CALLS     TIME  CALL WORK   VALUE    CALLS    TIME   CALLS     TIME      WORK   TIME  STAFFED  ASSISTS
---------------------------------------------------------------------------------------------------------------------------
4-025 ()             0     0.00     0.00     0.00     221    68.32      0      0.00    100.00   0.00    5.73       0
4-026 ()             0     0.00     0.00     0.00     198    67.65      0      0.00    100.00   0.00    4.95       0
7018 ()             32   111.13     0.00   111.13       2     1.00      0      0.00     15.88  53.43    1.85       0
  .
  .
7042 ()             71    75.37    19.42    94.79       2     1.00      0      0.00      5.11  50.54    3.70       0
---------------------------------------------------------------------------------------------------------------------------
SUMMARY            999   133.40     1.56   134.96     626    65.47      0      0.00     25.92  45.71   81.94       0
```

Figure 4-14   Example of the Group Summary Report

Table 4-9   Item Reference for the Group Summary Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/ 11/ 89	Date report was generated.	MM/ DD/ YY format date	DATE
GRPSUM	UNIX system file name of the report.		Label
DAY	Day covered in the report.	MM/ DD/ YY format date	DATE(J)
GROUP	Group name.	Synonym	GROUP
AGENT	Agent synonym or login ID for members of the selected group.	Synonym or ID	SYN(LOGID)
NUMBER OF ACD CALLS	ACD calls connected to this agent during the period covered. The count includes intraflowed and interflowed calls answered in this split.	Calls	ACDCALLS
AVERAGE ACD TALK TIME	Average length of this agent's ACD calls during the period covered.	Seconds	AVG ACD TALK TIME ACDTIME/ACDCALLS
AVERAGE AFTER CALL WORK	Average length of ACW sessions by this agent.	Seconds	AVG ACW TIME (ACWTIME - ACWINTIME - ACWOUTTIME) / ACDCALLS
WEIGHTED CALL VALUE	The average combined length of ACD calls and after-call work for this agent.	Seconds	AVG WORK TIME (ACDTIME + ACWTIME - ACWOUTTIME - ACWINTIME) / ACDCALLS
NO. OF EXT OUT CALLS	Number of extension-out calls by this agent in the period covered.	Calls	NUM CALL OUT2 ACWOUTCALLS + AUXOUTCALLS

Table 4-9 Item Reference for the Group Summary Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
AVG EXT OUT TALK TIME	Average extension-out talk time: the length of the average extension-out call.	Seconds	AVG TALK TIME OUT (ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)
NO. OF EXT IN CALLS	The number of direct-dialed calls to the agent's extension during the period covered.	Calls	EXT CALL IN ACWINCALLS + AUXINCALLS
AVG EXT IN TALK TIME	Length of the average direct-dialed call to this agent's extension during the period covered.	Seconds	AVG TALK TIME IN (ACWINTIME + AUXINTIME) / (ACWINCALLS + AUXINCALLS)
% AUX WORK	Percent auxiliary work: the percent of the agent's total logged-in time spent in the AUX-WORK state.	Percent	PERCENT AUX WORK 1-00*(AUXTIME/STAFTIME)
% ACD TIME	Percent ACD time: the percent of the agent's total logged in time actually spent on ACD calls and the associated ACW.	Percent	PERCENT ACD TIME 1-00 * ((ACDTIME + ACWTIME) / STAFTIME)
TOTAL HOURS STAFFED	Total logged-in time by this agent in the period covered.	Hours	HR STAFF TIME STAFTIME/3600
NUMBER OF ASSISTS	Number of calls referred to the supervisor by the agent using the ASSIST button during the period covered.	Calls	ASSISTS

Trunk Group Summary Report

Report File Name	`TGSUM`
Data File Used	`/DAILY/TRUNK`
Dependencies	Read permission for trunk group.

A Trunk Group Summary report summarizes the daily incoming and outgoing traffic of every trunk in a trunk group. You can use this report to verify that the number of trunks available to your splits is appropriate and to monitor the number of outgoing calls. In addition, you can get a report on any other measured trunk group not assigned to a split.

Also, because it lists trunks by physical location on the switch and tallies trunk failures, the Trunk Group Summary report can be very useful for troubleshooting problems with trunks. See Figure 4-14, Example of the Trunk Group Summary Report.

The report item Centum Call Seconds (CCS) is a measure of how many 100-second increments the trunk was busy during the half-hour interval. A trunk is "seized" while the call is both in queue and connected to an agent. Therefore, wait time for abandoned calls is figured into the CCS figures. Because a half-hour interval has 1800 seconds, the maximum CCS for each trunk in a trunk group is 18 CCS. Multiplying 18 CCS by the number of trunks in a trunk group will give you the maximum occupancy for the trunk group, which you can then compare with your actual CCS. See Figure 4-10, CCS Example, in the Trunk Group Report description in this chapter.

NOTE	For this report, non-ACD calls are calls which do not enter the ACD (such as a direct-dialed call to the agent's extension) or ACD calls which do not terminate at a destination measured by CMS (such as interflowed calls to the attendant).

NOTE	The "Number of Calls Carried" item contains, in addition to the number of calls answered and abandoned, the number of non-ACD calls (if any) and calls lost due to hardware and software failures (if any); therefore, "Calls Carried" may not always match the total of "Calls Abandoned" and "Calls Answered." You can create a custom report to eliminate these additional calls. See the *3B CMS Custom Reports* (5-85-215-503) document.

TRUNK GROUP: 30 ()

PHYSICAL TRUNK EQUIPMENT LOCATION	TRUNK NUMBER	INCOMING					OUTGOING			
		NUMBER OF CALLS CARRIED	NUMBER OF CALLS ABANDONED	AVG HOLD TIME	TOTAL CCS	DIRECT IN CALLS	NUMBER OF OUT CALLS	AVG HOLD TIME	TOTAL CCS	NUMBER OF FAILURES
8 . 1. 1. 19. 1	1627	10	1	196. 80	19. 68	0	0	0. 00	0. 00	0
8 . 1. 1. 20. 1	1639	13	0	287. 77	37. 41	1	0	0. 00	0. 00	0
8 . 1. 1. 18. 2	1640	11	0	322. 82	35. 51	0	0	0. 00	0. 00	0
.										
6 . 1. 1. 14. 3	2939	16	2	261. 81	41. 89	1	0	0. 00	0. 00	0

Figure 4-15   Example of the Trunk Group Summary Report

Table 4-10   Item Reference for the Trunk Group Summary

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/ 15/ 89	Date report was generated.	MM/ DD/ YY format date	DATE(D)
TGSUM	UNIX system file name of report.		Label
DAY	Day selected in the Report Parameters screen for the report to cover.	MM/ DD/ YY format date	DATE(J)
TRUNK GROUP	The number or synonym of the trunk group covered in the report.	Trunk group number or synonym	SYN(TRKGRP)
PHYSICAL TRUNK EQUIPMENT LOCATON	The cabinet, module, carrier, slot, and circuit location of the trunk equipment.	* See Footnote	MODULE, CABINET, CARRIER, SLOT, CIRCUIT
TRUNK NUMBER	Internal trunk number.	Trunk number	TRK NDX

*The switch administration format for trunk location. Shown in the sample report is the Generic 2 / System 85/ DIMENSION PBX format. Generic 1, Generic 2 Universal Module, and System 75 use a letter to represent the carrier.

Table 4-10   Item Reference for the Trunk Group Summary (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
INCOMING			
NUMBER OF CALLS CARRIED	Incoming calls that seize this trunk during the period covered.	Calls	INCALLS
NUMBER OF CALLS ABANDONED	Number of abandoned calls: calls in which the caller hangs up before connecting to an agent.	Calls	ABANDONS
AVG HOLD TIME	Average length of calls, including time in queue.	Seconds	AVG HOLD TIME IN `INTIME/INCALLS`
TOTAL CCS	The trunk occupancy by incoming calls in hundreds of call seconds.	Hundreds of call seconds	INCOMING CCS `INTIME/100`
DIRECT IN CALLS	Incoming calls on measured trunks that are answered by non-ACD destinations.	Calls	NONACD
OUTGOING			
NUMBER OF OUT CALLS	Extension-out calls that seize this trunk during the period covered.	Calls	OUTCALLS
AVG HOLD TIME	Average talk time of all outgoing calls on this trunk.	Seconds	AVG HOLD TIME OUT `OUTTIME/OUTCALLS`
TOTAL CCS	Total outgoing-call trunk occupancy in hundreds of call seconds.	Hundreds of call seconds	OUTGOING CCS `OUTTIME/100`
NUMBER OF FAILURES	Trunk hardware failures.	Failures	FAILURES

Daily Login and Logout Report

Report File Name	`DLOG`
Data File Used	`/HHOUR/AGENT`
Dependencies	Read permission for split.

The Daily Login and Logout report presents a daily log of agent logins and logouts in a split. Logins are sorted by extension numbers, and logouts are sorted by time. You can use this report to check that agents logged in or out at the proper times and to see what extensions they were logged into. Agents are identified by their login ID or synonym if the synonym is available.

The Daily Login and Logout report for an AUDIX system split will show an unusual number of logins and logouts since AUDIX system ports are automatically logged in/out each half-hour. This number of logins and logouts can use substantial amounts of disk space. Also, the AUDIX system split report will show AUDIX system agents not fully available.

Therefore, CMS measurement of AUDIX system splits is **not** recommended. In addition, if an AUDIX system split is administered on the switch, the split's number should be higher than that of any measured split since CMS-measured split numbers must be in sequence starting from 1.

```
                        DAILY LOGIN AND LOGOUT REPORT    (MENU: DLOG)
      2/16/89                                       DAY:  02/02/89

      SPLIT:  1  ()

      AGENT                     EXTENSION      LOG HISTORY      TIME
      ---------------------------------------------------------------
      7042 ()                     5002           LOG IN        8:59
      J Smith                     5003           LOG IN        8:57
      7027 ()                     5005           LOG IN        8:59
      7043 ()                     5008           LOG IN        9:01
      7015 ()                     5009           LOG IN        8:58
       .
       .
       .
      4-037 ()                    5009           LOG OUT      22:46
```

Figure 4-16   Example of the Daily Login and Logout Report

Table 4-11   Item Reference for the Daily Login and Logout Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/ 16/ 89	Date report was generated.	MM/ DD/ YY format date	DATE(D)
DLOG	UNIX system file name of report.		Label
DAY	Day selected in the Report Parameters screen for the report to cover.	MM/ DD/ YY format date	DATE(J)
SPLIT	The number or synonym of the split covered in the report.	Split number or synonym	SYN(SPLIT)
AGENT	Agent synonym or login ID.	Synonym or ID	SYN(LOGID)
EXTENSION	Measured extension where the agent logged in.	Extension number	EXTENSION
LOG HISTORY	Login and logout sequence in the system.	LOG IN or LOG OUT	LOGMODE
TIME	Time when login or logout event occurred.	Military-time format	AGHOUR, AGMINUTE

Daily Call Profile Report

File Name of Report	DCALLPROF
Data Files Used	/DAILY/SPLIT
Dependencies	Read permission for the split.

The Daily Call Profile report is the historical counterpart of the real-time Call Profile report. It shows the wait times of incoming calls handled and abandoned in a split during the specified day. Calls are displayed in ten columns, with each column representing a progressively longer wait time. The uniform increase in time between columns, which can be from 1 to 180 seconds, is established on the Call Profile Parameters screen (see Chapter 6, ''Configuration'').

Since this report shows you how long it takes for calls to be handled or abandoned, it can tell you how long a caller is willing to wait for an agent before hanging up and what answering speed is required to reduce abandoned calls.

NOTE	If the Call Profile Parameters are changed during the day being covered, that day's data may be invalidated.

```
                        DAILY CALL PROFILE REPORT                          (MENU:  DCALLPROF)
   2/11/89                                                                  DAY:  02/10/89

 SPLIT:  1  ( )

 SERVICE LEVEL:  34
 WINDOW  8
 PARAMETERS  CHANGED:  NO

 TIME  INTERVAL           0  -    8 -    16 -    24 -    32 -    40 -    48 -    56 -    64 -    72 +      TOTAL

 NUMBER  ANSWERED        835      28      23      20      19      10       9      13       8      32        997

 NUMBER  ABANDONED         1       0       1       2       2       0       0       0       2       2         10
```

Figure 4-17   **Example of the Daily Call Profile Report**

Table 4-12   Item Reference for Call Profile Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-2/ 11/ 89	Date the report was generated.	MM/ DD/ YY format date	DATE(D)
DCALLPROF	UNIX system file name of report.		Label
DAY	Day selected in the Report Parameters screen to be covered in the report.	MM/ DD/ YY format date	DATE(J)
SPLIT	Number and synonym of split covered.	Number and synonym	SYN(SPLIT)
SERVICE LEVEL	Call profile acceptable service level.	Seconds	SVCLVL
WINDOW	The length of the intervals into which answered and abandoned calls fall. The length of the intervals is administrable from the Configuration — Call Profile screen. The interval represented here is the last-specified length during the day covered in this report, if the interval was changed during the day.	Seconds	WINDOW
PARAMETERS CHANGED	Flag indicating either the call profile service level or the call profile window size changed.	YES/ NO	CALLPROFCHG
TIME INTERVAL	The elapsed time after queuing.	Seconds	WINDOW, 2*WINDOW. . . 9*WINDOW
NUMBER ANSWERED	The number of calls answered by the split covered during each interval.	Calls	CALLS1. . .CALLS10; TOTAL = ANSWERED
NUMBER ABANDONED	The number of calls that abandoned from this split's queue during each interval.	Calls	ABANDON1. . .ABANDON10; TOTAL = ABANDONS

Daily Trunk Report

File Name of Report	DTRUNK
Data File Used	/HHOUR/TRUNK
Dependencies	Read permission for trunk group for which the trunk is a member.

The Daily Trunk Report displays, in half-hour intervals, a day's call traffic data for a single trunk. You specify the day, trunk number, and half-hour intervals you want the report to cover on the Report Parameters screen. With this report, you can review trunks in any measured trunk group. See Figure 4-17, Example of the Daily Trunk Report.

You use this report to verify that call traffic levels for a trunk are appropriate throughout the day and to monitor outgoing calls made throughout the day. If your split or system reports show questionable results, this report can be especially effective in helping you track down potential trunk problems in your ACD.

> **NOTE** The "Number of Calls Carried" item contains, in addition to the number of calls answered and abandoned, the number of non-ACD calls (if any) and calls lost due to hardware and software failures (if any); therefore, "Calls Carried" may not always match the total of "Calls Abandoned" and "Calls Answered." You can create a custom report to eliminate these additional calls. See the *3B CMS Custom Reports* (5-85-215-503) document.

> **NOTE** In some call center configurations, all calls enter a single screening split. Then, the screening split's agents transfer the calls to other splits with specialized functions. In this situation, the Daily Trunk report records calls on a trunk only for the screening split. By counting calls in this way, the report prevents a double call count for the trunks involved, though technically calls are either answered twice or both answered (in the screening split) and abandoned (before reaching the destination split's agent). If your call center uses a screening split, you must check the split reports to get answer/abandon statistics for a destination split.

DAILY TRUNK REPORT (MENU: DTRUNK)
4/22/89   DAY: 04/01/89

TRUNK NUMBER: 82
TRUNK LOCATION: 00.0.0.10.02
TRUNK GROUP: 22 ()

| | ----------------INCOMING---------------- | | | | | ----------OUTGOING---------- | | | | |
TIME	NUMBER OF CALLS CARRIED	NUMBER OF CALLS ABANDONED	NUMBER OF CALLS ANSWERED	AVG HOLD TIME	TOTAL CCS	NUMBER OF OUT CALLS	AVG HOLD TIME	TOTAL CCS	TIME BUSY	TIME MAINT BUSY
0-8:00-08:30AM	12	1	11	143.17	17.18	0	0.00	0.00	1718	0
0-8:30-09:00AM	11	0	10	151.36	16.65	0	0.00	0.00	1665	0
0-9:00-09:30AM	11	1	11	149.64	16.46	0	0.00	0.00	1646	0
.										
0-5:30-06:00PM	10	0	10	169.30	16.93	0	0.00	0.00	1693	0
SUMMARY	531	25	506	154.03	817.92	0	0.00	0.00	81792	0

Figure 4-18   Example of the Daily Trunk Report

Table 4-13   Item Reference for the Daily Trunk Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
0-4/ 22/ 89	Date report was generated.	MM/ DD/ YY format	DATE(D)
DTRUNK	UNIX system file name of report.		Label
DAY	Day selected in the Report Parameters screen for the report to cover.	MM/ DD/ YY format	DATE(J)
TRUNK NUMBER	Internal trunk number.	Trunk number, in Trunk Group Summary report.	TRK NDX
TRUNK LOCATION	The cabinet, module, carrier, slot, and circuit location of the trunk equipment.	* See Footnote.	MODULE, CABINET, CARRIER, SLOT, CIRCUIT
TRUNK GROUP	The synonym or number of the trunk group of which the trunk is a member.	Trunk group number or synonym	SYN(TRKGRP)
TIME	The half-hour intervals selected in the Report Parameters screen for the report to cover.	a.m./ p.m. format	INTERVAL
INCOMING			
NUMBER OF CALLS CARRIED	Incoming calls that seize this trunk during the period covered.	Calls	INCALLS
NUMBER OF CALLS ABANDONED	Calls in which the caller hangs up before being connected to an ACD agent during the period covered. This statistic implies that the call, and the trunk, is associated with an ACD split. Non-ACD calls will never get a peg in this category.	Calls	ABANDONS

*The switch administration format for trunk location. Shown in the sample report is the Generic 2/ System 85/ DIMENSION PBX format. Generic 1, Generic 2 Universal Module, and System 75 use a letter to represent the carrier.

Table 4-13   Item Reference for the Daily Trunk Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
NUMBER OF CALLS ANSWERED	Calls connected to an agent in this period. This number implies an ACD call. Non-ACD calls may get an answer from whomever gets the call but are not pegged as answered in this statistical category. Calls that go to Coverage (Generic 1 and System 75) or are Forwarded (Generic 2 System 85, or DIMENSION PBX)—for night service, for example—are pegged in the Number of Calls Answered.	Calls	ANSWERED
AVG HOLD TIME	Average length of all incoming calls, including queue time.	Seconds	AVG HOLD TIME IN `INTIME/INCALLS`
TOTAL CCS	Total trunk occupancy by incoming calls calls during the current half hour.	Hundreds of call seconds	INCOMING CCS `INTIME/100`
OUTGOING			
NUMBER OF OUT CALLS	Extension-out calls that seized this trunk during the period covered.	Calls	OUTCALLS
AVG HOLD TIME	Average holding time of all outgoing calls on this trunk during this half-hour.	Seconds	AVG HOLD TIME OUT `OUTTIME/OUTCALLS`
TOTAL CCS	Total trunk occupancy by outgoing calls during the current half hour.	Hundreds of call seconds	OUTGOING CCS `OUTTIME/100`
TIME BUSY	The total holding time of all incoming and outgoing calls.	Seconds	TRKBUSY
TIME MAINT BUSY	The time the trunk has been busied out for maintenance.	Seconds	MBUSYTIME

Report-Item Cross-Reference

Table 4-14 will help you find out which data items are in which standard reports. Some nonstatistical items such as agent name, time, and ID number are not shown in this table.

Table 4-14   Report Item/Historical Report Cross-Reference

Report Items   Historical Reports in Which They Appear

Report Items	D,W,M* Agent	Daily Split	Weekly, Monthly Split	D,W,M* System	D,W,M* Split or Agent Event Count	Split or Group Summary	Trunk Group Summary	Daily Login/ Logout	Daily Call Profile	Daily Trunk	D,W,M* Trunk Group
Average Speed of Answer (Average Time to Answer)		X	X	X							
Number of Abandoned Calls		X	X	X		X			X	X	X
Avg. Abandon Time		X	X	X							
Number of ACD Calls	X	X	X	X	X	X					
Avg. ACD Talk Time (Avg. Talk Time)	X	X	X	X		X					
Avg. After Call Work Time	X	X	X	X		X					
Percent ACD Time (% ACD Time)	X	X	X	X		X					
Total Time Staffed (Min. Staffed, Hours Staffed)	X					X					
% AUX Work	X	X	X	X		X					
% Ans		X	X	X							
No. of Ext. Out Calls	X	X	X	X		X				X	X
Avg. Ext. Out Talk Time	X	X	X	X		X	X				
No. of Ext. In Calls	X					X					

*Daily, Weekly, Monthly

Table 4-14   Report Item/ Historical Report Cross-Reference (Contd)

Report Items   Historical Reports in Which They Appear

Report Items	D,W,M* Agent	Daily Split	Weekly, Monthly Split	D,W,M* System	D,W,M* Split or Agent Event Count	Split or Group Summary	Trunk Group Summary	Daily Login/ Logout	Daily Call Profile	Daily Trunk	D,W,M* Trunk Group
Avg. Ext In Talk Time (Time on Non-ACD Calls -- Incoming)	X					X					
Weighted Call Value (WCV)	X					X					
Number of Assists	X					X					
Max Delay		X	X	X							
Flow In		X	X	X							
Flow Out		X	X	X							
Avg. Pos. Staffed		X									
Event Count (1 - 9)					X						
Total CCS (Incoming, Outgoing)							X			X	X
Number of Failures							X				
Number of Calls Carried - Incoming, Outgoing							X			X	X
Time Busy										X	
Time Maint. Busy										X	
% All Trunks Busy											X
% Time Maint. Busy											X
Number Answered									X	X	X
Avg. Hold Time (Incoming/ Outgoing)							X			X	X
Service level									X		
Parameters Change Flag									X		
Agent Login Time								X			
Agent Logout Time								X			

*Daily, Weekly, Monthly

NOTES

General Information

The Dictionary is the subsystem with which you can define and/or reference the various elements of your CMS reports. Use the Dictionary to perform tasks such as:

Assigning agent names to login IDs, which CMS uses to record agent activities

Assigning names and descriptions to the splits and trunk groups in your ACD(s)

Grouping agents by login ID and/or extension for special reporting purposes

Researching CMS database items you can use to create custom reports

Creating and maintaining constants (constant arithmetic values) and calculations (abbreviated names for arithmetic formulas) you can use to create custom reports.

All database items and many calculations already exist in the Dictionary, but you will have to enter the other items.

Dictionary Menu

```
Call Management  System                              Switch_Name:Up or Down      Time

_____

                                      DICTIONARY

                               [ ] Login-Identifications

                               [ ] Agent-Groups
                               [ ] Extension-Groups
                               [ ] Calculations
                               [ ] Constants
                               [ ] Database-Items
                               [ ] Split-Synonyms
                               [ ] Trunk-Group-Synonyms



      Error and confirmation messages appear in this field.

  REPORT          ITEM                                    EXIT     PRINT     HELP
                  LOOKUP                                           SCREEN    KEYS
```

Figure 5-1   The Dictionary Menu

Procedures Common to All Dictionary Screens

The procedures listed on the next two pages are common to all screens (except Login Identification) in the Dictionary and involve the use of some screen-labeled keys (SLKs). Refer to Chapter 1, "Introduction," for a review of other SLKs.

Searching for Items With the ITEM LOOKUP Key

The $\boxed{\text{ITEM LOOKUP}}$ screen-labeled key is available on the Dictionary menu and on all Dictionary screens except Login Identification. On the menu and on the Database Items screen, it is in the first tier of SLKs. In other screens, you press $\boxed{\text{MORE KEYS}}$ to see the $\boxed{\text{ITEM LOOKUP}}$ SLK. The steps to use the key are:

1   In the Synonym, Agent Group, Extension Group, Constant, or Calculation screens, press $\boxed{\text{MORE KEYS}}$ to display the $\boxed{\text{ITEM LOOKUP}}$ SLK.

2   Enter the item to be looked up in the Item: field. Enter the complete item name, or any leading portion of the name.

> $\boxed{\text{NOTE}}$ In the Dictionary menu, the field at the top of the screen functions as an Item: field for lookup purposes.

3   Press $\boxed{\text{ITEM LOOKUP}}$.

[A "Search" screen will appear listing and describing the item or items that satisfy the lookup criteria.]

Searching for Items With the NEXT ITEM and PREV ITEM Keys

The [NEXT ITEM] and [PREV ITEM] SLKs appear on all Dictionary screens except the Dictionary menu.

1   When the screen for the selected process appears, press the [NEXT ITEM] SLK or [RETURN].

[The first item in that part of the Dictionary (Calculations, for example) will be displayed on the screen, with all associated data.]

2   To scroll through all items, keep pressing [NEXT ITEM]. Use [PREV ITEM] to scroll backward towards the top of the alphabet.

Ordering a Dictionary Report

A Dictionary report is a printed listing of all items in a particular area of the Dictionary. You can get a report by following these steps:

1   Select the DICTIONARY option from the CMS main menu, and press [RETURN].

[The Dictionary menu appears.]

2   Place the cursor in the brackets for the part of the Dictionary for which you want the report.

> If you want a report on the whole Dictionary, skip this step and leave the cursor in the line at the top of the screen.

3   Press the [REPORT] SLK.

[The Dictionary report will be sent to the system printer.]

Sample Dictionary Report

The following are the first two items from a Dictionary Report on Calculations :

Dictionary Report Fri Aug 29, 1988 at 13:54:12

Data Dictionary -- Calculations file

CALCULATION NAME	ACCURACY		PRECISION
AGENT CALL OUT	x.xx		integer
DESCRIPTION: number of agents on outgoing calls			
EQUATION: ACWOUTCOUNT+AUXOUTCOUNT			
AUX WORK TIME	x.xx	1	integer
DESCRIPTION: time on auxiliary work			
EQUATION: AUXTIME-AUXOUTTIME-AUXINTIME			

NOTE "Accuracy" means the number of decimal spaces specified in the Calculations screen. "Precision" refers to the type of number: integer or floating point.

Login Identification

Purpose   To identify CMS-measured ACD agents to CMS with a login
           ID and synonym.

You use the Login Identification screen to assign **agent names** to login IDs (that agents log in
with at their voice terminals). After you have assigned the names, you can tell agents to use
their assigned login ID exclusively whenever they log into the measured portions of the ACD.
CMS reports on specific agent activity will then display agent names instead of login ID
numbers.

Recording agent names in the Dictionary is **not** required by the ACD or CMS software. It
simply makes individual agent activity easier to follow.

> | NOTE | You cannot use the same agent name for multiple login IDs, and you should not allow
> two agents to use the same login ID at the same time because misleading report data
> may be created.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│                                                                                   │
│  ┌──────────────────────────────────────────────────────────────────────────┐    │
│  │ Call Management  System                        Switch_Name:Up  or Down   Time │ │
│  └──────────────────────────────────────────────────────────────────────────┘    │
│                                                                                   │
│                         DICTIONARY -- LOGIN IDENTIFICATION                         │
│                                                                                   │
│     [1] Login ID        Agent Name              Login ID       Agent Name         │
│       1001            Ben Borden                                                   │
│       1002            Mary Strevers                                               │
│       1003            Don Karnell                                                 │
│       1004            Barry Spender                                               │
│                                                                                   │
│     [2] Login ID: _____                                                      │
│     [3] Agent Name:_____                                           │
│                                                                                   │
│  ┌──────────────────────────────────────────────────────────────────────┐        │
│  │    Error and confirmation messages appear in this field.              │        │
│  └──────────────────────────────────────────────────────────────────────┘        │
│                                                                                   │
│  ┌───────┐ ┌─────┐ ┌────────┐  ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐     │
│  │CHANGE │ │ ADD │ │ DELETE │  │ PREV │ │ NEXT │   │ EXIT │ │ MORE │ │ HELP │     │
│  │       │ │     │ │        │  │ PAGE │ │ PAGE │   │      │ │ KEYS │ │ KEYS │     │
│  └───────┘ └─────┘ └────────┘  └──────┘ └──────┘   └──────┘ └──────┘ └──────┘     │
│                                                                                   │
└─────────────────────────────────────────────────────────────────────────────────┘
```

Figure 5-2   The Login Identification Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

	PRINT SCREEN	SEARCH		PREV PAGE	NEXT PAGE		EXIT	RESUME	HELP KEYS

Refer to Chapter 1, "Introduction," for a review of SLKs.

Definition of Fields

Field [1] Data Display

The previously entered login IDs and agent names are displayed here.

Field [2] Login ID

The field is used to enter the login IDs to be added, changed, deleted, or searched for.

Field [3] Agent Name

This field is used for agent names when entering them into the dictionary, changing them, or searching for them.

Adding a New Agent Login ID

1   On the DICTIONARY menu, select the [ ] Login-Identification
    option and press RETURN.

    [The currently-defined login IDs are displayed.]

2   Enter the new login ID and agent name in the Login ID and Agent Name
    fields, respectively.

> Login IDs are four integers in DEFINITY Communications System
> Generic 2, System 85, and DIMENSION PBX with the first character
> something other than zero. Login IDs are one to nine integers in
> DEFINITY Communications System— Generic 1 and System 75,
> depending on the switch's login-length specification.
>
> Names (synonyms) are 20 or fewer alphanumeric characters (blanks
> allowed and counted).

3   Press ADD.

    [The new identification will be added to the database.]

Changing an Agent Name

1   On the DICTIONARY menu, select the [ ] Login-Identification
    option and press RETURN.

    [The currently-defined login IDs are displayed.]

2   Enter either the current ID in the Login ID field or the agent name in the
    Agent Name field.

3   Press MORE KEYS, then SEARCH.

    [The current ID or name (whichever you didn't enter in Step 2) will be displayed.]

4   Enter the new agent name in the Agent Name field.

5   Press CHANGE.

    [The changed identification will be written to the Dictionary database.]

> **NOTE** To change an ID number for an agent, delete the old ID and reenter the
> new ID and name.

Searching for a Login Identification

1   On the DICTIONARY menu, select the [ ] Login-Identification
    option and press RETURN.

    [The currently-defined login IDs are displayed.]

2   Enter either the agent's ID number or a unique, leading portion of the agent's name
    in the appropriate field.

3   Press MORE KEYS, then SEARCH.

    [The complete ID description will be displayed.]

Deleting a Login Identification

1 On the DICTIONARY menu, select the [ ] Login-Identification option and press ⌈RETURN⌉.

   [The currently-defined login IDs are displayed.]

2 Enter either the agent's ID number or a unique, leading portion of the agent's name in the appropriate field.

3 Press ⌈MORE KEYS⌉, then ⌈SEARCH⌉.

   [The matching identification element will be displayed if it is in the Dictionary.]

4 Enter the ID to be deleted in the Login ID field, and press ⌈DELETE⌉.

   [The agent will be deleted from the Dictionary.]

Agent Groups

Purpose   To create and administer reporting groups organized
                     by login ID and name. The Group Summary and Group Status
                     reports depend on these groups' existence.
Dependencies   The login IDs on the Login Identification screen.

Creating agent groups is an optional preliminary-administration procedure.   You can group
agents, without regard to split assignment, according to special characteristics of interest to you.
For example, you may create groups of new employees or employees under particular
supervisors. CMS will then generate reports on the group(s) you create.   With these reports,
you can compare agents in a group to each other or compare the group as a whole to other
groups. You assign agents to a group using their login IDs.

Screen Description

```
Call Management  System                                Switch_Name:Up or Down     Time


                          DICTIONARY -- AGENT GROUPS
    1  Item: New-Hires_____

    2  Login ID      Agent Name                   Login ID       Agent Name

    1001          Mary Smith                      1007          Doug Watkins
    1002          Tom Jones                       1008          Bill Evans
    1003          Bob Thomas                      1009          Tom Flanagan
    1004          Alice Johnson
    1005          Tim Brown
    1006          Bill Singer

    3  Login ID(s)_____

   Error and confirmation messages appear in this field.

 CHANGE    ADD      DELETE      PREV      NEXT       EXIT     MORE     HELP
                                ITEM      ITEM                KEYS     KEYS
```

Figure 5-3   The Agent Group Dictionary Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

	PRINT SCREEN	ITEM LOOKUP		PREV PAGE	NEXT PAGE		EXIT	RESUME	HELP KEYS

Refer to Chapter 1, "Introduction," for a review of SLKs.

Definition of Fields

Field [1]   Item

The name of the agent group being added, deleted, or changed.

Field [2]   Data display field

Read Only Field

The IDs and agent names in this group.

Field [3]   Login ID(s)

This field is used when you place agents in a new group, add agents, or delete agents.

Creating a Group

1   On the `DICTIONARY` menu, select the `[ ] Agent-Groups` option and press [RETURN].

[The blank Agent Group screen appears.]

2   Enter the name you will call the new group in `Item:` field.

Use up to 20 alphanumeric characters.

3   Press [RETURN].

[The database will be searched for the item (in the sample screen) "New-Hires," and, because nothing is there, an empty screen appears.]

4   In the `Login ID(s)` field, enter the login IDs of the agents you want in the group.

> Entries may be individual numbers separated by commas or spaces, ranges separated by hyphens, or both individual numbers and ranges. For each login ID entered, an agent name must exist in the Login Identification screen.
>
> An Agent Groups screen with a correctly filled-in `Login ID(s)` field is shown in the following screen.

```
Call Management  System                              Switch_Name:Up or Down     Time

                            DICTIONARY -- AGENT GROUPS
   1 Item: New-Hires_____


   3 Login ID(s)  1001, 1002, 1004 1005-1008_____

   Error and confirmation messages appear in this field.

 CHANGE    ADD       DELETE      PREV       NEXT        EXIT      MORE     HELP
                                 ITEM       ITEM                  KEYS     KEYS
```

5   Press ADD.

[The new reporting group will be added to the Dictionary, and the data display field will display the members.]

Changing an Agent Group by Adding and/or Deleting Members

1   On the DICTIONARY menu, select the [ ] Agent-Groups option and press RETURN.

   [The blank Agent Groups screen appears.]

2   In the Item: field, enter the name (or leading, unique portion of the name) of the group you are changing.

3   Press RETURN.

   [The current membership of the group is displayed.]

4   In the Login ID(s) field, enter the login ID numbers of the agents you want to add. Add individual IDs (separated by commas or spaces) or ranges (using the hyphen between numbers).

   Each ID must have a corresponding agent name listed in the Login Identification screen in the Dictionary.

5   Press ADD.

   [The IDs and agent names will be added to the Dictionary for this group, and the updated display of this group will be returned to the screen.]

6   In the Login ID(s) field, enter the ID numbers of the agents you want to delete. You can specify individual IDs (separated by commas or spaces) or ranges (using the hyphen between numbers).

7   Press DELETE.

   [The IDs and agent names will be deleted from the database for this group, and the updated display for this group will be returned to the screen.]

NOTE   To delete the group itself, delete all members. The next time you access the agent group feature, the group will not be present.

Changing a Group Name

1   On the DICTIONARY menu, select the [ ] Agent-Groups option and press
    RETURN.

    [The blank Agent Groups screen appears.]

2   Enter old group name (item name) or leading, unique portion of the name in the
    Item: field.

3   Press RETURN.

    [The data for that group appears.]

4   Overtype the old name with the new.

5   Press CHANGE.

    [The new name replaces the old in the Dictionary.]

Extension Groups

Purpose   To create and administer reporting groups that are
organized by extension number.

Creating extension groups is an optional preliminary-administration procedure and generally
has the same purpose as creating agent groups.   You can group agents by their extension
numbers, without regard to split assignment, to identify groups with special characteristics. In
this way, you can compare agents in a group to each other or compare the group as a whole to
other groups. For example, you may create groups of new employees or employees under
particular supervisors. You assign agents to a group using their extensions.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────────────────┐
│  ┌─────────────────────────────────────────────────────────────────────────────┐  │
│  │ Call Management  System                         Switch_Name:Up or Down   Time │  │
│  └─────────────────────────────────────────────────────────────────────────────┘  │
│                                                                                    │
│                            DICTIONARY -- EXTENSION GROUPS                           │
│      ┌─┐                                                                            │
│      │1│  Item: _____                                           │
│      └─┘                                                                            │
│      ┌─┐                                                                            │
│      │2│   Extensions         Extensions       Extensions      Extensions          │
│      └─┘                                                                            │
│            1101                                                                     │
│            1102                                                                     │
│            1103                                                                     │
│            1104                                                                     │
│            1105                                                                     │
│            1106                                                                     │
│      ┌─┐                                                                            │
│      │3│   Extension(s): _____         │
│      └─┘                                                                            │
│      ┌───────────────────────────────────────────────────────────────────────┐    │
│      │   Error and confirmation messages appear in this field.                │    │
│      └───────────────────────────────────────────────────────────────────────┘    │
│  ┌────────┐ ┌────────┐ ┌────────┐  ┌────────┐ ┌────────┐   ┌────────┐ ┌──────┐ ┌──────┐ │
│  │ CHANGE │ │  ADD   │ │ DELETE │  │ PREV   │ │ NEXT   │   │  EXIT  │ │ MORE │ │ HELP │ │
│  │        │ │        │ │        │  │ ITEM   │ │ ITEM   │   │        │ │ KEYS │ │ KEYS │ │
│  └────────┘ └────────┘ └────────┘  └────────┘ └────────┘   └────────┘ └──────┘ └──────┘ │
└──────────────────────────────────────────────────────────────────────────────────┘
```
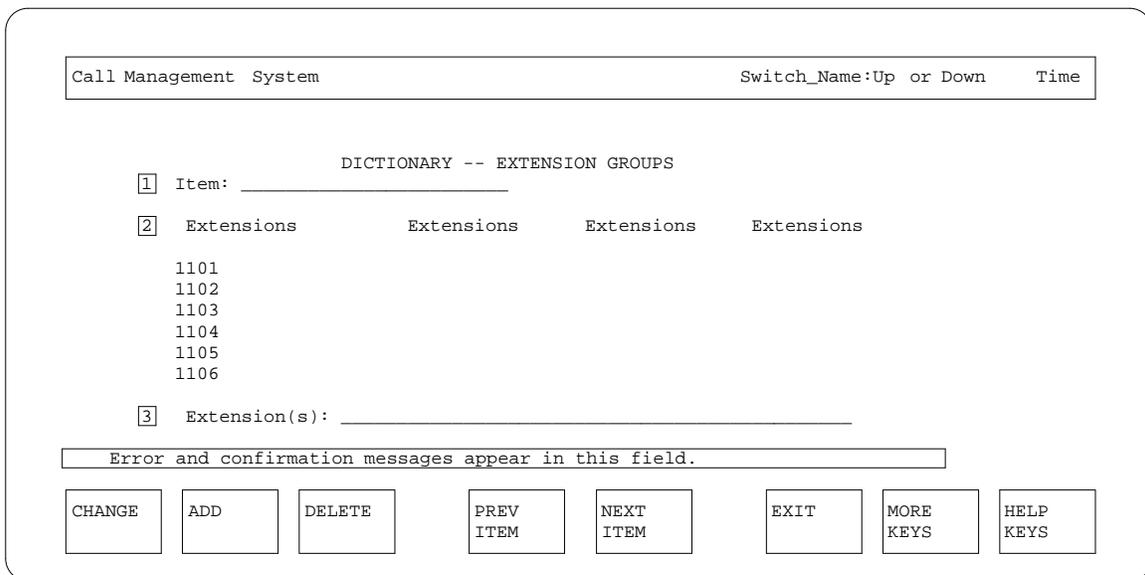
Figure 5-4   Extension Group Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

```
┌──────┐ ┌────────┐ ┌────────┐  ┌────────┐ ┌────────┐   ┌────────┐ ┌────────┐ ┌──────┐
│      │ │ PRINT  │ │ ITEM   │  │ PREV   │ │ NEXT   │   │ EXIT   │ │ RESUME │ │ HELP │
│      │ │ SCREEN │ │ LOOKUP │  │ ITEM   │ │ ITEM   │   │        │ │        │ │ KEYS │
└──────┘ └────────┘ └────────┘  └────────┘ └────────┘   └────────┘ └────────┘ └──────┘
```

Refer to Chapter 1, "Introduction," for a review of SLKs.

Definition of Fields

Field ☐1 Item

The name of the extension group.

Field ☐2 Data Field

Display of the extensions in the group named in the Item: field.

Read Only Field

Field ☐3 Extension(s)

Extensions to be added, deleted, or changed.

Creating an Extension Group

1   On the DICTIONARY menu, select the [ ] Extension-Groups option in the Dictionary menu, and press RETURN.

[The blank Extension Groups screen appears.]

2   Enter a new group name in the Item: field using 20 or fewer alphanumeric characters.

3   In the Extension(s): field, enter the extensions you wish to include in the group.

> You can enter individual extension numbers separated by commas or spaces, ranges separated by a hyphen, or a combination of individual extensions and ranges.

> Extensions included in this process may have up to seven digits. However, reports cannot show call activity on extensions unless they are measured. You can view a list of split extension assignments using the Configuration subsystem (see Chapter 6, "Configuration").

> The following screen illustrates extension numbers being correctly entered in the Extension(s): field.

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │ Call Management  System                    Switch_Name:Up or Down    Time │ │
│  └──────────────────────────────────────────────────────────────────┘    │
│                                                                           │
│                                                                           │
│                       DICTIONARY -- EXTENSION GROUPS                       │
│   1  Item: new-building                                                   │
│                                                                           │
│   2   Extensions        Extensions      Extensions      Extensions        │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│   3    Extension(s):  1101, 1103-1109_____                             │
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │  Error and confirmation messages appear in this field.           │    │
│  └──────────────────────────────────────────────────────────────────┘    │
│  ┌──────┐ ┌──────┐ ┌────────┐ ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐ │
│  │CHANGE│ │ ADD  │ │ DELETE │ │ PREV │ │ NEXT │  │ EXIT │ │ MORE │ │ HELP │ │
│  │      │ │      │ │        │ │ ITEM │ │ ITEM │  │      │ │ KEYS │ │ KEYS │ │
│  └──────┘ └──────┘ └────────┘ └──────┘ └──────┘  └──────┘ └──────┘ └──────┘ │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```

4   Press ADD.

[The group will be created with the entered extension numbers.]

Adding or Deleting Extensions to or From a Group

1   On the DICTIONARY menu, select the [ ] Extension-Groups option in
the Dictionary menu, and press RETURN.

[The blank Extension Groups screen appears.]

2   In the Item: field, enter the name of the group to which you would like to add
or delete extensions.

3   Press RETURN.

[The first page of extensions of the group entered will be displayed.]

4   Enter the extensions to be deleted in the Extension(s): field. Enter
individual extensions separated by commas or spaces or ranges separated by a
hyphen.

5   Press DELETE.

[The extensions will be deleted from this group.]

> If you place all of a group's extensions in the Extension(s): field and press DELETE, the group itself will be deleted.

6   Enter the extensions to be added in the Extension(s): field. You can enter individual extensions separated by commas or spaces, ranges separated by hyphens, or both individual extensions and ranges.

7   Press ADD.

[The extensions will be added to the group.]

Changing an Extension Group Name

1   On the DICTIONARY menu, select the [ ] Extension-Groups option in the Dictionary menu, and press RETURN.

[The blank Extension Groups screen appears.]

2   Enter the item name (current group name) in the Item: field and press RETURN.

[The data for that group appears.]

3   Overtype the old name with the new name and press CHANGE.

[The new name for the group will be entered into the Dictionary.]

Calculations

| Purpose | To view and change CMS calculations used in standard reports; to create custom calculations. |

Calculations are abbreviated names for formulas used to create report output. The calculations for standard reports already exist in the Dictionary, but you can add your own calculations to the Dictionary for use in custom reports. Refer to Appendix A in the *3B Call Management System Custom Reports* (5-85-215-503) or the standard report descriptions in Chapters 3 and 4 for a quick reference to standard CMS calculations.
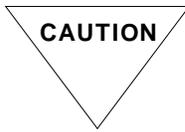
▽ CAUTION

Calculations that you create will coexist with standard CMS calculations in the Dictionary. Therefore, you should identify your own calculations with an all-lower-case letter format to distinguish them from standard calculations, which have an all-upper-case letter format. While there is no restriction on administering any calculation (your own or standard calculations), care should be used in changing standard calculations because standard reports could be adversely affected.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│  ┌─────────────────────────────────────────────────────────────────┐ │
│  │ Call Management  System                    Switch_Name:Up or Down    Time │
│  └─────────────────────────────────────────────────────────────────┘ │
│                                                                       │
│                       DICTIONARY -- CALCULATIONS                      │
│   1  Item:_____                               │
│   2  Formula: _____       │
│   3  Precision:x._____ (number of digits to the right of the decimal point) │
│   4  Description:_____           │
│                                                                       │
│  ┌─────────────────────────────────────────────────────────────────┐ │
│  │  Error and confirmation messages appear in this field.          │ │
│  └─────────────────────────────────────────────────────────────────┘ │
│  ┌───────┐ ┌─────┐ ┌────────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ │
│  │CHANGE │ │ ADD │ │ DELETE │ │ PREV │ │ NEXT │ │ EXIT │ │ MORE │ │ HELP │ │
│  │       │ │     │ │        │ │ ITEM │ │ ITEM │ │      │ │ KEYS │ │ KEYS │ │
│  └───────┘ └─────┘ └────────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 5-5   The Calculations Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

	PRINT	ITEM LOOKUP		PREV ITEM	NEXT ITEM		EXIT	RESUME	HELP KEYS

Refer to Chapter 1, "Introduction," for a review of SLKs.

Definition of Fields

Field $\boxed{1}$ Item

The name of the calculation that you wish to look up, add to the database, or change. The name can have up to 20 alphanumeric characters (blanks, underscores, and hyphens are okay).

Field $\boxed{2}$ Formula

The formula for the calculation. For example: CUMTALK/ NUMTALK

Field $\boxed{3}$ Precision

The number of decimal places to which division calculations are carried (a division is always carried to at least two places to the right of the decimal point, no matter what you specify here). Lower-case x is used to fill each desired decimal place.

Field $\boxed{4}$ Description

A verbal description of the calculation.

Adding a Calculation

1   On the DICTIONARY menu, select the [ ] Calculations option and press
     RETURN.

     [The blank Calculations screen appears.]

2   In the Item:, field enter the name of the new calculation you want added to the
     database.

3   In the Formula: field, enter the formula.

          Formulas can consist of database items, constants, and the following
          arithmetic operators: +, -, *, /, and ( ), which stand for: add, subtract,
          multiply, divide, and do first, respectively.

          No spaces separate the elements in a formula.

4   In the Precision: field, specify the precision desired using *x*'s.

5   Press ADD.

     [The new calculation will be added to the Dictionary.]

NOTE   All division-type formulas are automatically carried two decimal places in CMS
           reports, regardless of what precision you specify.

Creating a New Calculation by Modifying an Existing One

1   On the `DICTIONARY` menu, select the `[ ] Calculations` option and press
    [RETURN].

    [The blank calculations screen appears.]

2   Enter the name of the calculation to be copied in the `Item:` field and press
    [RETURN].

3   Enter any changes you want over the existing data, including the name, formula,
    and description. If you enter a new name, be sure to use all lower-case letters.

4   Press [ADD].

    [The modified, new calculation will be added to the Dictionary.]

Changing a Calculation
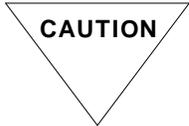
⚠ **CAUTION**   Calculations that you create will coexist with standard CMS calculations in the Dictionary. Therefore, you should identify your own calculations with an all-lower-case letter format to distinguish them from standard calculations, which have an all-upper-case letter format. While there is no restriction on administering any calculation (your own or standard calculations), care should be used in changing standard calculations because standard reports could be adversely affected.

1   On the `DICTIONARY` menu, select the `[ ] Calculations` option and press `RETURN`.

     [The blank Calculations screen appears.]

2   In the `Item:` field of the calculations screen, enter the item name of the calculation being changed.

3   Press `RETURN`.

     [CMS will return the data on the calculation to the screen.]

4   Make any desired changes to the displayed data by overtyping the name, formula, precision, or description.

5   Press `CHANGE`.

     [The change will be made in the database.]

Deleting a Calculation

<table>
<tr>
<td>NOTE</td>
<td>You cannot delete standard calculations (identified by their all-upper-case letter format). This procedure applies only to calculations you have created.</td>
</tr>
</table>

1   On the DICTIONARY menu, select the [ ] Calculations option and press RETURN.

    [The blank Calculations screen appears.]

2   Enter the item to be deleted in the Item: field, and press RETURN.

    [The item will be displayed.]

3   Press the DELETE SLK.

    [The item will be deleted from the Dictionary.]

Constants

Purpose To allow creation of constants such as ratios and
other fixed values to be used in custom reports.

Dependencies The only place you can put a constant
is the Item field of a Data Item Window of the
Custom Reports screen painter.

Constants are items with fixed numerical values that you can enter into the database and use in custom reports. No constants exist in CMS when it is first installed. By creating constants, you can use numbers within reports (either as parts of formulas or as stand-alone numbers) and, if needed, quickly change them in the Dictionary rather than changing them in Custom Reports Creation.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────────┐
│                                                                            │
│  ┌──────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management  System                   Switch_Name:Up or Down   Time│ │
│  └──────────────────────────────────────────────────────────────────────┘ │
│                                                                            │
│                         DICTIONARY -- CONSTANTS                            │
│   1  Item:_____                                             │
│                                                                            │
│   2  Value: 0.000000___                                                    │
│                                                                            │
│   3  Description:_____              │
│                                                                            │
│                                                                            │
│  ┌──────────────────────────────────────────────────────────────────────┐ │
│  │  Error and confirmation messages appear in this field.                 │ │
│  └──────────────────────────────────────────────────────────────────────┘ │
│  ┌────────┐ ┌─────┐ ┌────────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐│
│  │ CHANGE │ │ ADD │ │ DELETE │ │ PREV │ │ NEXT │ │ EXIT │ │ MORE │ │ HELP ││
│  │        │ │     │ │        │ │ ITEM │ │ ITEM │ │      │ │ KEYS │ │ KEYS ││
│  └────────┘ └─────┘ └────────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘│
│                                                                            │
└──────────────────────────────────────────────────────────────────────────┘
```

Figure 5-6   The Constants Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

	PRINT SCREEN	ITEM LOOKUP		PREV ITEM	NEXT ITEM		EXIT	RESUME	HELP KEYS

Refer to Chapter 1, "Introduction" for a review of SLKs.

Definition of Fields

Field 1 Item

The name of a constant that you wish to look up, add to the database, delete, or change. The name can have up to 20 alphanumeric characters (blanks, underscores, and hyphens are okay).

Field 2 Value

The numerical value of the constant.

Field 3   Description

An optional definition of the constant.

Adding a Constant

1   On the DICTIONARY menu, select the [ ] Constants option and press [RETURN].

[The blank Constants screen appears.]

2   In the Item: field of the blank Constants screen, enter the name of the new constant you want added to the database. Use a small number of letters to make the name easy to manipulate.

3   Enter the numerical value of the constant in the Value: field. Use a decimal point if desired and any desired number of decimal places.

4   Enter a description of the constant in the Description: field. It is recommended that you limit this description to 40 alphanumeric characters. This step is optional.

5   Press [ADD].

[The new constant will be added to the database.]

Changing a Constant

1   On the DICTIONARY menu, select the [ ] Constants option and press
RETURN.

[The blank Constants screen appears.]

2   Enter the name of the constant to be changed in the Item: field, and press
RETURN.

[CMS will return the data on the constant to the screen.]

3   Make any desired changes to the displayed data by overtyping it.

4   Press CHANGE.

[The Dictionary will be updated on the item.]

Deleting a Constant

1   On the DICTIONARY menu, select the [ ] Constants option and press
RETURN.

[The blank Constants screen appears.]

2   In the Item: field of the Constants screen, enter the name of the constant to be
deleted.

3   Press RETURN.

[CMS will display the constant's data.]

4   Press DELETE.

[The item will be deleted from the Dictionary.]

Database Items

Purpose On-line database-item to database-file
cross-reference; used in custom report creation.

Limitation This whole section of the Dictionary is read only.

Database items are the categories of information CMS uses to collect, store, and retrieve ACD data. They are the fundamental elements of all standard reports. As such, they cannot be changed. But you can look them up in the Dictionary and use them in creating custom reports. The Database Items screen will give a description of the items and a list of files that contain them. See Appendix A in the *3B Call Management System Custom Reports* (5-85-215-503) document for a listing of database items.

Screen Description

```
Call Management  System                              Switch_Name:Up or Down    Time


                        DICTIONARY -- DATABASE ITEMS
   1  Item: ACDCALLS_____


               2 Table: real-time hhour agent
                        real-time hhour split
                        historical hhour agent
                        historical daily agent
                        historical hhour split
                        historical daily split
         3 Description:  Total number of ACD calls_____

    Error and confirmation messages appear in this field.

  ┌──────┐ ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐
  │      │ │      │ │ ITEM │  │ PREV │ │ NEXT │  │ EXIT │ │ PRINT│ │ HELP │
  │      │ │      │ │LOOKUP│  │ ITEM │ │ ITEM │  │      │ │SCREEN│ │ KEYS │
  └──────┘ └──────┘ └──────┘  └──────┘ └──────┘  └──────┘ └──────┘ └──────┘
```

Figure 5-7   Database Item Screen

Refer to Chapter 1, "Introduction," for a review of SLKs.

Definition of Fields

Field ☐1 Item

The database item you wish to know about.

Field ☐2 Table

The database files in which the item appears.

Field ☐3 Description

Description of the database item.

Searching for a Database Item

1 On the DICTIONARY menu, select the [ ] Database-Items option in the Dictionary menu, and press RETURN.

[The blank Database Items screen appears.]

2 Enter the name (or unique, leading portion of the name) of the item in the Item: field.

> **NOTE** All database items are in all-capital letters: ACDTIME, ACDCALLS, etc.

3 Press RETURN.

[The database will be searched for the item, and the screen will display the files where the item appears and a definition for that item.]

> **NOTE** No administration is done on the database items. Items cannot be added, changed, or deleted, only searched.

Split Synonyms

Purpose   To create customized names for splits in your CMS.

You use the Split Synonyms screen to assign synonyms (names) to your ACD splits. Split synonyms appear with split numbers on reports and make the reports easier to read. The names you use should concretely reflect the configuration of your splits and ACD(s). For example, if you want splits in your system to be broken out by "Sales," "Customer Svc," and "Wholesale," just assign those names to the splits that handle those areas of the business.

NOTE	In naming trunk groups and splits, you may want to be consistent with the city-of-origin and queue-of-origin names given trunk groups and splits by your switch administrator (Generic 2/ System 85/ DIMENSION PBX only).

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  ┌───────────────────────────────────────────────────────────────────────┐  │
│  │ Call Management  System                    Switch_Name:Up or Down   Time │  │
│  └───────────────────────────────────────────────────────────────────────┘  │
│                                                                               │
│                         DICTIONARY -- SPLIT SYNONYMS                          │
│   ┌─┐                                                                         │
│   │1│ Item: magazine sales_____                                         │
│   └─┘                                                                         │
│          ┌─┐                                                                  │
│          │2│ Value: 22__                                                      │
│          └─┘                                                                  │
│   ┌─┐                                                                         │
│   │3│ Description: Split 22 is magazine sales_____            │
│   └─┘                                                                         │
│                                                                               │
│  ┌───────────────────────────────────────────────────────────┐              │
│  │  Error and confirmation messages appear in this field.     │              │
│  └───────────────────────────────────────────────────────────┘              │
│  ┌───────┐ ┌─────┐ ┌────────┐  ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐│
│  │CHANGE │ │ADD  │ │DELETE  │  │PREV  │ │NEXT  │   │EXIT  │ │MORE  │ │HELP  ││
│  │       │ │     │ │        │  │ITEM  │ │ITEM  │   │      │ │KEYS  │ │KEYS  ││
│  └───────┘ └─────┘ └────────┘  └──────┘ └──────┘   └──────┘ └──────┘ └──────┘│
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 5-8   The Split Synonyms Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

	PRINT SCREEN	ITEM LOOKUP		PREV ITEM	NEXT ITEM		EXIT	RESUME	HELP KEYS

Refer to Chapter 1, "Introduction," for a review of SLKs.

Definition of Fields

Field 1 Item

The synonym (name) of the split you want to add, change, or delete. The synonym can have up to 20 alphanumeric characters (blanks, underscores, and hyphens are okay). Other special characters (", &, etc.) are not allowed.

Field 2 Value

The number of the split to which the synonym will apply.

Field 3 Description

The description of the split (optional).

Adding a Split Synonym

1   On the `DICTIONARY` menu, select the `[ ] Split-Synonyms` option and press [RETURN].

 [The blank Split Synonyms screen appears.]

2   In the `Item:` field, enter the synonym you want for the split. Use 20 or fewer alphanumeric characters (blanks allowed and counted).

3   Enter the number of the split in the `Value:` field.

4   Enter a description in the `Description:` field. This is optional.

5   Press [ADD].

 [This adds the new synonym to the Dictionary.]

Changing a Split Synonym

1   On the DICTIONARY menu, select the [ ] Split-Synonyms option and
    press RETURN.

    [The blank Split Synonyms screen appears.]

2   In the Item: field, enter the synonym (or a unique leading portion of the
    synonym) you desire to change.

3   Press RETURN.

    [The Dictionary will display the data for the synonym.]

4   Enter in the desired changes over the existing data, and press CHANGE.

    [The synonym will be changed.]

Deleting a Split Synonym

1   On the DICTIONARY menu, select the [ ] Split-Synonyms option and
    press RETURN.

    [The blank Split Synonyms screen appears.]

2   In the Item: field, enter the synonym (or unique, leading portion of the
    synonym) you want to delete.

3   Press RETURN.

    [The Dictionary will be searched for the named item. When it is found, the data will
    be displayed.]

4   Press DELETE.

    [The synonym (item) will be removed from the Dictionary.]

Trunk Group Synonyms

Purpose   To create customized names for trunk groups in your CMS.

You use the Trunk Group Synonyms screen to assign meaningful synonyms (names) to your ACD trunk groups. The synonyms will appear with trunk group numbers on reports and make the reports easier to read. A trunk group synonym can be a published phone number, a variation of an associated split name, or any other name that concretely reflects the configuration of your trunk groups, splits, and ACD(s).

| NOTE | In naming trunk groups and splits, you may want to be consistent with the city-of-origin and queue-of-origin names given trunk groups by your switch administrator (Generic 2/ System 85/ DIMENSION PBX only). |

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│  ┌─────────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management  System                       Switch_Name:Up or Down   Time│ │
│  └─────────────────────────────────────────────────────────────────────────┘ │
│                                                                               │
│                         DICTIONARY -- TRUNK GROUP SYNONYMS                     │
│     [1]  Item_local 961-1234_____                                      │
│                                                                               │
│         [2]  Value: 22__                                                       │
│     [3]  Description: Trunk Group 22 is local line 961-1234_____           │
│                                                                               │
│                                                                               │
│  ┌─────────────────────────────────────────────────────────────────────────┐ │
│  │   Error and confirmation messages appear in this field.                  │ │
│  └─────────────────────────────────────────────────────────────────────────┘ │
│  ┌──────┐ ┌─────┐ ┌──────┐  ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐    │
│  │CHANGE│ │ ADD │ │DELETE│  │PREV  │ │NEXT  │  │EXIT  │ │MORE  │ │HELP  │    │
│  │      │ │     │ │      │  │ITEM  │ │ITEM  │  │      │ │KEYS  │ │KEYS  │    │
│  └──────┘ └─────┘ └──────┘  └──────┘ └──────┘  └──────┘ └──────┘ └──────┘    │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 5-9   The Trunk Group Synonyms Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

	PRINT SCREEN	ITEM LOOKUP		PREV ITEM	NEXT ITEM		EXIT	RESUME	HELP KEYS

Refer to Chapter 1, "Introduction," for a review of SLKs.

Definition of Fields

Field [1] Item

The synonym (name) of the trunk group you want to add, change, or delete. The synonym can have up to 20 alphanumeric characters (underscores and hyphens are okay). (No blanks are allowed.)

Field [2] Value

The number of the trunk group to which the synonym will apply.

Field [3] Description

The description of the trunk group (optional).

Adding a Trunk Group Synonym

1   On the DICTIONARY menu, select the [ ] Trunk-Group-Synonyms option and press [RETURN].

[The blank Trunk Group Synonyms screen appears.]

2   In the Item: field, enter the synonym you want for the trunk group. Use 20 or fewer alphanumeric characters (no blanks allowed).

3   Enter the number of the trunk group in the Value: field.

4   Enter the description in the Description: field. You should limit your description to 40 alphanumeric characters.

5   Press [ADD].

[This adds the new synonym to the Dictionary.]

Changing a Trunk Group Synonym

1   On the DICTIONARY menu, select the [ ] Trunk-Group-Synonyms
    option and press RETURN.

    [The blank Trunk Group Synonyms screen appears.]

2   Enter the synonym (or unique, leading portion of the synonym) you desire to
    change in the Item: field.

3   Press RETURN.

    [The database will be searched for the named item. When it is found, the data will
    be displayed.]

4   Enter in the new synonym, trunk group number, or description in the Item:,
    Value:, or Description: fields respectively.

5   Press CHANGE.

    [The change will be added to the Dictionary.]

Deleting a Trunk Group Synonym

1   On the DICTIONARY menu. select the [ ] Trunk-Group-Synonyms
    option and press RETURN.

    [A blank Trunk Group Synonyms screen appears.]

2   Enter the synonym (or unique, leading portion of the synonym) you desire to delete
    in the Item: field.

3   Press RETURN.

    [The Dictionary will be searched for the named item. When it is found, the data
    will be displayed.]

4   Press DELETE.

    [The synonym (item) will be removed from the Dictionary.]

NOTES

General Information

Use the Configuration subsystem to perform tasks such as:

Moving extensions and trunk groups to different splits

Setting automatic call-handling parameters for splits

Setting parameters with which to monitor call wait time

Setting up and monitoring the minute-by-minute trace of individual agent activity.

NOTE	For a DEFINITY Communications System Generic 1, a System 75, and a CMS with the Vectoring feature, the Split Trunk-Group-Assignments and the Split Parameter-Administration screens are not available.

Configuration Menu

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│  ┌──────────────────────────────────────────────────────────────────────┐    │
│  │ Call Management  System                    Switch_Name:Up       Time  │    │
│  └──────────────────────────────────────────────────────────────────────┘    │
│                                                                               │
│                          CONFIGURATION                                        │
│                                                                               │
│                          Split                                                │
│                          [ ] Extension-Assignments                            │
│                          [ ] Trunk-Group-Assignments                          │
│                          [ ] Parameter-Administration                         │
│                          [ ] Call-Profile-Administration                      │
│                                                                               │
│                          [ ] Agent Trace                                      │
│                                                                               │
│                                                                               │
│  ┌────┐ ┌────┐ ┌────┐  ┌────┐ ┌────┐  ┌─────┐ ┌──────┐ ┌─────┐                │
│  │    │ │    │ │    │  │    │ │    │  │EXIT │ │PRINT │ │HELP │                │
│  │    │ │    │ │    │  │    │ │    │  │     │ │SCREEN│ │KEYS │                │
│  └────┘ └────┘ └────┘  └────┘ └────┘  └─────┘ └──────┘ └─────┘                │
│                                                                               │
└─────────────────────────────────────────────────────────────────────────────┘
```

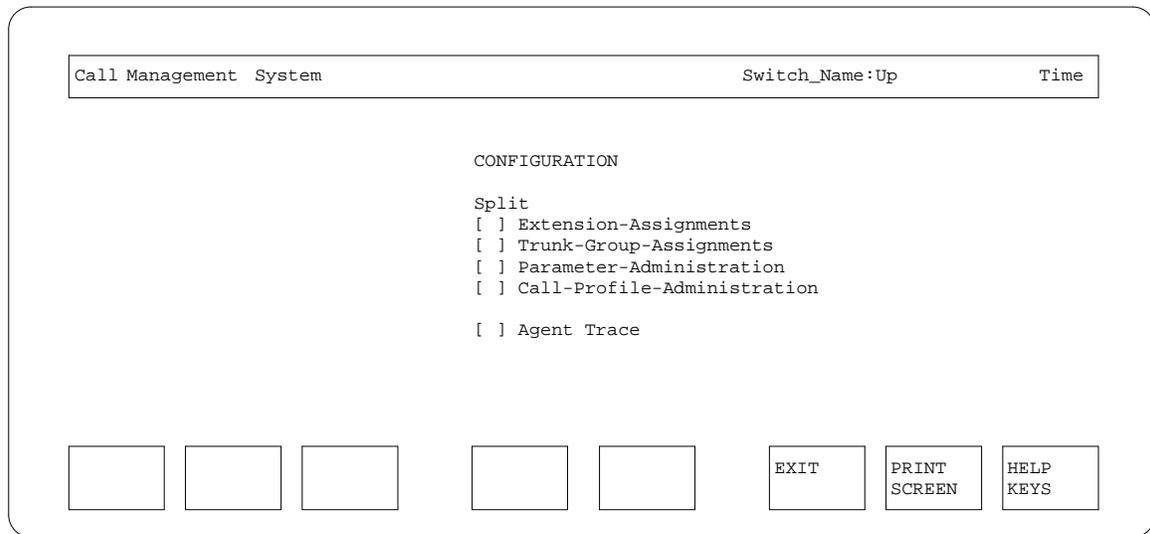**Figure 6-1   The Configuration Menu**

Split Extension Assignments

Purpose   To provide load balancing capability for the CMS-measured
               portion of the ACD through extension reassignment.
Dependencies   CMS measurement of the affected extensions and splits.
               If your site has Centralized System Management (CSM), you should
               coordinate changes with the CSM administrator.
               You need write permission for all affected splits.

Extensions are originally assigned to splits at the switch. Use this screen to search for and view those extension assignments and to reassign extensions to other splits. This screen can also be a quick reference to determine what extensions are available in a split, whether they are staffed by agents, and which agents are currently logged into those extensions.

> **NOTE** On a Generic 2/ System 85 switch, each split is assigned a split size, represented by the maximum number of extensions the split can have. Once the maximum number of extensions is assigned to a split, attempts to reassign an additional extension to that split will be rejected.

With a Generic 2/ System 85 switch, Split 0 is a dummy split to which you can assign extensions that you do not want in any of your measured splits. In addition, extensions that you assign to unmeasured splits will also be automatically assigned to Split 0 so that you can keep track of them for future reassignments. This capability is not available with Generic 1/ System 75.
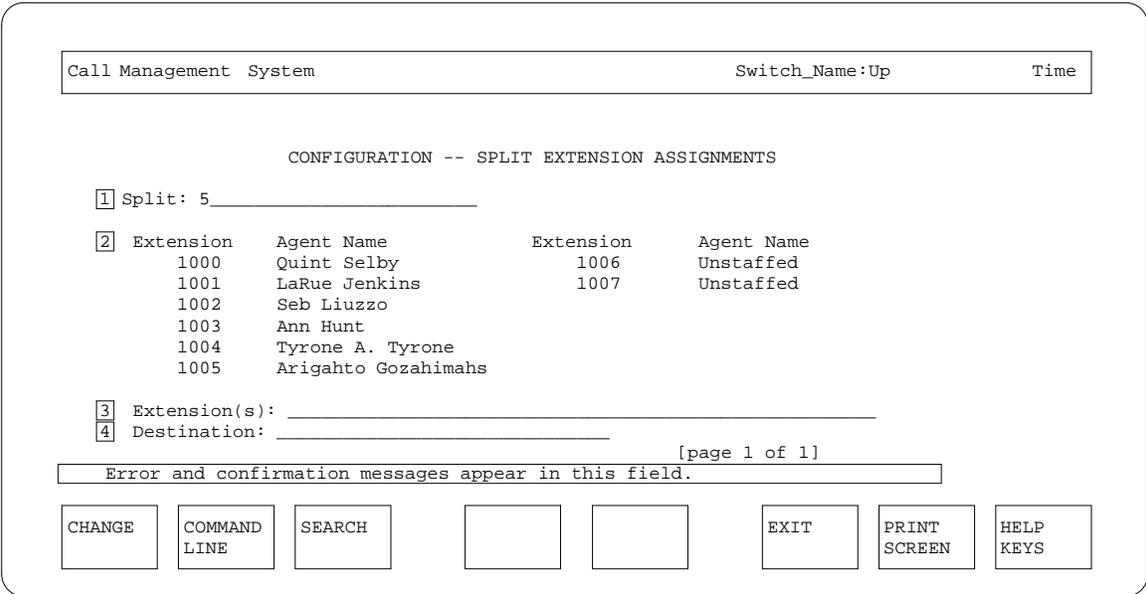
Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │ Call Management  System                     Switch_Name:Up    Time │    │
│  └──────────────────────────────────────────────────────────────────┘    │
│                                                                           │
│                                                                           │
│                   CONFIGURATION -- SPLIT EXTENSION ASSIGNMENTS             │
│                                                                           │
│  ⎡1⎤ Split: 5_____                                       │
│                                                                           │
│  ⎡2⎤ Extension     Agent Name          Extension      Agent Name          │
│          1000      Quint Selby             1006       Unstaffed           │
│          1001      LaRue Jenkins           1007       Unstaffed           │
│          1002      Seb Liuzzo                                             │
│          1003      Ann Hunt                                              │
│          1004      Tyrone A. Tyrone                                       │
│          1005      Arigahto Gozahimahs                                    │
│                                                                           │
│  ⎡3⎤ Extension(s): _____          │
│  ⎡4⎤ Destination: _____                            │
│                                                    [page 1 of 1]          │
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │  Error and confirmation messages appear in this field.            │    │
│  └──────────────────────────────────────────────────────────────────┘    │
│                                                                           │
│  ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌──────┐ ┌──────┐ ┌──────┐ │
│  │CHANGE │ │COMMAND│ │SEARCH │ │       │ │       │ │EXIT  │ │PRINT │ │HELP  │ │
│  │       │ │LINE   │ │       │ │       │ │       │ │      │ │SCREEN│ │KEYS  │ │
│  └───────┘ └───────┘ └───────┘ └───────┘ └───────┘ └──────┘ └──────┘ └──────┘ │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 6-2   The Split Extension Assignments Screen

Definition of Fields

Field ⎡1⎤ Split

The number or synonym of the split whose extensions you are interested in.

Field ⎡2⎤ Data Fields

The display area for the extension numbers assigned to the split and agents currently logged in at the split. The word ''Unstaffed'' will appear next to an extension if no one is logged into it. You cannot enter data in these fields.

Field ⎡3⎤ Extension(s)

Extensions whose split assignments you wish to change or search for.

Field ⎡4⎤ Destination

The desired new split number for the extensions in the Extension(s): field.

Viewing Extension Assignments

1 On the CONFIGURATION menu, select the [ ] Extension-
   Assignments option and press RETURN.

   [The blank Split Extension Assignments screen appears.]

2 In the Split: field, enter the synonym or number of the split whose extensions
   you wish to view.

3 Press RETURN.

   [The extensions assigned to the selected split will be shown, accompanied by names
   of agents currently logged into those extensions.]

Reassigning Extensions

NOTE	If you are moving extensions for the first time, the original extensions assigned at the switch are displayed for any split.

NOTE	Only positions that are unstaffed can be moved via the Extension Assignments process.

1   Request that agents at extensions you want to move log off the system.

2   On the `CONFIGURATION` menu, select the `[ ] Extension-Assignments` option and press ⌈RETURN⌋.

[The blank Split Extension Assignments screen appears.]

3   In the `Split:` field, enter the split number or synonym of the current location of the extensions.

4   Press ⌈RETURN⌋.

[The current assignments to the split will be displayed.]

Be sure that word "Unstaffed" appears in the area next to each extension you wish to move.

5   In the `Extension(s)` field, enter the numbers of the extensions you wish to move. Enter individual extension numbers separated by spaces or commas, ranges separated by hyphens, or combinations of both.

6   In the `Destination:` field, enter the number of the split to which the extensions will be moved.

7   Press ⌈CHANGE⌋ or ⌈COMMAND LINE⌋.

[If you press ⌈CHANGE⌋, the move will occur immediately. The screen will also display the destination split to verify to what extent the move was successful.]

[If you press ⌈COMMAND LINE⌋, you will move to the Schedule Subsystem where you can schedule the move at another time.]

8   If, after a change, you want to validate the original split's new configuration, enter its number in the `Split` field and press ⌈RETURN⌋.

Reasons for an Unsuccessful Extension Reassignment

If the move attempt is unsuccessful or partially unsuccessful, the message shown in the following screen appears:
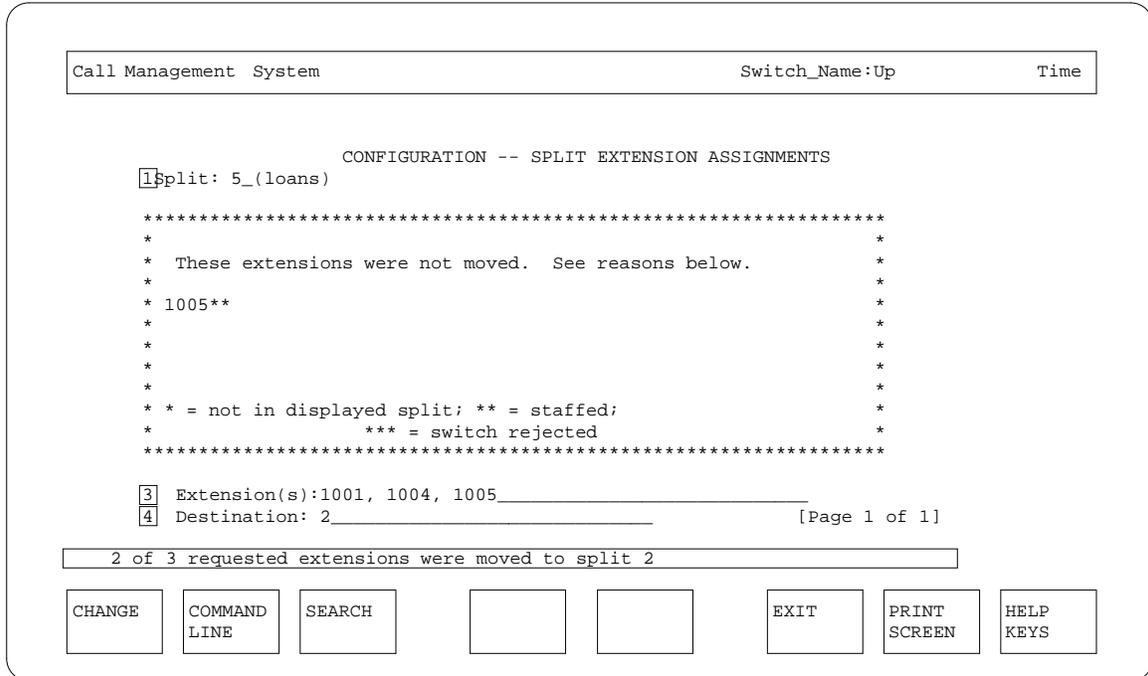
```
Call Management  System                           Switch_Name:Up          Time


                      CONFIGURATION -- SPLIT EXTENSION ASSIGNMENTS
      1 Split: 5_(loans)

      **********************************************************************
      *                                                                    *
      *  These extensions were not moved.  See reasons below.              *
      *                                                                    *
      * 1005**                                                             *
      *                                                                    *
      *                                                                    *
      *                                                                    *
      *                                                                    *
      * * = not in displayed split; ** = staffed;                          *
      *                *** = switch rejected                               *
      **********************************************************************

      3  Extension(s):1001, 1004, 1005_____
      4  Destination: 2_____      [Page 1 of 1]

       2 of 3 requested extensions were moved to split 2

 CHANGE     COMMAND    SEARCH                            EXIT     PRINT     HELP
            LINE                                                  SCREEN    KEYS
```

Figure 6-3   An Unsuccessful Extension Reassignment Screen

In this case, extension 1005 was not successfully moved because an agent was logged in at that extension when the move was attempted. Extensions 1001 and 1004 were successfully moved. Reasons for an unsuccessful move are:

Either one or both splits are not part of the ACD.

Either one or both splits are not CMS measured.

The extension is not a member of the old split.

The extension being moved is currently active (the position must be unstaffed).

The extension is the supervisor's extension (member 0).

You lack write permission for either the original split, the destination split, or both.

NOTE | Only Generic 2 and System 85 identifies member 0 as the split supervisor extension.

Searching for an Extension Assignment

1 On the CONFIGURATION menu, select the Split [ ] Extension-Assignments option in the Configuration menu.

[The blank Extension Assignments screen appears.]

2 In the Extension(s): field, enter the extension number whose assignment you are interested in.

3 Press [SEARCH].

[The split containing the extension being sought will be displayed.]

Trunk Group Assignments

Purpose	To view trunk group assignments and move trunk groups.
Dependencies	CMS measurement of all affected splits and trunk groups; write permission for the affected splits and trunk groups. Check with CSM administrator if CSM is present.
Limitations	**The Trunk Group Assignment process is not available on Generic 1 and System 75. See the** *3B CMS Vectoring Administration* **(585-215-502) document if you have the 3B CMS Vectoring feature**.

Trunk groups are originally assigned to splits at the switch. Use this screen to search for and view those trunk group assignments and to reassign trunk groups to other splits.

Split 0 is a dummy split to which you can assign trunk groups that you do not want in any of your measured splits. In addition, trunk groups that you assign to unmeasured splits will also be automatically assigned to Split 0 so that you can keep track of them for future reassignments.

NOTE	Split — Trunk Group assignment is available only on the Generic 2, System 85, and DIMENSION PBX. Also, it is not available for CMS with the Vectoring feature.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────┐   │
│  │ Call Management  System                    Switch_Name:Up    Time │   │
│  └──────────────────────────────────────────────────────────────────┘   │
│                                                                          │
│                    CONFIGURATION -- SPLIT TRUNK GROUP ASSIGNMENTS         │
│         ┌1┐ Split:7_____                                   │
│                                                                          │
│                         Trunk Group        Synonym                       │
│                             19             TG19_DID                      │
│                             18             TG18_Band5_In                 │
│         ┌2┐                 121            TG121_Band5_In                │
│                             122            TG122_Band4_In                │
│                             178            TG178_Band8_In                │
│                                                                          │
│         ┌3┐  Trunk Group(s):_____         │
│         ┌4┐    Destination:_____ [page 1 of 1] │
│  ┌──────────────────────────────────────────────────────────────────┐   │
│  │  Error and confirmation information appears on this line.        │   │
│  └──────────────────────────────────────────────────────────────────┘   │
│  ┌──────┐ ┌───────┐ ┌──────┐ ┌─────┐ ┌─────┐ ┌──────┐ ┌──────┐ ┌──────┐ │
│  │CHANGE│ │COMMAND│ │SEARCH│ │     │ │     │ │EXIT  │ │PRINT │ │HELP  │ │
│  │      │ │LINE   │ │      │ │     │ │     │ │      │ │SCREEN│ │KEYS  │ │
│  └──────┘ └───────┘ └──────┘ └─────┘ └─────┘ └──────┘ └──────┘ └──────┘ │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 6-4   The Split Trunk Group Assignments Screen

Definition of Fields

Field ⬚1 Split

The number of the split whose trunk group assignments you are viewing or changing.

Field ⬚2 Data Display field

The list of trunk groups currently assigned to this split. You cannot enter data in this field.

Field ⬚3 Trunk Group

This field is for numbers of trunk groups — either for reassignment or search purposes.

Field ⬚4 Destination

The split to which trunk groups will be reassigned.

Viewing Trunk Group Assignments

1   On the CONFIGURATION menu, select the Split [ ] Trunk-Group-
    Assignments option and press [RETURN].

    [The blank Split Trunk Group Assignments screen appears.]

2   In the Split field, enter the number or synonym of the split whose trunk group
    assignments you are interested in.

3   Press [RETURN].

    [The trunk group assignments will be displayed.]

Moving a Trunk Group

1   On the CONFIGURATION menu, select the Split [ ] Trunk-Group-
    Assignments option and press [RETURN].

    [The blank Split Trunk Group Assignments screen appears.]

2   In the Split field, enter the number or synonym of the split where the trunk
    group currently terminates.

3   Press [RETURN].

    [The current assignments will be displayed.]

4   In the Trunk Group(s): field, enter the number of the trunk group or groups
    to be moved. The entry may be single trunk group numbers separated by spaces or
    commas, ranges separated by hyphens, or both individual numbers and ranges.
    This field will not accept synonyms.

5   In the Destination: field, enter the number of the new split receiving the
    trunk groups.

6   Press [CHANGE] or [COMMAND LINE].

    [If you press [CHANGE], the move will occur immediately. The screen will also
    display the destination split to verify to what extent the move was successful.]

    [If you press [COMMAND LINE], you will move to the Schedule Subsystem where you
    can schedule the move at another time.]

NOTE | If you want to move trunk groups from more than one split to a single destination split, you can skip Steps 3 and 4 and, in the `Trunk Group(s):` field, enter the numbers of all the trunk groups you want to move to a single destination.

Reasons for an Unsuccessful Trunk Group Reassignment

If the move is unsuccessful, the screen will display a message like the one shown below.

```
Call Management  System                          Switch_Name:Up          Time

                    CONFIGURATION -- SPLIT TRUNK GROUP ASSIGNMENTS
       Split: 1_____
       *********************************************************************
       *                                                                   *
       *  These trunk groups were not moved.  See reasons below.           *
       *                                                                   *
       * 19*                                                               *
       *                                                                   *
       * * = trunk group not assigned  ** = no permission to move          *
       *           *** = switch rejected                                   *
       *********************************************************************
       3  Trunk Group(s):_____
       4   Destination:_____     [page 1 of 1]
     Error and confirmation information appears on this line.      "

  CHANGE      COMMAND   SEARCH                                         PRINT    HELP
              LINE                                                     SCREEN   KEYS
```

Figure 6-5   An Unsuccessful Trunk Group Reassignment Screen

The following can cause a move to fail:

The trunk group is not "measured" at the switch.

One of the affected splits is not measured at the switch.

The user does not have permissions for the trunk group, the original split, or the destination split.

Searching for a Trunk Group to See Its Split Assignment

1 On the CONFIGURATION menu, select the Split [ ] Trunk-Group-Assignments option and press RETURN.

[The blank Split Trunk Group Assignments screen appears.]

2 When the blank screen appears, enter the trunk group number you are searching for in the Trunk Group(s): field.

3 Press SEARCH.

[The split containing this trunk group assignment will be displayed if it is a measured trunk group.]

Split Parameters

Purpose   Establish, change intraflow patterns; administer recorded-announcement delay.

Dependencies   Switch administration for Queue Directory and Priority Queue Directory numbers, if used. Write permission for the splits involved.

Limitations   **This screen is not present in a CMS attached to a Generic 1, System 75, or CMS with the Vectoring feature.**

Use the Split Parameters screen to control **intraflow** (the forwarding of queued calls from a split to another measured portion of the ACD) and schedule prerecorded announcements for calls waiting in split queues.

Intraflow helps balance the workload during peak periods by moving callers to splits that are not as busy. You set up intraflow by entering forwarding destination(s) and forwarding conditions on the Split Parameters screen. The destination of calls can be:

> Another split in the measured portion of the ACD

> Another split that is not measured

> The attendant or Centralized Attendant Service (CAS) attendant

> An extension (measured or unmeasured).

You can specify up to three forwarding destinations for each split. Then, when the ACD forwards a call, it will try to send the call to the first destination you specified. If that destination cannot accept the call, the ACD will try the second destination, then the third. If the third destination cannot accept the call, the ACD will leave the call in the original split's queue. Therefore, the last destination should be a split or extension that accepts all calls into its queue.

You establish forwarding conditions for a split by specifying an **outflow threshold**, or the number of queued calls that will trigger call forwarding. For example, if you specify an outflow threshold of 10, the oldest call waiting in queue will be forwarded when the number of calls in queue reaches 10.

You can also use the Split Parameters screen to limit the number of forwarded calls a split will accept from other splits. You establish that limit by specifying an **inflow threshold**, or the number of queued calls above which forwarded calls will not be accepted into the queue. For example, if you specify an inflow threshold of 9, forwarded calls will not be accepted by the split when the number of calls in queue meets or exceeds 9. When a destination split's inflow threshold is met or exceeded, the ACD will try to forward calls to the next destination specified in the original split's intraflow parameters.

You may choose to intraflow **all** calls to another destination, in which case you do not enter an outflow threshold for the split. This unconditional type of intraflow is most useful at times such as weekends or evenings when no one is staffing the split. When all of a split's calls are intraflowed, the ACD tries to send each call to the first destination, then the second, and finally the last — if you specify more than one destination.

However, unlike conditional intraflow, unconditional intraflow requires that the ACD successfully forward calls — it cannot leave calls in the original split's queue. If the destination is an attendant or split queue, the ACD will always queue an unconditionally intraflowed call to that destination, regardless of whether the destination has an inflow threshold that is being exceeded. As a result, entering more than one split as a destination is ineffectual because the first destination split will always accept all calls, and no calls will ever reach the second destination split. Also, an attendant queue or another split should always be the last destination for unconditional intraflow, and extension destinations that do not have a queue should precede split destinations in the intraflow sequence.

Your intraflow parameters can be scheduled to take effect at predetermined times, such as Friday afternoon (for weekend traffic) or the beginning of the evening shift. At times, you might want to have all calls route to an answering machine, where callers can leave messages. This would be possible by forwarding the split's calls to an extension that had an answering machine attached.

| NOTE | CMS intraflow is not available in CMS applications attached to a Generic 1 or System 75 switch. Generic 1 or System 75 intraflow can be administered from the System Administration Terminal (SAT). Also, the Split Parameters screen is not available on CMS with the Vectoring feature. |

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────┐   │
│  │ Call Management  System                     Switch_Name:Up    Time │   │
│  └──────────────────────────────────────────────────────────────────┘   │
│                                                                           │
│                    CONFIGURATION -- SPLIT PARAMETERS ADMINISTRATION       │
│    [1]  Split: 1_____     Session: UP        │
│                                                                           │
│              [2]  Intraflow Call Forwarding: conditional                  │
│                        Destination 1: [3]  split ____  [4]  2_____ │
│                        Destination 2: extension  4444_____              │
│                        Destination 3: extension  3444_____              │
│                     [5]  Inflow threshold: 6_                            │
│                    [6]  Outflow threshold: 20                            │
│          [7]  Delay Time for Announcement 1: 25                          │
│          [8]  Delay Time for Announcement 2: 45                          │
│                                                                           │
│                    [9]  Queue Directory No: 4445_____               │
│            [10]  Priority Queue Directory No: 1234_____               │
│  ┌──────────────────────────────────────────────────────────────────┐   │
│  │   Error and confirmation messages appear in this field.           │   │
│  └──────────────────────────────────────────────────────────────────┘   │
│  ┌───────┐┌───────┐┌──────┐  ┌──────┐  ┌──────┐  ┌──────┐┌──────┐┌──────┐│
│  │CHANGE ││COMMAND││      │  │      │  │      │  │EXIT  ││PRINT ││HELP  ││
│  │       ││LINE   ││      │  │      │  │      │  │      ││SCREEN││KEYS  ││
│  └───────┘└───────┘└──────┘  └──────┘  └──────┘  └──────┘└──────┘└──────┘│
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 6-6   **The Split Parameters Screen**

Definition of Fields

Field [1] Split

The number or synonym of the split whose parameters you are viewing or administering.

Field [2] Intraflow Call Forwarding

Enter of intraflowing. Valid entries include:

none   No calls will be forwarded; calls will remain in the queue.

conditional Calls will be forwarded according to outflow thresholds.

all   All calls will be forwarded.

Field ③ Destination field, first part

The type of receiving point you desire for the intraflowed calls. Enter one of the following codes:

e extension

s split

p priority split

c Centralized Attendant Service (CAS)

a attendant

u unassigned.

Field ④ Destination field, second part

The number of the split or extension to which calls are forwarded.

> **NOTE** If you specify more than one destination, the ACD will first try to forward each call to Destination 1. If the conditions are not met for a successful forwarding (such as the inflow threshold being exceeded at the destination split), the intraflow software will attempt to queue to the second destination, then the third. If no forwarding conditions are met, the call remains queued to the original split.

Field ⑤ Inflow threshold

A field where receipt of intraflowed calls is specified for this split. When the number of calls in this split's queue is less than or equal to this number, intraflowed calls will be accepted into this split's queue.

Field ⑥ Outflow threshold

Another field where conditional intraflow parameters are set. When the type of forwarding is "conditional" and the number of calls in a split's queue is greater than or equal to this number, conditional intraflow will be in effect for that split. The intraflow routines will attempt to intraflow this split's calls elsewhere under these conditions.

Fields 7 and 8 Delay Time for Announcements 1 and 2

The delay established for this split before a recorded announcement is heard by queued callers.

Field 9 Queue Directory Number

The main associated extension number of the split. Assigned during TRACS (Translations Recovery, Additions, Conversions System) implementation in DEFINITY Communications System— Generic 2 and System 85. Particularly useful in forwarding internal calls to an ACD split. You cannot enter data into this field.

Field 10 Priority Queue Directory Number (optional field)

The priority associated extension for this split (dialing it gives the caller priority in the queue over calls to the main split number). You cannot enter data into this field.

Changing the Intraflow Parameters

The procedure for *changing* a split parameter also applies to creating new ones either at the start up of your CMS administration or after, for example, adding a new split to the ACD.

1   On the CONFIGURATION menu, select the Split [ ] Parameter-Administration option and press RETURN.

    [A blank Split Parameters screen appears.]

2   Enter the number or synonym of a split in the Split: field, and press RETURN.

    [The split's data appears.]

3   In the Intraflow Call Forwarding: field, specify the type of intraflow to be used by this split— conditional, all, or none.

4   Fill in the `Destination` fields (fields 3 and 4) for each destination you are administering according to the following chart. Three successive destinations are possible for an intraflowed call. Also, you can enter the destinations even if you specified "none" in Step 3. Then, when necessary you can turn on intraflow without having to enter the destinations each time.

IF YOU PLACE THIS IN THE 1ST DESTINATION FIELD (3)...	YOUR 2ND DESTINATION FIELD (4) ENTRY WILL BE...
e for extension	A valid extension number in your switch system.
s for split	A measured split number or synonym.
p for priority split	A measured split number or synonym that has a Priority Queue Directory Number (PQDN). In this case, intraflowed calls will get priority over other calls queued to this split.
c for CAS (Centralized Attendant Service) attendant	Blank.
a for attendant	Blank.
u for unassigned	Blank.

> **NOTE** Do not specify a split, priority split, attendant, or CAS attendant as the destination of unconditionally intraflowed calls, *except as the last destination.* Use extensions for all but the last destination (the first two if the total is three, the first if the total is two destinations). More information on this subject is available in Appendix C, "ACD Basics," the section on "Interflow and Intraflow."

5   In the `Inflow threshold` and `Outflow threshold` fields, enter the inflow and outflow thresholds for the original split. The ranges are 0 through 9-8 for inflow, 1 through 99 for outflow. A split's outflow must always exceed inflow.

6   Press ⌈CHANGE⌉ or ⌈COMMAND LINE⌉.

⌈CHANGE⌉ sends the information to the switch immediately, and calls will start
intraflowing immediately. Calls *previously* in queue when the ⌈CHANGE⌉ SLK is
pressed *will* be processed by the intraflow. That is, if the intraflow is an ''all''
type, all calls that were previously in the queue will move. If the intraflow is a
conditional type, previously-queued calls above the outflow threshold will move.
Of course, all newly-arriving calls will also be processed by the intraflow.

⌈COMMAND LINE⌉ creates a command line that can be scheduled. This forces the
intraflowing to begin when you schedule the command (see Chapter 7,
''Schedule''). The same rule applies to scheduled changes that applies to immediate
changes. Previously queued calls are moved according to the specifications you set,
at the moment the scheduled change takes place.

Changing the Delay Time for an Announcement

1   On the CONFIGURATION menu, select the Split [ ] Parameters-
Administration option and press ⌈RETURN⌉.

[The blank Split Parameters screen appears.]

2   Enter the number or synonym of a split in the Split: field, and press ⌈RETURN⌉.

[The parameters for the split appear.]

3   Change the announcement delay times by overtyping the existing times in the
Delay Time for Announcements 1 and 2 fields with the number of
seconds you desire for delay.

4   Press ⌈CHANGE⌉ or ⌈COMMAND LINE⌉.

[If you press ⌈CHANGE⌉, the change will occur immediately.]

[If you press ⌈COMMAND LINE⌉, you will move to the Schedule Subsystem where you
can schedule the change at another time.]

| NOTE | Because announcements play only from the beginning, the length of an announcement, as well as your specified delay period, may pass before the caller actually hears the announcement. For example, if the announcement lasts 10 seconds and you have specified a 20-second delay, the caller may wait up to 30 seconds before hearing the announcement. |

Call Profile Parameters

Purpose | To allow administration of Call Profile report parameters.

Dependencies | Write permission for the split in question.

On the Call Profile reports (both real-time and historical), ten time intervals of uniform length (from 1 to 180 seconds) form a continuum of progressively greater wait time. The Call Profile reports display the number of calls to a split that were either answered or abandoned within each of these time intervals. This information indicates how long callers will wait to be answered before hanging up and what answering speed is required to reduce abandoned calls.

You use the Call Profile Parameters screen to define the length of call profile time intervals. You also use the Call Profile Parameters screen to define the acceptable time limit (service level objective), within which calls should be answered. This service level objective is displayed on both Call Profile reports. On the real-time Call Profile report, the percentage of calls that are actually answered within the service level are also displayed.

> **NOTE** | Within any half-hour interval of the day, if you change the length of the call profile time intervals, CMS will delete call profile data already collected for that half-hour and will keep only call profile data that occurs in that half-hour after the change. Thus, the real-time Call Profile report may have incomplete data after a change.

Also, if you change the time intervals after a lot of data has already been collected for the day, data on the Daily Call Profile report will be misleading, because CMS tries to combine the call profile data gathered both before and after the change into a single daily record of call profile data. As a result, some data is incorrectly placed in the wrong time interval.

To avoid misleading daily call profile data, you should change time intervals early in the day, preferably before agents begin staffing splits and before any substantive data has been gathered.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────┐
│  ┌────────────────────────────────────────────────────────────────┐ │
│  │ Call Management  System                 Switch_Name:Up      Time│ │
│  └────────────────────────────────────────────────────────────────┘ │
│                                                                      │
│                  CONFIGURATION -- SPLIT CALL PROFILE PARAMETERS       │
│         [1]  Split: 1 (Order Entry)_____                    │
│                                                                      │
│                           [2]  Acceptable Service Level: 30_          │
│                            [3]  Service Interval Size: 10             │
│                                                                      │
│  ┌────────────────────────────────────────────────────────────────┐ │
│  │   Error and confirmation messages appear in this field.        │ │
│  └────────────────────────────────────────────────────────────────┘ │
│  ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐┌───────┐│
│  │CHANGE │ │COMMAND│ │       │ │PREV   │ │NEXT   │ │EXIT   ││PRINT  │ HELP│
│  │       │ │LINE   │ │       │ │ITEM   │ │ITEM   │ │       ││SCREEN │ KEYS│
│  └───────┘ └───────┘ └───────┘ └───────┘ └───────┘ └───────┘└───────┘│
└─────────────────────────────────────────────────────────────────────┘
```

Figure 6-7   The Call Profile Parameters Screen

Definition of Fields

Field [1] Split

The split number or synonym of the split whose Call Profile parameters you are administering.

Field [2] Acceptable Service Level

The acceptable number of seconds before an ACD call is answered. The Call Profile reports indicate the percentage of calls within this service level.

Default: 20 seconds

Field [3] Service Interval Size

The size of the "windows" used in the Call Profile reports to create time-of-abandonment and time-of-answer profiles for splits. The range of window size is 1 through 180 seconds. The Call Profile reports display ten equal windows of the interval size that you specify in this field.

Default: 5 seconds for each interval (e.g., 5, 10, 15, 20, etc.)

Changing the Call Profile Interval

1 On the CONFIGURATION menu, select the Split [ ] Call-Profile-Administration option and press [RETURN].

   [The blank Call Profile Administration screen appears.]

2 Enter the number or synonym of the split whose call profile parameters you are interested in.

3 Press [RETURN].

   [The current parameters for this split will display in the Acceptable Service Level and Service Interval Size fields.]

4 In the Service Interval Size: field, enter the size of interval that will be used in the Call Profile reports.

5 Press either [CHANGE] or [COMMAND LINE].

   [If you press [CHANGE], you will get a message like the following screen:]

```
Call Management  System                          Switch_Name:Up              Time


                    CONFIGURATION -- SPLIT CALL PROFILE PARAMETERS

          1  Split: Order Entry_____

                            2  Acceptable Service Level: 30_
                            3  Service Interval Size: 10

              Call Profile data may be lost! Continue with change? _




     Error and confirmation messages appear in this field.

 CHANGE      COMMAND                PREV       NEXT           EXIT     PRINT     HELP
             LINE                   ITEM       ITEM                    SCREEN    KEYS
```

Figure 6-8   Changing a Call Profile Interval Screen

This message (Figure 6-8) means that, if you enter *y* (yes), the current half-hour's data for the Call Profile real-time report will be discarded to allow for the accumulation of data for the new intervals.

If you press the COMMAND LINE, you will create a command line for the parameters you have entered and be placed in the Schedule Subsystem, where you can schedule the change. You can minimize the loss of current-half-hour data by scheduling Call Profile Parameters changes for late at night or at other slow times.

The NEXT ITEM and PREV ITEM keys refer to the numerical sequence of splits. So, if you enter any split number or synonym in the Split: field, and press RETURN, you can then move to any other split from that point.

Changing the Service Level

1   On the CONFIGURATION menu, select the Split [ ] Call-Profile-Administration option and press RETURN.

    [The blank Call Profile Administration screen appears.]

2   Enter the number or synonym of the split of whose call profile parameters you are interested in.

3   Press RETURN.

    [The current parameters for this split will display in the Acceptable Service Level: and Service Interval Size: fields.]

4   In the Acceptable Service Level field, enter the number of seconds you want for service level reporting in Call Profile reports.

5   Press either CHANGE or COMMAND LINE.

    [If you press CHANGE, the screen will ask you if you really want the change. Typing *y* (yes) causes the change to take effect immediately.]

    [Pressing COMMAND LINE places you in the Schedule Subsystem where you can schedule the change.]

Agent Trace

Purpose	To activate a trace in computer storage of an agent's activities, and to order Agent Trace reports
Dependencies	CMS measurements of the extensions used by traced agents.
Limitation	Limit the active traces to 25 agents per ACD.

Use the Agent Trace screen to record switch data on agents and produce a log-like report of every action taken by the agent. It includes all state changes by the agent for the period covered.

The Agent Trace report differs from the Agent reports. While the Agent reports tally totals for various activities within a specified time period, the Agent Trace report simply lists each activity and the time it occurred. You can use this information to evaluate how well agents are using their time.

A maximum of 25 agents may be active in the trace system at any one time. Also, because agent trace records are kept on the disk even after the trace is stopped, you should periodically remove trace records no longer needed.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│ ┌───────────────────────────────────────────────────────────────────┐   │
│ │ Call Management  System                    Switch_Name:Up     Time │   │
│ └───────────────────────────────────────────────────────────────────┘   │
│                                                                           │
│                      CONFIGURATION -- AGENT TRACE                         │
│        1  Logid          Name            Status                           │
│             5001         Ella Maxwell    saved on disk                    │
│             5002         Dean Foster     saved on disk                    │
│             5003         Phil Jones      saved on disk                    │
│             5900         Dick Johnson    saved on disk and trace is active│
│             5901         Alice Slater    saved on disk and trace is active│
│                                                          Page 1           │
│        2 Agent(s):_____              │
│   ┌──────────────────────────────────────────────────────────────┐      │
│   │ Error and confirmation messages appear in this field.         │      │
│   └──────────────────────────────────────────────────────────────┘      │
│  ┌──────┐ ┌──────┐ ┌────────┐  ┌──────┐ ┌──────┐  ┌──────┐ ┌─────┐ ┌─────┐│
│  │START │ │STOP  │ │DELETE  │  │PREV  │ │NEXT  │  │EXIT  │ │MORE │ │HELP ││
│  │      │ │      │ │        │  │PAGE  │ │PAGE  │  │      │ │KEYS │ │KEYS ││
│  └──────┘ └──────┘ └────────┘  └──────┘ └──────┘  └──────┘ └─────┘ └─────┘│
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 6-9   **Agent Trace Screen**

The second tier of screen-labeled keys accessed via ⌈MORE KEYS⌉ is as follows:

PRINT SCREEN	COMMAND LINE	REPORT	PREV PAGE	NEXT PAGE	EXIT	SEARCH	HELP KEYS

Definition of Fields

Field ⌈1⌉ Data Display

The agent login IDs and names for those agents you are tracing are displayed here. You cannot enter data in this field.

Field ⌈2⌉ Agent(s)

The agent login IDs for those agents you want to start a trace on, stop a trace on, or order a report on are entered here.

Starting an Agent Trace

1   On the CONFIGURATION menu, select the [ ] Agent-Trace option and press ⌈RETURN⌉.

   [The list of agents in the trace system is displayed.]

      You can use the ⌈PREV PAGE⌉ and ⌈NEXT PAGE⌉ keys to scroll through a multipage block of agents, if that many are displayed.

2   To see if the agent you want to add is currently in the trace system, enter the agent's login ID, and press ⌈MORE KEYS⌉ and ⌈SEARCH⌉.

   [The agent's ID and name will be found in the trace system, if it is present.]

3   Press ⌈EXIT⌉ to return to the first tier of screen-labeled keys.

4   To add an agent who is not being traced, enter the ID in the Agent(s): field. This field accepts individual ID numbers or ranges separated by a hyphen. No agent names may be used in this field.

5   Press (START) or (COMMAND LINE).

[If you press (START), you will start a trace on this agent.]

[If you press (COMMAND LINE), a new line of text will appear above the `Agent(s):` field: `Press key to be scheduled:  [START], [STOP] or [MORE KEYS-REPORT]`.

Press the (START) SLK and you will be placed in the Schedule system.

Stopping an Agent Trace

1   On the `CONFIGURATION` menu, select the `[ ] Agent-Trace` option and press (RETURN).

[The Agent Trace screen appears.]

2   In the `Agent(s):` field, enter the ID of the agent you wish to stop tracing.

3   Press (STOP) or (COMMAND LINE).

[If you press (STOP), the trace of the agent will stop.]

[If you press (COMMAND LINE), you will be prompted for the (STOP) SLK, and then be placed in the Schedule Subsystem.]

Deleting Agent Records From Disk

1   On the `CONFIGURATION` menu, select the `[ ] Agent-Trace` option and press (RETURN).

[The Agent Trace screen appears.]

2   Enter the ID of the agent whose record you wish to delete in the `Agent(s):` field.

3   Press (DELETE).

[The agent's record will be deleted from the disk.]

Ordering an Agent Trace Report

1   On the `CONFIGURATION` menu, select the `[ ]` `Agent-Trace` option and press `RETURN`.

[The Agent Trace screen appears.]

2   Enter the ID of the agent on whom you desire a report in the `Agent(s):` field.

3   Press `MORE KEYS` and `REPORT`, or press `COMMAND LINE`.

[If you press `REPORT`, the report will be started in the background.]

[If you press `COMMAND LINE`, you will be prompted to press the `REPORT` SLK. Having done that, you will move to the Schedule Subsystem where you can place the report into the schedule.]

Sample Agent Trace Report

```
 Call Management  System                              Switch_Name:Up           Time


   08/23/88
                     AGENT TRACE REPORT FOR LOGIN ID 15002: DEAN FOSTER

        DATE       TIME         EXTENSION           ACTIVITY

      08/23/88  08:14:45              0            Start-of-Trace
      08/23/88  08:14:56           4456            on ACD call
      08/23/88  08:15:57           4456            available
      08/23/88  08:23:23           4456            logoff
      08/23/88  08:45:01           4457            login, split #2
      08/23/88  08:45:45           4457            available:
      08/23/88  08:45:34           4457            on ACD call
      08/23/88  08:53:45           4457            after call work


 PRINT      COMMAND    REPORT      PREV      NEXT          EXIT     SEARCH    HELP
 SCREEN     LINE                   PAGE      PAGE                             KEYS
```

Figure 6-10   Example of an Agent Trace Report

The date and time are the moment the activity occurred. The extension is the extension the agent is logged into. Note that the trace can follow an agent to more than one extension.

Searching for Agent Trace Records

1   On the `CONFIGURATION` menu, select the `[ ] Agent-Trace` option and
    press `RETURN`.

    [The Agent Trace screen appears.]

2   Enter the login ID of the agent in the `Agent(s):` field.

3   Press `MORE KEYS` and `SEARCH`.

    [The agent's data will be displayed if he or she is in the trace system.]

4   Press `EXIT` to return to the first tier of screen-labeled keys.

General Information

The Schedule Subsystem gives you the option of scheduling a task for completion at a time that is convenient and nondisruptive to your call-center's operation. The Scheduling subsystem consists of two screens: the Program Editor and the Program Scheduler. Normally, you will use both when scheduling a program.

NOTE	You must create your programs in the Program Editor before you can schedule them using the Program Scheduler. Therefore, the "Program Editor" is presented first in this chapter, then the "Program Scheduler," and finally "How to Schedule a Program Via Command Line" which takes you through scheduling a task from beginning to end.

The **Program Editor** is used for the following:

Creating a new program

Adding a command line to existing programs

Editing a program

Deleting a program

Getting a list of programs.

The **Program Scheduler** is used for the following:

Adding a new program to the schedule

Adding an existing but unscheduled program to the schedule

Rescheduling a program

Deleting a program from the scheduler

Changing program list options.

Tasks That Can Be Scheduled

You can schedule the following tasks in CMS. You define and request each task in the subsystem appearing in parentheses ( ).

Printing historical reports (Report)

Printing forecast reports (Forecast)

Printing exception reports (Exceptions)

Printing an error log (Maintenance)

Changing the Call Profile Parameters (Configuration)

Printing an Agent Trace report (Configuration)

Starting and stopping Agent Trace (Configuration)

Intraflowing calls (Configuration)

Moving extensions and trunk groups (Configuration)

Running the Forecast Manager (Maintenance)

Running Daily Data Archive (Maintenance)

Performing CMS backups (on systems requiring only one tape) (Maintenance).

While you are in one of these subsystems, you can schedule your task by pressing the COMMAND LINE screen-labeled key. CMS immediately places you in the Schedule subsystem and the Program Editor screen appears so you can create a program for your task. Then you will access the Program Scheduler screen to set the time for the task's program to run.

Schedule Menu

If you want to edit a program or change a program schedule, you can select the appropriate option on the Schedule menu and bypass the subsystem in which you initially defined the task.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                      Switch_Name:Up or Down    Time │
│  └──────────────────────────────────────────────────────────────────────┘    │
│                                                                               │
│   _____                                                            │
│                              SCHEDULE                                         │
│                       [ ] Scheduler                                           │
│                       [ ] Program Editor                                       │
│                                                                               │
│                                                                               │
│                                                                               │
│                                                                               │
│   ┌──────────────────────────────────────────────────────────┐               │
│   │  Error and confirmation messages appear in this field.    │              │
│   └──────────────────────────────────────────────────────────┘               │
│  ┌─────┐ ┌─────┐ ┌──────┐ ┌───────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐      │
│  │     │ │     │ │      │ │       │ │      │ │EXIT  │ │PRINT │ │HELP  │      │
│  │     │ │     │ │      │ │       │ │      │ │      │ │SCREEN│ │KEYS  │      │
│  └─────┘ └─────┘ └──────┘ └───────┘ └──────┘ └──────┘ └──────┘ └──────┘      │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 7-1   The Schedule Menu

Program Editor

Purpose	Create programs, append command lines to programs, move programs into the scheduler, edit command lines.
Dependencies	The [COMMAND LINE] SLK in another CMS screen to create the command line and enter the Program Editor process.

If you want to schedule tasks (printing reports, moving extensions, running the Forecast Manager, etc.) for execution, you must first create and/or edit programs to perform those tasks. A program contains one or more command lines that specify the task(s) you want to schedule. You use the Program Editor screen to create programs, append (add) command lines to existing programs, and edit command lines in existing programs.

Create Mode

The three main steps normally involved in creating a program are as follows:

1   Define the task by entering parameters on the appropriate subsystem (Forecast, Reports, etc.) screen.

2   Press [COMMAND LINE], which places you on the Program Editor screen and generates a command line. The command line (displayed on the Program Editor) contains, in program format, each portion of your task definition.

3   Transform the command line into a program by entering a program name and pressing [CREATE].

As an example, say that you are in the Reports subsystem and you order a Daily Split Report using the following Report Parameters screen (see Figure 7-2).

```
┌─────────────────────────────────────────────────────────────────────────
│ ┌──────────────────────────────────────────────────────────────────────┐
│ │ Call Management  System                     Switch_Name:Up or Down   Time │
│ └──────────────────────────────────────────────────────────────────────┘
│
│                              REPORT PARAMETERS
│
│                                 Daily Split
│
│              ┌─┐
│              │1│ REPORT_DAY= -1
│              ├─┤
│              │2│ SPLIT NUMBER= 1
│              ├─┤
│              │3│ FIRST_INTERVAL= 1
│              ├─┤
│              │4│ LAST_INTERVAL= 48
│              └─┘
│
│
```

Figure 7-2   Report Parameters Screen

After you press COMMAND LINE and specify your output destination, you will see the
following screen (Figure 7-3).

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│ ┌──────────────────────────────────────────────────────────────────────┐ │
│ │ Call Management  System                     Switch_Name:Up or Down   Time │ │
│ └──────────────────────────────────────────────────────────────────────┘ │
│                                                                           │
│                        SCHEDULE -- PROGRAM EDITOR                          │
│ ┌─┐                                                                       │
│ │1│ Program Name: _____                  │
│ └─┘                                                                       │
│                                                                           │
│                                                                           │
│                               COMMAND LINE                                │
│ reports standard historical  /cms/acd1/standard/historical/ objects/DSPLIT  "REPORT_DAY=-1" │
│ "SPLIT_NUMBER= 1" "FIRST_INTERVAL= 1" "LAST_INTERVAL=  48" RETURN_KEY destination=printer │
│ RETURN_KEY printer=printer1 copies=1                                       │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 7-3   Example of Program Editor Screen

The command line (Figure 7-3) contains the parameters you originally entered on the Report
Parameters screen, plus output destination parameters. You then create a program by entering
a program name and pressing CREATE. In this example, the program created will, after it is
scheduled, print a copy of the Daily Split report.

Append Mode

At times, you may want to append a command line to an existing program rather than create a new program just for that command line. You append command lines of various tasks to a single program for one of two reasons:

A   You eliminate the possibility of scheduling tasks out of sequence. That is, tasks that depend on output from other tasks can be assured of having the output.

B   Tasks that should execute at or near the same time are handled by the 3B's CPU far more efficiently in a single program.

For example, you may want to schedule, for 5:00 p.m. every night, intraflow (forwarding of queued calls) from 20 splits to an answering machine. Rather than scheduling 20 separate programs, you can append command lines for each split's intraflow into one program. This method would assure that each task is processed at the desired time and would simplify your CMS files.

The process of appending a command line to an existing program is similar to creating a program: you define your task in the appropriate subsystem, you press (COMMAND LINE), and you are placed in the Program Editor with a new command line. However, once you are in the Program Editor, you type the name of an existing program and press (APPEND). The command line will then be added to the end of the existing program. The existing program will then perform the new task, along with the other tasks previously entered, according to the schedule you set on the Program Scheduler.

Edit Mode

You can edit a program at any time by accessing the Program Editor through the Schedule menu, naming the desired program, and pressing (EDIT). You can also edit a program immediately after you create it or immediately after you append a command line to it.

| NOTE | You cannot edit a command line until it has been placed in a program. Also, you will not see a program's command line(s) on the Program Editor screen until you name the program and press (EDIT). |

The edit mode is most useful as a short cut method of including new tasks within a program. This is possible because, after you press (EDIT) and enter the UNIX system *vi* editor, you can copy a program's command line and make changes to that copy. The result is a new command line in the program.

This method will save time when in a case where you want to schedule a number of very similar tasks — as in the previous append example. In that example, you could create a program with one command line that intraflows calls, enter edit mode for that program, make 1-9 copies of the command line, and then edit each copy. The result would be a program with command lines that intraflow calls from 20 splits.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                    Switch_Name:Up or Down    Time │
│  └──────────────────────────────────────────────────────────────────┘    │
│                                                                           │
│                         SCHEDULE -- PROGRAM EDITOR                         │
│     ┌─┐                                                                    │
│     │1│ Program Name: _____                 │
│     └─┘                                                                    │
│                              COMMAND LINE                                  │
│     ┌─┐                                                                    │
│     │2│  configuration split extensions assignments split=1 (Sales)  RETURN_KEY │
│     └─┘    extension=3000  destination=2 CHG_KEY  EXIT_KEY                  │
│                                                                           │
│                                                                           │
│                                                                           │
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │  Error and confirmation messages appear in this field.            │    │
│  └──────────────────────────────────────────────────────────────────┘    │
│  ┌──────┐ ┌──────┐ ┌──────┐   ┌──────┐ ┌────────┐  ┌──────┐ ┌──────┐ ┌──────┐ │
│  │CREATE│ │APPEND│ │DELETE│   │ EDIT │ │SCHEDULE│  │ EXIT │ │MORE  │ │HELP  │ │
│  │      │ │      │ │      │   │      │ │        │  │      │ │KEYS  │ │KEYS  │ │
│  └──────┘ └──────┘ └──────┘   └──────┘ └────────┘  └──────┘ └──────┘ └──────┘ │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 7-4   The Program Editor Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

```
┌──────┐ ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐
│PRINT │ │      │ │LIST  │   │PREV  │ │NEXT  │   │EXIT  │ │RESUME│ │HELP  │
│SCREEN│ │      │ │      │   │PAGE  │ │PAGE  │   │      │ │      │ │KEYS  │
└──────┘ └──────┘ └──────┘   └──────┘ └──────┘   └──────┘ └──────┘ └──────┘
```

Definition of Fields

Field [1] Program Name

The name of a program. A program is a schedulable object. If this is to be a new program, you create it by naming it in this field. If this is to be an edit session with an existing program, name it in this field.

A program name may have up to 14 alphanumeric characters (underscores and capital letters are counted).

Field ⬚2⬚ Command Line

This field contains one or more command lines, which define an administrative action. Command lines are created by the COMMAND LINE SLK in another CMS screen.

Creating a New Program

1 Press COMMAND LINE in any schedulable screen, having set the parameters for the screen's activity as you want them.

[The Report Destination screen appears to direct output to a file or the printer:]

```
Call Management System                          Switch_Name:Up or Down     Time


        Please enter the report destination: p
        (''p'' for printer, or ''f'' for file; for your command
```

2 Leave the screen unchanged or make any changes desired to the defaults, and press RETURN.

[The Program Editor screen appears, which contains a command line reflecting the task you defined in the subsystem you just left.]

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│   ┌─────────────────────────────────────────────────────────────────────┐   │
│   │ Call Management System                    Switch_Name:Up or Down   Time│  │
│   └─────────────────────────────────────────────────────────────────────┘   │
│                                                                               │
│                         SCHEDULE -- PROGRAM EDITOR                            │
│    ▁ Program Name: 1stshift_____                    │
│    1                                                                          │
│                                                                               │
│                                                                               │
│                                                                               │
│    ▁  configuration split extension assignments split=1 (Sales) RETURN_KEY extension=300│
│    2   destination=2 CHG_KEY EXIT_KEY                                         │
│                                                                               │
│                                                                               │
│   ┌─────────────────────────────────────────────────────────────────────┐   │
│   │  program creation or command line addition successfully completed    │   │
│   └─────────────────────────────────────────────────────────────────────┘   │
│   ┌──────┐ ┌──────┐ ┌──────┐  ┌──────┐ ┌────────┐ ┌──────┐ ┌──────┐ ┌──────┐│
│   │CREATE│ │APPEND│ │DELETE│  │ EDIT │ │SCHEDULE│ │ EXIT │ │MORE  │ │HELP  ││
│   │      │ │      │ │      │  │      │ │        │ │      │ │KEYS  │ │KEYS  ││
│   └──────┘ └──────┘ └──────┘  └──────┘ └────────┘ └──────┘ └──────┘ └──────┘│
│                                                                               │
└─────────────────────────────────────────────────────────────────────────────┘
```

3   Enter the name you wish to give this new program in the `Program Name:` field. Use up to 14 alphanumerics, with no blanks or periods.

4   Press ⎣CREATE⎦.

[A message will confirm that your program has been created.]

> You can check that your program has been created by pressing ⎣MORE KEYS⎦ and ⎣LIST⎦, which causes a list of all existing programs, whether scheduled or not, to be displayed.

> The ⎣EDIT⎦ SLK lets you make changes to the program you just created.

> ┌──────┐
> │ NOTE │ When you are creating a program, the ⎣EDIT⎦ SLK is not
> └──────┘ available on the Program Editor until you press ⎣CREATE⎦.

> The ⎣SCHEDULE⎦ SLK moves you to the Scheduler screen so you can schedule the program.

Adding a Command Line to an Existing Program

1   Press the COMMAND LINE SLK in any schedulable process.

  [The Program Editor screen appears with the just-completed command line in the Command Line field (field 2), and with the Program Name: field (field 1) blank.]

2   In the Program Name: field, enter the name of an existing program, using MORE KEYS and LIST to research the correct names of programs, if necessary.

3   Press RESUME and APPEND.

  [The new command line will be added to the existing program.]

4   If you want to edit the program to which you just appended a command line, you can press the EDIT SLK.

  [You will be placed in a *vi* editing environment and in a UNIX system file that can be edited.]

| NOTE | When you are appending a command line to a program, the EDIT SLK does not become available on the Program Editor until you press APPEND. |

Editing a Program

1   On the SCHEDULE menu, select the [ ] Program Editor option.

  [The Program Editor screen appears.]

2   Enter the name of an existing program in the Program Name: field of this screen.

        Use the LIST SLK to see the names of all existing programs.

3   Press EDIT.

  [The Program Editor will place you into the edit mode, where you are shown a UNIX system file containing the program you just named. You now are in the UNIX system *vi* editing environment, which is illustrated in the following screen.]

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                    Switch_Name:Up or Down    Time │  │
│  └──────────────────────────────────────────────────────────────────────┘    │
│                                                                               │
│     configuration split extension assignments  split=1 (Sales) RETURN_KEY extension=300 │
│     destination=2 CHG_KEY EXIT_KEY                                            │
│     ~                                                                         │
│     ~                                                                         │
│     ~                                                                         │
│     ~                                                                         │
│     ~                                                                         │
│  ┌──────────────────────────────────────────────────────────────────────┐    │
│  │  Error and confirmation messages appear in this field.                │    │
│  └──────────────────────────────────────────────────────────────────────┘    │
│  ┌──────────┐ ┌──────┐ ┌──────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌──────────┐ ┌──────┐ │
│  │ WRITE    │ │      │ │      │ │         │ │         │ │         │ │ EXIT     │ │      │ │
│  └──────────┘ └──────┘ └──────┘ └─────────┘ └─────────┘ └─────────┘ └──────────┘ └──────┘ │
└─────────────────────────────────────────────────────────────────────────────┘
```

4   Make any editing changes desired using the *vi* editor.

| NOTE | You can read more about *vi* commands in Appendix A. |

5   Press ⌷WRITE⌷ to save your changes.

| NOTE | You can also enter the editing mode just after creating a new program. (See ''Creating a New Program,'' earlier in this chapter.) |

Deleting a Program

1   Access the Program Editor via the Schedule menu or the ⌷COMMAND LINE⌷ SLK.

2   Type the name of the program to be deleted in the `Program Name:` field.

3   Press ⌷DELETE⌷.

   [The message `Do you want to delete program "`*xxxxx*`"?  (y/n) _` will appear.]

4   Type *y* and press ⌷RETURN⌷.

   [The program will be deleted.]

Getting a List of Programs

1   Access the Program Editor via the Schedule menu or the ⸢COMMAND LINE⸣ SLK.

2   Press ⸢MORE KEYS⸣ to get the secondary tier of SLKs.

3   Press the ⸢LIST⸣ SLK.

[The list of programs will be displayed. These are all the programs created, but not necessarily scheduled, for the ACD you are logged into. The following screen shows what the list looks like.]

```
┌──────────────────────────────────────────────────────────────────────┐
│ Call Management System                    Switch_Name:Up or Down   Time │
└──────────────────────────────────────────────────────────────────────┘


                       SCHEDULE --  PROGRAM EDITOR
  ┌─┐
  │1│ Program File Name: _____
  └─┘
                              SCHEDULE PROGRAMS
      prog1           hourly2
      dailyprog       daily2
      weekly prog     monthly1
      hourlyprog      halfhrly






 ┌──────────────────────────────────────────────────────────────┐
 │   Error and confirmation messages appear in this field.        │
 └──────────────────────────────────────────────────────────────┘
 ┌────────┐┌────────┐┌────────┐  ┌────────┐┌────────┐  ┌────────┐┌────────┐┌────────┐
 │PRINT   ││        ││LIST    │  │PREV    ││NEXT    │  │EXIT    ││RESUME  ││HELP    │
 │SCREEN  ││        ││        │  │PAGE    ││PAGE    │  │        ││        ││KEYS    │
 └────────┘└────────┘└────────┘  └────────┘└────────┘  └────────┘└────────┘└────────┘
```

Program Scheduler

Purpose	To schedule reporting and administrative activities.
Dependencies	The Program Editor to create programs to be scheduled; the COMMAND LINE SLK to create command lines.

Use the Program Scheduler to schedule programs to run at specific dates and times. You can also schedule programs to run at regular intervals and on specific day(s) of the week. To assist you in determining what programs to schedule and when to schedule them, the Program Scheduler can also provide you with a list of currently scheduled programs and programs not yet scheduled.

NOTE You must create your programs on the Program Editor screen before you can schedule them.

Scheduling Guidelines

In general, you schedule programs according to your needs; but because some tasks depend on the prior completion of other tasks, and because you want to avoid conflicts in computer availability during peak hours, you should follow the guidelines below:

Schedule the Daily Data Archive to run each day because it creates daily records essential to many reports. Also, you should schedule the Daily Data Archive for approximately 1/2-hour after midnight (12:30 a.m.) because this time allows the day's last half-hour of data to archive and, at the same time, creates output needed by other programs that are also normally scheduled at night.

The following historical reports depend on the output of the Daily Data Archive and should be scheduled to run at night after the Daily Data Archive executes:

— Weekly and monthly reports

— The Daily System report

— Summary reports.

You should schedule the Forecast Manager to run at night after the Daily Data Archive executes because the Forecast Manager also depends on Daily Data Archive output.

Forecast reports should be scheduled during off hours after the Forecast Manager executes.

In a multi-ACD system, you must schedule programs for each ACD. Therefore, if you have four ACDs, you might schedule four Daily Data Archive programs, four Forecast Manager programs, four sets of historical reports, and so on. You should avoid scheduling programs for your system at the same off-peak time. Instead, you should devote approximately 2 hours for all scheduled tasks for each. The period from 00:30 to 02:30 could be for ACD1, from 02:30 to 04:30 could be ACD2, and so on.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌───────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                    Switch_Name:Up or Down    Time │  │
│  └───────────────────────────────────────────────────────────────────┘    │
│                                                                            │
│                         PROGRAM SCHEDULER                                  │
│   1  Program Name: _____                      SMTWTFS             │
│                                       5  Days of Week: _____            │
│   2     Interval: once_____                                            │
│   3   Start Date: 03/15/87          6  Half-Hourly/Hourly Stop Time: 0_:0_ │
│   4   Start Time: 0_:0_                                                   │
│                           7  Sort On Time Instead of Name?: n            │
│           8  List all user's programs in addition to your own?: y        │
│                                                                          │
│                        Days    Next    Scheduled   Stop                  │
│   Program Name      Interval  SMTWTFS  Date        Time   Time    User   │
│   9                                                                      │
│   __daily            daily    XXXXX   03/16/87    22:30          gle    │
│   __weekly           weekly   X       03/21/87    23:00          gle    │
│                                                                          │
│  ┌───────────────────────────────────────────────────────────┐          │
│  │  Error and confirmation messages appear on this line.      │          │
│  └───────────────────────────────────────────────────────────┘          │
│  ┌─────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐ │
│  │ ADD │ │CHANGE│ │DELETE│ │      │ │NEXT  │  │EXIT  │ │MORE  │ │HELP  │ │
│  │     │ │      │ │      │ │      │ │PAGE  │  │      │ │KEYS  │ │KEYS  │ │
│  └─────┘ └──────┘ └──────┘ └──────┘ └──────┘  └──────┘ └──────┘ └──────┘ │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 7-5   The Program Scheduler Screen

The second tier of screen-labeled keys accessed via [MORE KEYS] is as follows:

```
┌──────┐ ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐
│PRINT │ │MAIL  │ │LIST  │  │PREV  │ │NEXT  │  │EXIT  │ │RESUME│ │HELP  │
│SCREEN│ │      │ │      │  │PAGE  │ │PAGE  │  │      │ │      │ │KEYS  │
└──────┘ └──────┘ └──────┘  └──────┘ └──────┘  └──────┘ └──────┘ └──────┘
```

Definition of Fields

Field ⬚1⬚ Program Name

The name of the program to be scheduled. You enter this name if you access the Scheduler from the Schedule menu. The system places the name in this field if you access the Scheduler via the [SCHEDULE] SLK from the Program Editor.

Field ⬚2⬚ Interval

Frequency with which the scheduled program is run. You enter one of the following codes:

once once

ha half-hourly

ho hourly

d daily

w weekly

m monthly

q quarterly.

Default: once

Field ⬚3⬚ Start Date

A MM/ DD/ YY-format date for the day the program starts executing.

Default: today's date

Field ⬚4⬚ Start Time

The (military format) time you wish the program to start running.

Default: 0: 0

Range: 0-0:00 through 23:59

Field ⬚5⬚ Days of Week

Space for an "x" under the day or days a program is to run.

Interactions with the `Interval` field (field 2):

— If you designate *daily, half-hourly,* or *hourly,* you can place an x under any single day or combination of days.

Default: no *x*'s

— If you designate *weekly, monthly,* or *quarterly,* you can only place an x under one day.

Interactions with the `Start Date` field (field 3):

For weekly, monthly, and quarterly programs, the day of the week the Start Date falls on should match the Day of Week specification.

Field 6 Half-Hourly/ Hourly Stop Time

For hourly and half-hourly programs only, space for the (military format) time you wish the program to stop running.

Default: 0 :0

Range: 0-0:00 through 23:59 depending on the choice in the `Interval` field (field 2).

Field 7 Sort on Time Instead of Names?

How the scheduled programs are to be listed — by time or name. Type `y` or `n`.

Field 8 List All Users' Programs in Addition to Your Own?

The decision whether programs scheduled by you or by all login IDs in your *acd* environment will be shown in the current-schedule portion of the screen. Type `y` or `n`.

Field 9 Schedule Display

The display of currently scheduled programs. The blank space prior to each field is given an *x* when you delete programs from the schedule. The individual fields have the following meanings:

Program Name Name of the program in the schedule.

Interval How often the program is scheduled to execute.

Days Which day or days of the week a weekly, daily, hourly, or half-hourly program executes.

Next Date   The date the program is scheduled to run next.

Schedule Time When on the next scheduled date the program is scheduled to run.

Stop Time   The time when a half-hourly or hourly program is scheduled to stop.

User   The login ID that scheduled the program.

Adding a New Program to the Schedule

1   The addition of a new program to the schedule requires that you use the Program Editor and the [COMMAND LINE] SLK. The procedure is to press [COMMAND LINE] in the screen for any schedulable process (such as ordering a report).

[You will enter the Program Editor.]

2   Follow the procedures for creating a new program in the Program Editor section. Finish by pressing the [SCHEDULE] SLK.

[The Program Scheduler screen will appear. The name of the program just created will appear in the `Program Name:` field (field 1).]

3   In the `Interval:` field (field 2) enter `ha` for *half-hourly,* `ho` for *hourly,* `d` for *daily,* `w` for *weekly,* `m` for *monthly,* or `q` for *quarterly*. To execute the program only once, leave the default, `once`.

4   In the `Start Date:` field (field 3), enter the date you want the program to begin executing. Use a MM/ DD/ YY format.

5   In the `Start Time:` field (field 4), enter the time you want the program to execute. If you selected hourly or half-hourly in Step 3, this time is when the program first executes. The range is 00:00 to 23:59, in military format.

6   If the program will run daily, hourly, half-hourly, in the `Days of Week:` field,
    enter *x*'s under the day or days of the week you want the program to run. If you
    want the program to run every day, leave this field blank.

    If the program will run weekly, monthly, or quarterly, in the `Days of Week:`
    field enter an *x* under the day of the week you want the program to run.

    | NOTE | Be sure that the day specified in the `Day of Week` field matches the date specified in the `Start Date` field. |

7   In the `Half-Hourly/Hourly Stop Time:` field, enter the time you want
    the program to stop executing if it is on an hourly or half-hourly schedule. The
    range is 00:00 to 23:59, in military format time.

    | NOTE | For half-hour and hourly programs, the Stop Time value must exceed the Start Time value. In other words, you cannot cross a "midnight" boundary. |

8   Press the [ADD] SLK.

Adding an Existing but Unscheduled Program to the Schedule

1   On the SCHEDULE menu, select the [ ] Schedule option and press RETURN.

[A blank Program Scheduler screen appears.]

2   Name the program to be scheduled in the Program Name: field.

[If this is not the correct name of an existing program, you will get the message shown in the error and confirmation field in the following screen.]

```
Call Management System                          Switch_Name:Up or Down    Time


                         PROGRAM SCHEDULER
     1  Program Name: wrongname_____                SMTWTFS
                                       5  Days of Week: _____
     2    Interval: once_____
     3  Start Date: 03/15/87      6  Half-Hourly/Hourly Stop Time: 0_:0_
     4  Start Time: 0_:0_
                            7  Sort on time instead of name?: n
              8  List all user's programs in addition to your own?: y

                      Days    Next     Scheduled   Stop
     Program Name   Interval  SMTWTFS  Date         Time   Time    User
     9
     __daily         daily    XXXXX    03/16/87    22:30          gle
     __weekly        weekly   X        03/21/87    23:00          gle

   The Program Name -- wrongname -- does NOT EXIST.  Use LIST under MORE KEYS.

  ADD      CHANGE    DELETE              NEXT      EXIT     MORE     HELP
                                        PAGE               KEYS     KEYS
```

3   Following the message's direction, press MORE KEYS and LIST. The list of existing programs will be displayed on the screen.

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│  ┌─────────────────────────────────────────────────────────────────────────┐     │
│  │ Call Management System                          Switch_Name:Up or Down    Time │ │
│  └─────────────────────────────────────────────────────────────────────────┘     │
│                                                                                   │
│                           PROGRAM SCHEDULER                                       │
│      ┌1┐ Program Name: wrongname _____                    SMTWTFS           │
│                                                ┌5┐ Days of Week: _____          │
│      ┌2┐   Interval: once_____                                                  │
│      ┌3┐ Start Date: 03/15/87      ┌6┐ Half-Hourly/Hourly Stop Time: 0_:0_        │
│      ┌4┐ Start Time: 0_:0_                                                         │
│                              ┌7┐ Sort on time instead of name?: n                 │
│              ┌8┐  List all user's programs in addition to your own?: y            │
│                                                                                   │
│                           SCHEDULE PROGRAMS                                        │
│                                                                                   │
│          daily          mvext1                                                    │
│          dailydsave     mvtg1                                                     │
│          mvtg2          errorlog                                                  │
│          weekly         reports                                                   │
│          agenttrace     fcstmgr                                                  │
│                                                                                   │
│      ┌──────────────────────────────────────────────────────────┐                │
│      │ Error and confirmation messages appear on this line.      │                │
│      └──────────────────────────────────────────────────────────┘                │
│  ┌───────┐ ┌─────┐ ┌─────┐  ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐       │
│  │ PRINT │ │     │ │LIST │  │ PREV │ │ NEXT │   │ EXIT │ │RESUME│ │ HELP │       │
│  │SCREEN │ │     │ │     │  │ PAGE │ │ PAGE │   │      │ │      │ │ KEYS │       │
│  └───────┘ └─────┘ └─────┘  └──────┘ └──────┘   └──────┘ └──────┘ └──────┘       │
└─────────────────────────────────────────────────────────────────────────────────┘
```

4   Reenter the correct name in the `Program Name:` field.

5   Enter any desired changes to fields 2 through 8 (i.e., `Interval:`, `Start Date:`, `Start Time:`, `Days of Week:`, `Half-Hourly/Hourly Stop Time:`, `Sort on time instead of name?:`, `List all user's programs in addition to your own?:`

6   Press the `RESUME` and `ADD` screen-labeled keys.

[The program will be scheduled.]

Rescheduling a Program

┌──────┐
│ NOTE │ To reschedule program, you must be the person who originally scheduled the
└──────┘ program. If another user originally scheduled the program, you must press `ADD` to
          enter the new schedule. A copy of the program will enter the schedule with the new
          (changed) specifications. The original version will remain untouched.

1   On the `SCHEDULE` menu, select the `Scheduler` option, and press `RETURN`.

[The Program Scheduler screen appears with default data and a list of the current schedule.]

2   Check the data for the program you would like to change.

     For example, the following screen contains a schedule for a program called *daily*.

     ┌──────┐
     │ NOTE │   This example assumes you are "gle."
     └──────┘

```
┌─────────────────────────────────────────────────────────────────────────┐
│ Call Management System                      Switch_Name:Up or Down   Time │
└─────────────────────────────────────────────────────────────────────────┘

                           PROGRAM SCHEDULER

   1  Program Name: _____                    SMTWTFS
                                          5  Days of Week: _____
   2    Interval: once_____
   3  Start Date: 03/15/87           6  Half-Hourly/Hourly Stop Time: 0_:0_
   4  Start Time: 0_:0_
                         7  Sort on time instead of name?: n
              8  List all user's programs in addition to your own?: y

                        Days    Next     Scheduled   Stop
   Program Name    Interval   SMTWTFS  Date        Time    Time    User
   9
   __daily          daily      XXXXX    03/16/87    22:30           gle
   __weekly         weekly     X        03/21/87    23:00           gle



 Error and confirmation messages appear on this line.

┌─────────┐ ┌─────────┐ ┌─────────┐  ┌─────────┐ ┌─────────┐  ┌─────────┐ ┌──────┐ ┌──────┐
│ CHANGE  │ │ ADD     │ │ DELETE  │  │ PREV    │ │ NEXT    │  │ EXIT    │ │ MORE │ │ HELP │
│         │ │         │ │         │  │ PAGE    │ │ PAGE    │  │         │ │ KEYS │ │ KEYS │
└─────────┘ └─────────┘ └─────────┘  └─────────┘ └─────────┘  └─────────┘ └──────┘ └──────┘
```

3   Type the program name (*daily* in this example) in the `Program Name:` field.

4   Make the desired schedule change by typing new numbers in the `Start Date:`, `Start Time:`, and `Days of Week:` fields.

5   Press the `CHANGE` SLK.

     [The new data will be substituted in the schedule for this program and the list in the `Schedule Display` field (field 9) will be updated to reflect the new schedule.]

Deleting a Scheduled Program

NOTE To delete a scheduled program, you must be listed as the user who created the program in the schedule.

---

1   On the SCHEDULE menu, select the [ ] Scheduler option in the Schedule menu, and press RETURN.

     [The Scheduler screen appears.]

2   Move the cursor to the schedule display at the bottom of the screen and place an *x* beside the program to be deleted.

3   Press DELETE.

     [The message Do you really want to delete marked program(s)? will appear.]

4   Type *y*.

     [If the IDs match, the marked program will be deleted from the group of scheduled programs, and the Schedule Display field (field 9) display will be updated.]

Changing Program List Options

1   Type *y* or *n* in the Sort on time instead of name?: field (field 7) or the List all user's programs in addition to your own field (field 8).

2   Press RETURN.

     [The new sorting type and/ or new list will be displayed.]

How to Schedule a Program Via Command Line

The following steps take you through scheduling a program using the [COMMAND LINE] from the beginning to the end.

1   In any schedulable screen (i.e., Reports, Exceptions, etc.) enter the specifications for the activity you want to schedule and press [COMMAND LINE].

    [You will be prompted to select either a printer and a number of copies or a file name for a program that generates a report.]

2   Make any changes to this screen, and press [RETURN].

    [The Schedule -- Program Editor screen appears. The "command line" summarizing the activity you just scheduled should appear in the center of that screen.]

3   In the Program Name: field, type the name of a program. It can be a new or existing program name. Use up to 14 alphanumerics, with no blanks or periods.

4   Press [CREATE] or [APPEND], depending on whether you named a new or are adding to an existing program in Step 3.

    [If you press [CREATE], a message will confirm that your program has been created. If you press [APPEND], CMS appends the command line with no further action from you.]

5   Make sure the parts of the command line accurately reflect the activity you want scheduled. If not, press [EDIT] and make any required changes using the vi editor. Make sure you press [WRITE] to save your changes.

NOTE	When you are creating a program or appending a command line to a program, the [EDIT] SLK is not available in the Program Editor until you press [CREATE] or [APPEND].

6   Press [SCHEDULE] to schedule a new program or to change the schedule of an existing program.

    [The PROGRAM SCHEDULER screen will appear. The name of the program just created appears in the Program Name field along with the default values. The programs that are currently scheduled should be shown towards the bottom of the screen.]

7   In the `Interval:` field, enter `ha` for **half-hourly,** `ho` for **hourly,** `d` for **daily,** `w` for **weekly,** `m` for **monthly**, or `q` for **quarterly.** To execute the program only once, leave the default, `once`.

8   In the `Start Date:` field, type the date you want the program to start executing, if it is other than today. Use a MM/ DD/ YY format.

9   In the `Start Time:` field, type the time you would like the program to execute. If it is an hourly or half-hourly program, this is when the program *first* executes. Use military-format time, 00:00 to 23:59.

10 If the program will run daily, hourly, half-hourly, in the `Days of Week:` field, enter *x*'s under the day or days of the week you want the program to run. If you want the program to run every day, leave this field blank.

   If the program will run weekly, monthly, or quarterly, in the `Days of Week:` field, enter an *x* under the day of the week you want the program to run.

   | NOTE | Be sure that the day specified in the `Day of Week` field matches the date specified in the `Start Date` field. |

11 In the `Half-Hourly/Hourly Stop Time:` field, enter the time you want an hourly or half-hourly program to stop executing. Use military-format time, 0-0:00 to 23:59.

   | NOTE | For hour-hour and hourly programs, the Stop Time value must exceed the Start Time value. In other words, you cannot cross a "midnight" boundary. |

12 When you are satisfied that the schedule will execute the way you want it to, press `ADD`.

   [The program will be scheduled.]

General Information

You use the Forecast Subsystem to generate forecast reports which predict both future call traffic and the resources required to meet call-handling objectives. CMS uses data for the current day, historical data, and/ or objectives that you set to generate the following forecast reports:

Long-Term Forecast

This report forecasts split call traffic up to 35 days in advance. The report displays the following forecast data:

Forecast Calls Carried — The number of calls the split will receive each half-hour in the day.

Number Positions Required— The number of agents you will need for each half-hour in the day.

%ACD Time — The percentage of time agents will spend handling ACD calls each half-hour in the day.

Current Day Forecast

This report forecasts split call traffic for the current day. The report data is automatically compiled when the Forecast Manager collects data for the previous day. The report displays Forecast Calls Carried, Number Positions Required, and % ACD Time for each half-hour interval in the current day.

Intraday Forecast

This report forecasts split call traffic for the remainder of the current day. It uses the previously compiled Current Day forecast data (Forecast Calls Carried, Number Positions Required, and % ACD Time) and adjusts it using data from actual call traffic that has already occurred for the current day.

Special Day Forecast

This report forecasts split call traffic for any special day (for example, a bad weather day or holiday) defined on the Special Days Administration screen. The report displays Forecast Calls Carried, Number of Positions Required, and % ACD Time for each half-hour interval in the special day.

Agent Positions Required Forecast
This report displays a table showing the relationship between the Number of Positions Required and the Number of Calls Carried for any hypothetical set of call characteristics. The Agent Positions Required forecast does not use historical data in its calculations, and the data is independent of any split or half-hour interval. Therefore, this report is a quick means of determining how many agents you might need for the number of calls you expect; or it is a means of determining how many calls you can handle with the number of agents you have.

Trunk Engineering Forecast
This report does not actually forecast future performance and call traffic. Instead, it gives the following data for a specified month in the past:

Number of Trunks Required

This is the number of trunks that each trunk group should have had to meet your objective **trunk group blocking percentage**.

Blocking is the inability of a caller to connect with the switch. Therefore, a trunk group blocking percentage indicates what percentage of calls receive busy signals on a trunk group and do not connect with the switch. Your objective blocking percentage will normally be a blocking percentage that you find acceptable for the split.

Busy Hour CCS

Busy Hour CCS (Centum Call Seconds) is a measure of how many 100-second increments the trunks in a trunk group were seized by calls in the trunk group's average busy-hour of the month.

Actual Blocking Factor %

The actual blocking factor percentage is the estimated percentage of calls that were blocked in the trunk group during the busiest hour of the month.

You use this forecast to determine if you need to adjust the number of trunks in a trunk group.

Forecast Objectives

The forecasts you get are dependent on the objectives you set for a split or trunk group. Your objectives may consist of one or more of the following parameters:

Call Characteristics   Call characteristics are expected values you give a split for each half-hour in the day. Call characteristics consist of the following:

> The **Average Answer Delay** for calls in the split's queue
>
> The **Weighted Call Value**, which is average length of time an agent in the split will spend on a call, including time spent in after-call-work.
>
> The **Number of Assigned Trunks**, which are the expected number of trunks in all trunk groups that will be assigned to the split, plus an estimated number of trunks or extensions that are expected to connect to the split from unassigned trunk groups (for example, DID trunk groups) or from internal calls. The Number of Assigned Trunks serves as a limit within CMS forecast calculations for the number of calls that may be simultaneously connected to the split at any given moment. Therefore, it also serves as a limit for the number of agents that will be required at any given moment.

You can also enter, for Split 0*, a set of special call characteristics that can temporarily replace the regular call characteristics you establish for any split in an ACD. Split 0 characteristics can be particularly useful as a substitute characteristics on special days.

The Forecast Calls Carried, Agent Positions Required, and % ACD Time forecasted in the Long-Term, Current Day, Intraday, and Special Day forecasts are based on call characteristics. The Call Characteristics Administration screen has default characteristics which you can use or change according to your expectations.

---

* Because CMS measures ACD splits that are numbered 1 through n, Split 0 is also used as the destination split in the Extension Assignment, Trunk Group Assignment, and interflow processes to remove an item from CMS measurement without resorting to PBX administration.

Weighting Coefficients   For Long-Term, Current Day, and Intraday forecasts, CMS determines the day of the week (Monday, Tuesday, Wednesday, etc.) of the forecast date, then figures into the forecast the data from that same weekday in each of the 3 weeks preceding the current date. For example, if your forecast is for Wednesday, September 21, and the current date is September 19, CMS figures in the data from the previous three Wednesdays, which occurred on August 31, September 7, and September 14.

Weighting coefficients are the relative weights (entered as numbers from 0 to 10) given to each of these 3 days of historical data. Weighting coefficients determine which week's data should be factored most heavily in a forecast. For example, if the day 1 week ago has a weight of 6 and the day 2 weeks ago has a weight of 2, the data from 1 week ago will be given 3 times as much weight in the calculations as the data from 2 weeks ago.

You specify one set of weighting coefficients for all splits on the Weighting Coefficients screen, though you can adjust the weighting coefficients when you order a Long-Term forecast on a particular split.

NOTE	Since a Special Day forecast uses historical data only from a previous occurrence of a special day and does not include data from the preceding 3 weeks, weighting coefficients are not used for Special Day forecasts.

Growth Factors   The **System Growth Factor** is a percentage from 1 to 1000% that tells CMS you expect an overall increase or decrease in call traffic. CMS uses this percentage to adjust its forecasts. The System Growth Factor also tells CMS adjust its forecasts when you believe the historical data to be used in the forecast does not represent normal call traffic for that time period. You enter the System Growth Factor on the Weighting Coefficients screen. The System Growth Factor is used to calculate Long-Term, Current Day, Intraday, and Special Day forecasts.

When you order a Long-Term or Special Day forecast, you can adjust the System Growth Factor for the particular split. When you order a Long-Term, Intraday, or Special Day forecast, you can also specify additional growth factors for Weighted Call Value and Average Answer Delay for the particular split.

Trunk Group Blocking % You can enter a targeted trunk group blocking percentage (`Objective Blocking Factor %`) on the Trunk Group Blocking Percentages screen. Then, on the Trunk Engineering Forecast, the system will determine the number of trunks the trunk group would have needed to meet that objective for the given month in the past.

Seasonal Trend Base Date The seasonal trend base date is a date in the past that has similar call traffic characteristics to the date(s) of the forecast you are ordering. CMS includes, in its forecast algorithms, data for the seasonal trend base date and the days 1, 2, and 3 weeks before the base date. For Intraday and Current Day forecasts, a seasonal trend base date exactly one year ago is automatically figured into the forecasts. (Presumably, the season 1 year ago was similar to the current season.) For Long-Term forecasts, you can specify any seasonal trend base date you want, up to 1 year ago.

Forecast Manager

You must run the Forecast Manager (see Chapter 11, "Maintenance") to collect historical data that CMS uses for Special Day forecasting. If for some reason the Forecast Manager has been inactive, you can have the Forecast Manager go back and retrieve Special Day data from any of the past 31 days.

You must also run the Forecast Manager to create Current Day forecasts and to store up-to-date Special Day, Call Characteristics, and Weighting Coefficients administration changes. You should be sure that CMS has collected half-hour historical data (see Chapter 11, "Maintenance") for at least 3 weeks before the current date, because CMS creates Current Day forecasts using data from the 3 weeks immediately preceding the day you order a report.

Since CMS can store data for up to 387 days (1 year plus 3 weeks), you can base a Special Day or Trunk Engineering forecast on data from up to 1 year in the past. And, as mentioned earlier, you can include for a Long-Term report a seasonal trend base date from up to 1 year in the past. A seasonal trend base date exactly one year ago is automatically included in Intraday and Current Day reports.

The Forecast menu (Figure 8-1) lists the six screens you use to define dates, times, and objectives for your reports. In addition, the four administration screens listed on the Forecast menu are available to define global forecast objectives or objectives for individual split or trunk group forecasts.

Forecast Menu

You use the Forecast Menu to select the particular screen you want, either to order a forecast report or to define forecast objectives.

> **NOTE** Because you should define forecast objectives before ordering any reports, this chapter presents administration screen procedures **before** report screen procedures.

```
Call Management System                          Switch_Name:Up or Down      Time

_____
                                   FORECAST

                        Reports
                        [ ] Long-Term
                        [ ] Intraday
                        [ ] Current-Day
                        [ ] Special-Day
                        [ ] Agent-Positions-Required
                        [ ] Trunk-Engineering

                        Administration
                        [ ] Special-Days
                        [ ] Call-Characteristics
                        [ ] Trunk-Group-Blocking
                        [ ] Weighting-Coefficients


     Error and confirmation messages appear in this field.

                                                 EXIT   PRINT    HELP
                                                        SCREEN   KEYS
```
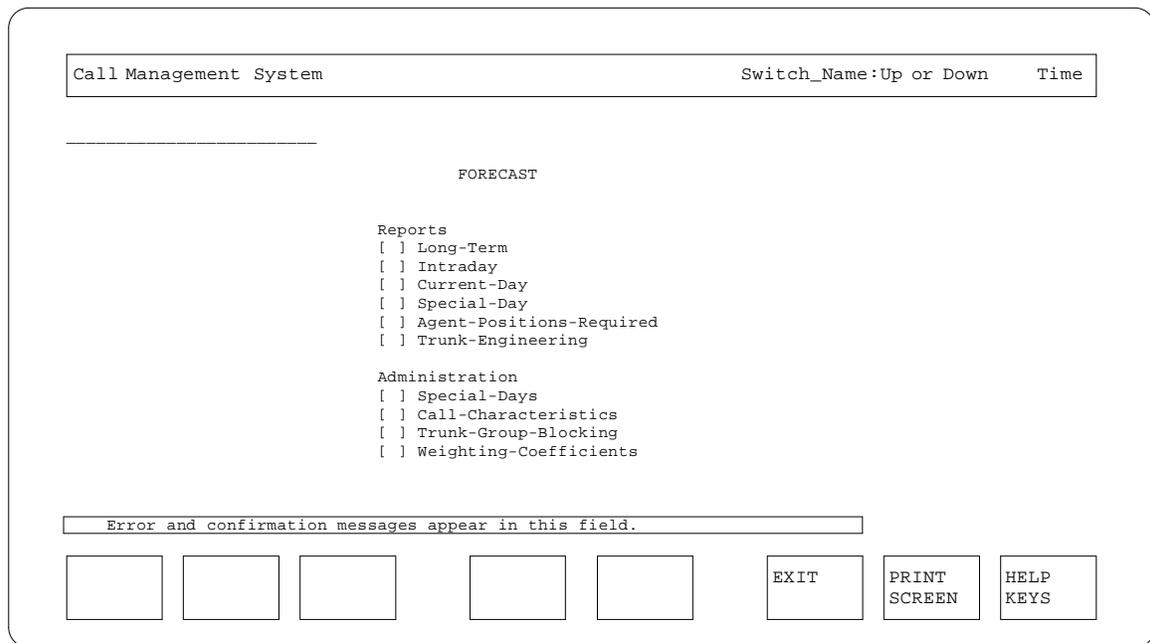
Figure 8-1   Forecast Menu

Special Days Administration

Purpose   To create up to 15 special days per split.
Dependencies   Write permission for the split.

You use the Special Days Administration screen to identify to CMS those days that have unusual call traffic. CMS can then store historical data in separate special day files and produce forecast reports on future occurrences of those days. For example, if a serious storm created a significant change in call volume, you could enter that day as a special day, then access a special day forecast report if the same storm conditions occurred again in the future.

You can identify up to 15 special days for a split, and when the Forecast Manager runs for those days, the unusual call traffic data will be stored for future special day forecasts. Historical data for special days that haven't occurred yet will be compiled by the Forecast Manager when those days actually arrive. Historical data for special days that are recently past (within the last 3-1 days or less depending on your archive parameters [see Chapter 11])can be compiled if you make separate runs of the Forecast Manager to specifically catch those days' data.

> **NOTE**   If you change the dates for a special day like Thanksgiving, whose date changes each year, do not delete the existing special day definition and reenter a new one. Instead, just change the date. This method retains the previous year's data in the database.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                    Switch_Name:Up or Down   Time │ │
│  └──────────────────────────────────────────────────────────────────┘    │
│                          FORECAST - SPECIAL DAYS                          │
│   [1] Split: 1_____                                          │
│   [2]   Date        Description        Date        Description             │
│       1/1           New Year's Day                                         │
│                                                                           │
│             [3] Date:__/__                                                  │
│           [4] Description: _____                          │
│   ┌────────────────────────────────────────────────────────────────┐     │
│   │ Error and confirmation messages appear in this field.           │     │
│   └────────────────────────────────────────────────────────────────┘     │
│  ┌────────┐┌──────┐┌────────┐    ┌──────┐┌──────┐┌──────┐┌───────┐┌──────┐│
│  │ CHANGE ││ ADD  ││ DELETE │    │      ││      ││ EXIT ││ PRINT ││ HELP ││
│  │        ││      ││        │    │      ││      ││      ││ SCREEN││ HELP ││
│  └────────┘└──────┘└────────┘    └──────┘└──────┘└──────┘└───────┘└──────┘│
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 8-2   **Forecast — Special Days Administration Screen**

Definition of Fields

Field ⬛1 Split

The number or synonym of the split for which you are administering forecast special days.

Field ⬛2 Data Display

The special days you have set up for this split are displayed here.

Field ⬛3 Date

The MM/ DD-format date of the special day you are administering.

Field ⬛4 Description

An optional description of the day, up to 24 characters in length.

Adding a Special Day

1 On the FORECAST menu, select the Administration [ ] Special Days option and press ⎡RETURN⎤.

   [A blank Special Days Administration screen appears.]

2 Enter the number or synonym of a measured split in the Split: field.

3 Press ⎡RETURN⎤.

   [The current special days for the split are displayed.]

4 Enter the date in the Date: field, and (optionally) enter the description of the special day in the Description: field.

5 Press ⎡ADD⎤.

   [The new special day definition will be added to the forecast system when the Forecast Manager runs again (normally each night). Historical data for the new special day will be obtained on the next occurrence of the special day, or if the special day occurred within the last 31 days, when a separate run of the Forecast Manager is made for that day.]

Changing a Special Day

1   On the FORECAST menu, select the Administration [ ] Special-
    Days option and press [RETURN].

    [A blank Special Days Administration screen appears.]

2   Enter a measured split number or synonym in the Split: field.

3   Press [RETURN].

    [The special days for that split are displayed.]

4   To change a description of a day but keep the date the same, enter the existing date
    in the Date: field and the new description in the Description: field. This
    would allow you, for instance, to change the description of 7/4 to "Independence
    Day" from "The Fourth of July."

5   To change a date, enter the new date in the Date: field.

6   Press [CHANGE].

    [The changed data will be made available to the Forecast system, and will be
    displayed on your screen. The change will be used to gather forecast data with the
    next execution of the Forecast Manager on the Special Day.]

Deleting a Special Day

1   On the FORECAST menu, select the Administration [ ] Special-
    Days option and press [RETURN].

    [A blank Special Days Administration screen appears.]

2   Enter a split number or synonym of a measured split in the Split: field.

3   For the special day to be deleted, enter the date in the Date: field.

4   Press [DELETE].

    [A confirmation prompt appears to verify that you want to delete the Special Day
    and discard that day's data.]

5   Enter *y* next to the confirmation message and press [RETURN].

    [The special day will be deleted, and the screen will be updated with the revised list
    of special days.]

Call Characteristics Administration

Purpose	To set the half-hour WCV, delay, and number of trunks for a split's forecasts. You can also set Split 0's (special) characteristics.
Dependencies	Write permission for the split.

You use the Call Characteristics Administration screen to set the average delay of calls, weighted call values, and number of assigned trunks targeted for a split. You enter those values for each half-hour interval in a day. CMS then uses these expected values to calculate forecast data for the number of agents and trunks needed.

You complete a set of call characteristics for each ACD split you wish to forecast. In addition, you can set special call characteristics for Split 0, a special dummy split. Then you can apply Split 0's special call characteristics to any forecast report at the time you order it.

Screen Description

```
┌────────────────────────────────────────────────────────────────────────────────┐
│                                                                                  │
│  ┌────────────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System                          Switch_Name:Up or Down   Time│ │
│  └────────────────────────────────────────────────────────────────────────────┘ │
│                                                                                  │
│                            FORECAST -- CALL CHARACTERISTICS                       │
│                                                                                  │
│     1 Split:_____                                                 │
│                                                                                  │
│     2  Interval 3 WCV 4 Delay 5 Trunks       Interval    WCV     Delay   Trunks  │
│                                                                                  │
│       MIDNT-00:30   180      5__    1__     06:00-06:30   180      5__     1__    │
│       00:30-01:00   180      5__    1__     06:30-07:00   180      5__     1__    │
│       01:00-01:30   180      5__    1__     07:00-07:30   180      5__     1__    │
│       01:30-02:00   180      5__    1__     07:30-08:00   180      5__     1__    │
│       02:00-02:30   180      5__    1__     08:00-08:30   180      5__     1__    │
│       02:30-03:00   180      5__    1__     08:30-09:00   180      5__     1__    │
│       03:00-03:30   180      5__    1__     09:00-09:30   180      5__     1__    │
│       03:30-04:00   180      5__    1__     09:30-10:00   180      5__     1__    │
│       04:00-04:30   180      5__    1__     10:00-10:30   180      5__     1__    │
│       04:30-05:00   180      5__    1__     10:30-11:00   180      5__     1__    │
│       05:00-05:30   180      5__    1__     11:00-11:30   180      5__     1__    │
│       05:30-06:00   180      5__    1__     11:30-12:00   180      5__     1__    │
│                                                                                  │
│       WCV - Weighted Call Value                        [Page 1 of 2]             │
│  ┌────────────────────────────────────────────────────────────────────────────┐ │
│  │   Error and confirmation messages appear in this field.                      │ │
│  └────────────────────────────────────────────────────────────────────────────┘ │
│                                                                                  │
│  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐       │
│  │CHANGE│ │      │ │      │ │PREV  │ │NEXT  │   │EXIT  │ │PRINT │ │HELP  │       │
│  │      │ │      │ │      │ │PAGE  │ │PAGE  │   │      │ │SCREEN│ │KEYS  │       │
│  └──────┘ └──────┘ └──────┘ └──────┘ └──────┘   └──────┘ └──────┘ └──────┘       │
└────────────────────────────────────────────────────────────────────────────────┘
```

Figure 8-3   Forecast — Call Characteristics Administration Screen

Definition of Fields

Field ⬚1 Split

The number or synonym of the split for which you are viewing or changing the call characteristics. Note that you can also define call characteristics for split 0, which can store an alternate set of characteristics available to the whole system.

Field ⬚2 Interval

The half-hour periods for which call characteristics are individually set.

Field ⬚3 WCV

Weighted Call Value. The objective number of seconds agents will spend per call — combining ACD talk time and after-call work (ACW).

Default: 1-80

Range: 1 to 999 seconds

Field ⬚4 Delay

The objective or expected average queue-delay for this split. The delay characteristic of a split is like the service level entered for Call Profile reports.

Default: 5

Range: 1 to 999 seconds

Field ⬚5 Trunks

The number of trunks assigned to this split during this interval.

Default: 1

NOTE	This number represents the ceiling for the number of agents the system will forecast in the Current Day, Intraday, Special Day, and Long Term reports. In other words, the number of trunks specified for a split in this screen will not be exceeded by the number of agents forecast for that split.

Adding or Changing Forecast Call Characteristics

The process used to administer call characteristics is to change the default values already in the system.

1 On the `FORECAST` menu, select the `Administration [ ] Call Characteristics` option and press ⌈RETURN⌋.

   [A blank Call Characteristics Administration screen appears.]

2 Enter the number (or synonym) of the split you want to administer in the `Split:` field.

3 Press ⌈RETURN⌋.

   [The default or current values for each half-hour interval appear: Weighted Call Values, Average Answer Delay, and Number of Trunks.]

> Each split's call characteristics require two pages for a complete display, the first page containing the 24 a.m. intervals, the second containing the 24 p.m. intervals. The ⌈NEXT PAGE⌋ and ⌈PREV PAGE⌋ SLKs are used to move back and forth between the a.m. and p.m. intervals for each split; each SLK appears on the screen when appropriate. You can make changes to both pages before pressing the ⌈CHANGE⌋ key.

4 Make changes on Page 1; press ⌈NEXT PAGE⌋ and make changes on Page 2. You can change (overwrite) any of the three characteristics (WCV, Delay, or Number of Trunks) for any half-hour interval.

5 Press ⌈CHANGE⌋.

   [Your changes will be used to calculate forecast data after the Forecast Manager runs next.]

Trunk Group Blocking Percentage Administration

Purpose   To set desired blocking percentages for trunk groups, for
               which CMS will find the required number of trunks.
Dependencies   Write permission for the trunk group.

You use the Trunk Group Blocking Percentages screen to set a targeted blocking percentage for each trunk group assigned to the ACD. CMS will list these percentages on the Trunk Engineering Forecast report under the Objective Blocking Factor % column, and CMS will use them to forecast the numbers of trunks required to meet those percentages in a given month.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌─────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System                    Switch_Name:Up or Down   Time│ │
│  └─────────────────────────────────────────────────────────────────────┘ │
│                                                                           │
│                                                                           │
│                     FORECAST - TRUNK GROUP BLOCKING PERCENTAGES           │
│                                                                           │
│   1     Trunk Group          Name                          %              │
│                                                                           │
│              10            local 961-1234                   5             │
│              11            local 961-1235                   5             │
│              12            FX 1-961-1236                    5             │
│              13            local 961-1237                   5             │
│              14-800-number                        5                       │
│                                                                           │
│                                                                           │
│                                                                           │
│   2 Trunk Group(s):_____                       │
│   3 Percentage: ___%                                                      │
│                                                                           │
│                                          [Page 1 of 10]                    │
│  ┌─────────────────────────────────────────────────────────────────────┐ │
│  │ Error and confirmation messages appear in this field.               │ │
│  └─────────────────────────────────────────────────────────────────────┘ │
│  ┌────────┐┌──────┐┌────────┐┌──────┐┌──────┐  ┌──────┐┌───────┐┌──────┐ │
│  │ CHANGE ││      ││ SEARCH ││ PREV ││ NEXT │  │ EXIT ││ PRINT ││ HELP │ │
│  │        ││      ││        ││ PAGE ││ PAGE │  │      ││ SCREEN││ KEYS │ │
│  └────────┘└──────┘└────────┘└──────┘└──────┘  └──────┘└───────┘└──────┘ │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 8-4   Forecast — Trunk Group Blocking Percentages Screen

Definition of Fields:

Field ☐1 Data field

The display of measured trunk groups (number and, if present, synonym) and their current forecast blocking percentages.

Field ☐2 Trunk Group(s)

The trunk group or groups whose blocking percentage you want to view or change in the forecast system.

Field ☐3 Percentage

The blocking percentage desired for these trunk groups. Blocking percentages range from 1 (the lowest available) to 100 percent (no calls get through on this trunk group).

Default: 5

| NOTE | Because all trunk groups begin — for modeling purposes — with a 5 percent blocking percentage, all administration on this subject is a matter of changes. Notice there is no ADD SLK on the screen for blocking percentage. |

Changing a Blocking Percentage

1   On the FORECAST menu, select the Administration [ ] Trunk-Group-Blocking option and press RETURN.

   [The first page of measured trunk groups and their percentages will automatically display.]

2   In the Trunk Group(s): field, enter the numbers of trunk groups for which you want to change the blocking percentage. You can enter individual trunk group numbers separated by spaces or commas, ranges separated by hyphens, a combination of both, or "all."

3   Enter a number from 1 through 100 in the Percentage: field. This will be the new blocking percentage.

   This change affects only forecasting calculations, not actual blocking.

4   Press CHANGE.

[The changed blocking percentages will be entered into the forecast system.]

Searching for a Blocking Percentage

1   On the FORECAST menu, select the Administration [ ] Trunk-Group-Blocking option and press RETURN.

[A blank Trunk Group Blocking screen appears.]

2   Enter the number of the trunk group of interest in the Trunk Group(s): field and press SEARCH.   You can also use the NEXT PAGE or PREV PAGE SLKs to scroll page-by-page through the trunk group display to search for a specific trunk group.

[If you press SEARCH, the page of data containing the specified trunk group will be displayed.]

Weighting Coefficient Administration

Purpose   To assign weighting coefficients to the historical data in each of the 3 weeks before the current date. This determines how heavily each week's data is figured into a forecast.

You use the Weighting Coefficient Administration screen to set the relative weights of historical data from the selected days 1, 2, and 3 weeks before the current date. CMS gathers data from the day in each of the 3 past weeks that is the same day of the week as the forecast date. That is, if the forecast date is a Wednesday, the historical data from the Wednesday in each of the 3 weeks preceding the current date is used in the forecast. CMS uses the weighting coefficients to determine how heavily each of those day's data should be factored into a forecast. For example, if you believe that the data from 1 week past will better match your forecast date than the data from 2 weeks past, you will give one-week-past data a heavier weighting in the CMS forecast algorithms.

You also use this screen to set an expected system growth factor (the percentage of current call traffic you expect on the day being forecast), which CMS also uses to forecast call traffic.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────────────────────────────────┐ │
│ │ Call Management System                    Switch_Name:Up or Down  Time│ │
│ └─────────────────────────────────────────────────────────────────────┘ │
│                                                                           │
│                     FORECAST - WEIGHTING COEFFICIENTS                     │
│                                                                           │
│              1  System Growth Factor: 100%                                │
│                                                                           │
│                 Number of Calls Carried                                   │
│                  Weighting Coefficients                                   │
│                        2 3 Weeks Past: 1                                  │
│                        3 2 Weeks Past: 3                                  │
│                        4 1 Week Past: 6                                   │
│                                                                           │
│  ┌─────────────────────────────────────────────────────────────────┐    │
│  │  Error and confirmation messages appear in this field.           │    │
│  └─────────────────────────────────────────────────────────────────┘    │
│  ┌──────┐┌──────┐┌──────┐  ┌──────┐┌──────┐  ┌──────┐┌──────┐┌──────┐   │
│  │CHANGE││      ││      │  │      ││      │  │EXIT  ││PRINT ││HELP  │   │
│  │      ││      ││      │  │      ││      │  │      ││SCREEN││KEYS  │   │
│  └──────┘└──────┘└──────┘  └──────┘└──────┘  └──────┘└──────┘└──────┘   │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 8-5   Forecast — Weighting Coefficients Administration Screen

Definition of Fields:

Field 1 System Growth Factor

The percentage of current call traffic you expect on the day being forecast. Enter a value from 1 to 1000. Values below 100 indicate a decrease in call traffic; values above 100 indicate an increase in call traffic.

Default: 1-00.

Fields 2, 3, and 4 Weighting Coefficients

In each of these 3 fields, enter a number from 0 to 10. The weighting coefficients **should** add up to 10 to get valid data. (You could enter 10 in any one of the fields, but if you do, the other two fields should equal 0.)

The value placed in each field will be the relative weighting of the historical data from 3 weeks ago, 2 weeks ago, and 1 week ago for the day of the week matching the forecast date. The higher the number, the greater the weighting placed on the week's data.

Defaults: 1, 3, 6, respectively, for weeks 3, 2, and 1.

Changing Forecast Weighting for the System

All weighting is done through the [CHANGE] key. There is no [ADD] function.

1 On the FORECAST menu, select the Administration [ ] Weighting-Coefficients option and press [RETURN].

   [A Weighting Coefficients Administration screen with current weighting coefficient values appears.]

2 Enter, in the System Growth Factor: field, the system growth factor you expect your forecasts to have over the historical data in your forecast system. You can enter any integer from 1 through 1000.

3 Enter, in the Weighting Coefficients fields, the weighting coefficients you want to attach to each of the previous 3 weeks' data. For each week, the values can be from 0 through 10. The greater the number, the greater the weight attached to that week. The weighting coefficients **must** add up to 10 (100 percent) to get valid data. (You could enter 10 in any one of the fields, but if you do, the other two fields should equal 0.)

4 Press [CHANGE].

   [When the Forecast Manager runs next, the entered values will be used to calculate forecast data.]

Long Term Report

Purpose   To set the objectives and order a long-term forecast.
Dependencies The Forecast Manager and Daily
              Data Archive. Read permission for the split.

You use the Long Term Report screen to order a long-term forecast report for a split (up to 35 days). For the specific report you order, you can also use the screen to alter forecast objectives previously set, including call characteristics, weighting coefficients, and growth factors. Finally, you can choose to base your long-term forecast only on current (in the last 3 weeks) data or to also include data from a seasonal trend base date and the days 1, 2, and 3 weeks before the base date.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────┐
│ Call Management System                        Switch_Name:Up or Down    Time  │
└─────────────────────────────────────────────────────────────────────────────┘

                          FORECAST -- LONG TERM REPORT
   1  Split: _____

   2  Forecast Date: __/__ OR Future Day(s): _____
   3     Start Time: 0_:0_
   4      Stop Time: 0_:0_

                       5  Seasonal Trending?n
                6  Seasonal Trend Base Date: 11/25/86

   7  Use Special Call Characteristics? n

      NCC Weighting Coefficients       Growth Factor Percentages
             8   3 weeks past: 1_                    11    System: 100%
             9   2 weeks past: 3_            12  Weighted Call Value: 100%
            10   1 week past: 6_                     13  Delay: 100%
  ┌──────────────────────────────────────────────────────────────────────┐
  │  Error and confirmation messages appear in this field.                 │
  └──────────────────────────────────────────────────────────────────────┘

  ┌──────┐ ┌────────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌────────┐ ┌──────┐
  │      │ │COMMAND │ │      │ │ MAIL │ │      │ │ EXIT │ │ PRINT  │ │ HELP │
  │      │ │LINE    │ │      │ │      │ │      │ │      │ │ SCREEN │ │ KEYS │
  └──────┘ └────────┘ └──────┘ └──────┘ └──────┘ └──────┘ └────────┘ └──────┘
```

Figure 8-6   Forecast — Long Term Report Screen

Definition of Fields

Field [1] Split

The number or synonym of the split for which the forecast will be generated.

Field [2] Forecast Date or Future Day(s)

The date in the future that will be forecast if you use the MM/DD format in the Forecast Date part of the field, or the relative future day if you place a positive integer in the Future Day(s) part of the field. For Future Day(s), 1 means tomorrow; 2 means the day after tomorrow, etc. It can be a range using two integers separated by a hyphen. This would result in an output of several days' forecasts. The maximum number of days in the future is 35.

The MM/DD format is used for a 1-time forecast. The relative day can be used for a regularly scheduled forecast, always so many days hence. For example, this could be used to regularly schedule a forecast for 1 week from today, so you can plan your staff and shift schedules a week ahead.

Field [3] Start Time

The beginning time you want the forecast to cover in military notation. Minutes are either 00 or 30.

Default: 0 :0

Range: 0-0:00 through 23:30

Field [4] Stop Time

The ending time you want the forecast to cover in military notation. Minutes are either 00 or 30.

Default: 0 :0

Range: 0-0:30 through 24:00

Field [5] Seasonal Trending?

The decision, yes or no, to use a past day (and the 3 weeks before it) as the basis of this forecast. Enter *y* (yes) or *n*(no). You specify the seasonal trend base date in the next field.

Default: n

Field $\boxed{6}$ Seasonal Trend Base Date

If you entered *y* in field 5, enter any past date, using the MM/ DD/ YY format. Pick a date in the past where the data for that day and the days 1, 2, and 3 weeks before that date have a similar pattern to the period you are forecasting. **If the seasonal trend data is distorted for any reason, it will have a distorting effect on the forecast.**

Default: Date of day 1 year ago.

Field $\boxed{7}$ Use Special Call Characteristics?

Enter either *y* (yes) or *n* (no). ''Yes'' means the forecast will use the special, system-wide call characteristics (WCV, Delay, Number of Assigned Trunks) that are currently in effect for split 0. ''No'' means the forecast will use the call characteristics established for the split requested in field 1.

Default: n

Field $\boxed{8, 9, \text{and } 10}$ NCC Weighting Coefficients

These fields are overrides of the values entered in the Weighting Coefficient Administration screen, specifying the weight to put on the call statistics for the system 1 week ago, 2 weeks ago, and 3 weeks ago.

Defaults: The values entered in the Weighting Coefficient screen.

Enter any values you desire from 0 to 10 to override the defaults.

Field $\boxed{11}$ Growth Factor Percentages — System

The relative size of the call volume you expect at the future point of the forecast.

Default: The system growth factor entered in the Weighting Coefficient screen.

Enter any percentage from 1 through 1000. Any value less than 100 percent means system shrinkage. A value over 100 percent means system growth.

Field ⎡12⎤ Growth Factor Percentages — Weighted Call Value

In field 7 you chose a set of call characteristics. Field 12 gives you a chance to alter the ones you chose to allow you to vary the results for this particular forecast — without having to go back to the Call Characteristics Administration screen. In field 12, you specify a multiplier for the weighted call value characteristic. For example, 100 would mean no alteration to the specified weighted call value, 90 would mean slightly shorter WCV, and 150 would mean an objective WCV half again as large as specified in the Call Characteristics screen.

Default: 1-00 percent (e.g., the same values present in the Call Characteristics Administration process).

Enter any value 1 through 1000 percent.

Field ⎡13⎤ Growth Factor Percentages — Delay

The same type of entry as field 12 — an alteration to the delay call characteristic for each half-hour for this forecast report only.

Default: 1-00 percent

Enter any value from 1 through 1000. The effect is to increase or decrease the targeted average wait in queue.

Ordering a Long Term Forecast

1   Be sure all forecast administration is filled out properly. This includes Call Characteristics and Weighting Coefficients screens.

2   On the FORECAST menu, select the Reports [ ] Long-Term option and press ⎡RETURN⎤.

[The blank Long Term Forecast screen appears.]

3   Enter, in the Split: field, the number or synonym of the split to be covered by this report.

4   Enter the MM/DD/YY-format date in the Forecast Date:, or enter a relative day integer in the Future Days: field. If you use integers, you can enter one integer, a range of integers separated by a hyphen, such as *3-5*, or a combination of both.

5   Enter, in military time, the start time in the `Start Time:` field and the stop
    time in the `Stop Time:` field to define the period to be covered in the report.

        Minutes must be either `:00` or `:30`.

6   Enter *y* or *n* in the `Seasonal Trending?` field to select or bypass seasonal
    trending.

7   If you typed *y* in the `Seasonal Trending?` field, enter in the `Seasonal
    Trend Base Date:` field the date to be used in seasonal trending. Use an
    MM/ DD/ YY format.

8   Enter *y* (yes) or *n* (no) in the `Use Special Call Characteristics?`
    field. "Yes" selects the call characteristics for split 0. "No" keeps the call
    characteristics for the split selected in Step 3.

9   In the `NCC Weighting Coefficients` fields, overwrite the default
    weighting coefficients if you want to change them. The greater the number, the
    greater the weight.

10 In the `Growth Factor Percentages` fields, enter integers from 1 through
    1-000 if you want to change the percentages. These are multiplied against the
    values in the Call Characteristics Administration screen for this split.

11 Press $\boxed{\text{RETURN}}$ to generate the report immediately, or press $\boxed{\text{COMMAND LINE}}$ to
    schedule the report for a later time.

    [The Report Destination screen appears.]

12 Follow the directions on the Report Destination screen to finish ordering the report,
    and press $\boxed{\text{RETURN}}$ again.

    [If you pressed $\boxed{\text{RETURN}}$ in Step 11, the report is generated immediately. If you
    pressed $\boxed{\text{COMMAND LINE}}$ in Step 11, the Program Editor in the Schedule subsystem
    appears so you can schedule the report.]

| NOTE | If you enter values other than the defaults (100 percent) in `Growth Factor Percentages` fields, processing time will be delayed. |

| NOTE | The integer(s) you enter in the `Future Day(s):` field must be positive. The forecast will not run if you enter a negative integer (for example, "-1") in the field. |

Long Term Forecast Report Description

The following figure shows a sample long-term forecast output to a terminal screen:

```
09/23/89              CALL MANAGEMENT SYSTEM                page 1

                        LONG TERM FORECAST
SPLIT: 1 (Sales)                                   DATE: 10/23/87

FORECAST BASED ON:  9/16/87    9/ 9/87    9/ 2/87
SEASONAL TRENDING BASED ON: 9/23/86

WEIGHTING FACTORS: 1    3    6
SYSTEM GROWTH FACTOR:  120%

OBJECTIVE GROWTH FACTORS:
    WEIGHTED CALL VALUE = 95%       DELAY = 110%

          ----OBJECTIVE-----
             WEIGHTED           NUMBER    FORECAST    NUMBER      %
               CALL               OF       CALLS    POSITIONS    ACD
 TIME         VALUE    DELAY     TRUNKS    CARRIED   REQUIRED    TIME
----------------------------------------------------------------------

15:00-15:30    120       35       10         79          6       67
15:30-16:00    120       35       10         89          6       75
16:00-16:30    120       35       10         91          6       75
17:00-17:30    120       35       10        110          6       99
18:00-18:30    120       45       15        250         10       89
18:30-19:00    120       45       15        260         11       95
----------------------------------------------------------------------
TOTAL                                       879         45
```

SEARCH NEXT	SEARCH PREV	SEARCH	PREV PAGE	NEXT PAGE		EXIT		

The SLKs for a terminal output of a forecast report have the following meanings:

SEARCH   Pressing this key invokes the string search command. This puts a slash (/) in the command line of the screen, allowing you to place any string of characters you desire after the slash. Then by pressing RETURN, you will get the search function and be moved to the string's location in the report.

SEARCH PREV   Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT   Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.

NEXT PAGE   Moves you to the next page of the report.

PREV PAGE   Moves you to the previous page of the report.

EXIT   Returns you to the Long Term Report request screen.

Table 8-1   Long Term Forecast Output Explanation

FIELD	EXPLANATION
SPLIT	The split selected in the Long Term Report screen.
DATE	The date forecast.
FORECAST BASED ON	Dates 1, 2, and 3 weeks ago— used, along with weighting factors, to project an estimated number of calls carried.
SEASONAL TRENDING BASED ON	Taken from Long Term Report screen's Seasonal Trend Base Date field. Data from the Seasonal Trend Base Date and the days 1, 2, and 3 weeks before that date can be another element in the algorithm for the forecast number of calls.
WEIGHTING FACTORS	Data entered in the Weighting Coefficients field in the Long Term Report screen. These numbers give greater or less weight to each of the weeks used to project calls carried.
SYSTEM GROWTH FACTOR	Data from the System field in the Long Term Report screen. This percentage projects the overall growth (or shrinkage) of call volume from the past 3 weeks to the forecast date.
OBJECTIVE GROWTH FACTORS	Data from the Weighted Call Value and Delay fields in the Long Term Report screen. These percentages project growth or shrinkage in WCV and Delay from the past 3 weeks to the forecast date.
TIME	Half-hour intervals designated for the forecast report in the Start Time and Stop Time fields in the Long Term Report screen.

Table 8-1   Long Term Forecast Output Explanation (Contd)

FIELD	EXPLANATION
WEIGHTED CALL VALUE	The expected time on each ACD call, including after-call work. The time is taken from the call characteristics for either the specific split or Split 0, as selected in the `Use Special Call Characteristics?` field of the Long Term Report screen. This time may be modified by the Growth Factor Percentage for WCV entered on the Long Term Report screen. The actual Weighted Call Value can be calculated for the split by adding AVG TALK TIME and AVG AFTER CALL in the historical Split Reports.
DELAY	The projected time callers will wait before an agent answers. The time can be for the specified split or Split 0. The actual value can be seen in the Average Speed of Answer statistics in real-time or historical reports for this split.
NUMBER OF TRUNKS	The number of trunks assigned to the split. The number can be for the specified split or Split 0. This number represents the maximum number of calls that can be connected to the split at a given time and acts as a ceiling on the number of **agents** that the system will forecast. The principle is that no ACD will ever use more agents than trunks in a split.
FORECAST CALLS CARRIED	Calls forecast to be received by this split. See "Algorithms for Forecast Report Items" at the end of this chapter.
NUMBER OF POSITIONS REQUIRED	The number of agents needed to service the forecast call volume. See the "Algorithms for Forecast Report Items" at the end of this chapter.
% ACD TIME	The percent of time the number of agents required will spend on ACD calls for the half-hour. See "Algorithms for Forecast Report Items" at the end of this chapter.
TOTAL	
TOTAL CALLS	Forecasted total of calls received.
TOTAL AGENTS	Column total (not the total agents needed).

Intraday Report

Purpose	To forecast agent requirements for the rest of the current day.
	Updates the Current Day forecast.
Dependencies	The Forecast Manager must have executed that day.
	Read permission for the split.

You use the Intraday Report screen to order split forecast reports for the remainder of the current day. The Intraday Report contains current day forecast data that has been revised to incorporate actual data generated early in the day.

You can alter call characteristics for the specific intraday report you order.

Screen Description

```
Call Management System                          Switch_Name:Up or Down    Time


                        FORECAST -- INTRADAY REPORT
  1 Split:1_____


                            2 Start Time: 13:00
                            3 Stop Time: 24:00
       4 Use Special Call Characteristics?: n

               Growth Factor Percentages
               5 Weighted Call Value: 100
                       6 Delay: 100




   Error and confirmation messages appear in this field.

       COMMAND              MAIL              EXIT    PRINT   HELP
       LINE                                          SCREEN  KEYS
```

Figure 8-7   Intraday Forecast Screen

Definition of Fields

Field ⊡1⊡ Split

The number or synonym of the split for which you want the Intraday Report.

Field ⊡2⊡ Start Time

The beginning half-hour to be included in the forecast report.

Default: Current half-hour in the day.

Range: 0-0:00 through 23:30

Minutes are either 00 or 30.

Field ⊡3⊡ Stop Time

The final half-hour to be included in the forecast report.

Default: 2-4:00

Range: 0-0:30 through 24:00

Minutes are either 00 or 30.

Field ⊡4⊡ Use Special Call Characteristics?

Enter either *y* (yes) or *n* (no). "Yes" means the forecast will use the special, system-wide call characteristics (WCV, Delay, Number of Assigned Trunks) that are currently in effect for split 0. "No" means the forecast will use the call characteristics established for the split requested in field 1.

Default: n

Field ⊡5⊡ Growth Factor Percentages — Weighted Call Value

This field is another fine-tuning you can apply to call characteristics — in this case, specifically Weighted Call Value (WCV). It is the percentage increase (enter 1-00 to 1000) or decrease (anything less than 100 down to 1) you want this Intraday Forecast to reflect in the WCV values you defined on the Call Characteristics Administration screen.

> For example, if you accepted the default WCV (180 seconds) and you would like to forecast agents for the rest of today based on a longer WCV scenario, enter in this field the *percentage* increase in WCV you would like to forecast, such as 150. This would mean that, for this forecast, WCV is projected at 270 seconds, generating a forecast need for

a proportionately larger number of agents. Using this field and the next, you can run forecasts based on several possible scenarios of talk time and after call work without affecting the base call characteristics you have defined for this split.

Default: 1-00

Range: 1 through 1000

Field ⑥ Growth Factor Percentages — Delay

The percentage increase or decrease you project for the delay characteristic originally established for this split on the Call Characteristics Administration screen.

Default: 1-00

Range: 1 through 1000

Ordering an Intraday Forecast

1 Be sure all forecast administration is filled out properly. This includes Call Characteristics and Weighting Coefficients screens.

2 On the `FORECAST` menu, select the `Reports [ ] Intraday` option in the Forecast menu, and press `RETURN`.

A blank Intraday Report screen appears.

3 Enter, in the `Split:` field, the number or synonym of the split to be covered by this report.

4 Overtype the defaults, as desired, in the `Start Time:`, `Stop Time:`, `Use Special Call Characteristics?`, `Weighted Call Value:`, and `Delay:` fields.

All minutes must be either `:00` or `:30`.

The Weighted Call Value and Delay fields take values from 1 to 1000.

5   Press ⎡RETURN⎤ to generate the report immediately, or press ⎡COMMAND LINE⎤ to schedule the report for a later time.

[The Report Destination screen appears.]

6   Follow the directions on the Report Destination screen to finish ordering the report, and press ⎡RETURN⎤ again.

[If you pressed ⎡RETURN⎤ in Step 5, the report is generated immediately. If you pressed ⎡COMMAND LINE⎤ in Step 5, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Intraday Forecast Report Description

The following figure shows Intraday Forecast output to a terminal:

```
0-9/23/89                  CALL MANAGEMENT SYSTEM                    page 1

                         Forecast Intraday Report
SPLIT: 1

OBJECTIVE GROWTH FACTORS: WEIGHTED CALL VALUE = 100%    DELAY = 100%
SPECIAL CALL CHARACTERISTICS: NO

ACTIVITY FROM MIDNITE TO 12:00
NUMBER OF CALLS CARRIED:                2345
FORECASTED NUMBER OF CALLS CARRIED:     1967
PERCENTAGE OF ACTUAL TO FORECAST:        119%

            ---OBJECTIVE---
            WEIGHTED            NUMBER    FORECAST    NUMBER         %
               CALL                OF       CALLS   POSITIONS      ACD
TIME          VALUE    DELAY    TRUNKS     CARRIED  REQUIRED      TIME
-----------------------------------------------------------------------
1-2:00-12:30    210      5        25         167        15         79
1-2:30-13:00    210      5        25         203        15         85
1-3:00:13:30    210      6        25         199        15         84
1-3:30-14:00    200      7        26         245        15         90
1-4:00-14:30    200      8        26         340        19         90
-----------------------------------------------------------------------
TOTAL                                       1144        79
```

| SEARCH NEXT | SEARCH PREV | SEARCH | | PREV PAGE | NEXT PAGE | | EXIT | | |

Figure 8-8   Intraday Forecast Report Output on a Terminal

The SLKs for a terminal output of a forecast report have the following meanings:

SEARCH Pressing this key invokes the string search command. This puts a slash (/) in the command line of the screen, allowing you to place any string of characters you desire after the slash. Then by pressing RETURN, the cursor moves to the string's first location in the report.

SEARCH PREV Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.

NEXT PAGE Moves you to the next page of the report.

PREV PAGE Moves you to the previous page of the report.

EXIT Returns you to the Intraday Report request screen.

Table 8-2   **Intraday Forecast Output Explanation**

FIELD	EXPLANATION
SPLIT	The split selected in the Intraday Report screen.
OBJECTIVE GROWTH FACTORS: WEIGHTED CALL VALUE DELAY	The percentage of the WCV and delay values, originally defined on the Call Characteristics Administration screen, that are targeted for this specific intraday forecast.
SPECIAL CALL CHARACTERISTICS	The decision (*y* or *n*) whether to use, for this report, the Split 0 special call characteristics established on the Call Characteristics screen.
TOTAL NUMBER OF CALLS CARRIED	Actual split ACD call traffic for the current day up until the time of the forecast.
TOTAL FORECASTED NUMBER OF CALLS CARRIED	For the same period, the number of calls projected in the Current Day Forecast.
PERCENTAGE OF ACTUAL TO FORECAST	The ratio of the actual number of calls to the forecasted number of calls.

Table 8-2   Intraday Forecast Output Explanation (Contd)

FIELD	EXPLANATION
TIME (Body)	Half-hour intervals designated for the forecast report in the Start Time and Stop Time fields in the Intraday Report screen.
WEIGHTED CALL VALUE	The expected time on each ACD call, including after-call work. The time is taken from the call characteristics for either the specific split or Split 0, selected in the `Use Special Call Characteristics?` field of the Intraday Report screen. This time may also be modified by the Growth Factor Percentage for WCV entered on the Intraday Report screen. The actual Weighted Call Value can be calculated for the split by adding AVG TALK TIME and AVG AFTER CALL WORK in the historical Split Reports.
DELAY	The projected time callers will wait before an agent answers. The time can be for the specified split or Split 0. The actual value can be seen in the Average Speed of Answer statistics in real-time or historical reports for this split.
NUMBER OF TRUNKS	The expected number of trunks assigned to the split. The number can be for the specified split or Split 0. This number represents the maximum number of calls that can be connected to the split at a given time and acts as a ceiling on the number of **agents** that the system will forecast. The principle is that no ACD will ever use more agents than trunks in a split.
FORECAST CALLS CARRIED	The calls forecast to be received by this split. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
NUMBER OF POSITIONS REQUIRED	The number of agents needed to service the forecast call volume. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
% ACD TIME	The percent of time the number of agents required will spend on ACD calls during the half-hour interval. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
TOTAL	
TOTAL CALLS	Forecasted total of calls received.
TOTAL AGENTS	Column total (not the total agents needed).

Current Day Report

Purpose   To forecast agent requirements for today.

Dependencies   The Forecast Manager must execute to
create a Current Day forecast for the next day.
Also, half-hour historical data must be available
for days 1, 2, and 3 weeks before the current day.
Read permission for the split.

You use the Current Day Report screen to order a split forecast report for the current day. The Current Day Report forecasts the number of agents needed, percentage of ACD time agents will spend, and the number of calls the split will carry for each half-hour interval in the current day. A current day forecast is available after the Forecast Manager executes that day (preferably soon after 12:30 a.m.).

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│  ┌──────────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                    Switch_Name:Up or Down   Time│   │
│  └──────────────────────────────────────────────────────────────────────┘    │
│                                                                               │
│                         FORECAST -- CURRENT DAY REPORT                         │
│                                                                               │
│                                                                               │
│    1 Split:1_____                                       │
│                                                                               │
│                                                                               │
│    2 Start Time: 12:00                                                         │
│    3 Stop Time: 15:00                                                          │
│                                                                               │
│                                                                               │
│                                                                               │
│                                                                               │
│                                                                               │
│                                                                               │
│  ┌──────────────────────────────────────────────────────────────────┐        │
│  │  Error and confirmation messages appear in this field.            │        │
│  └──────────────────────────────────────────────────────────────────┘        │
│  ┌────┐ ┌────────┐ ┌────┐ ┌────────┐ ┌────┐ ┌────────┐ ┌────────┐ ┌────────┐  │
│  │    │ │COMMAND │ │    │ │MAIL    │ │    │ │EXIT    │ │PRINT   │ │HELP    │  │
│  │    │ │LINE    │ │    │ │        │ │    │ │        │ │SCREEN  │ │KEYS    │  │
│  └────┘ └────────┘ └────┘ └────────┘ └────┘ └────────┘ └────────┘ └────────┘  │
│                                                                               │
└─────────────────────────────────────────────────────────────────────────────┘
```
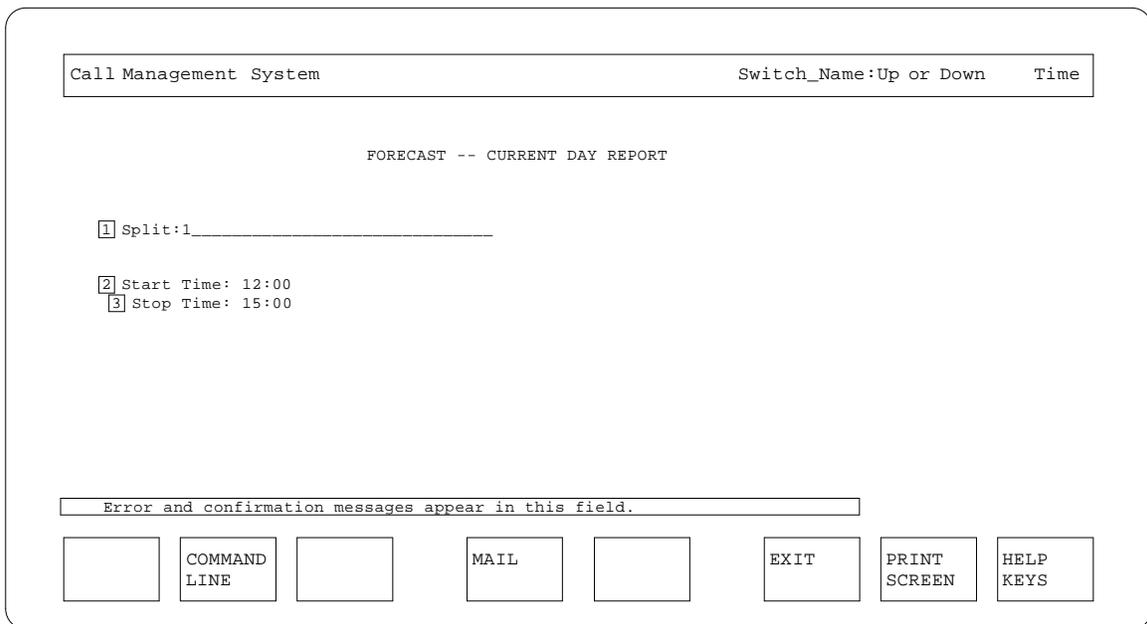
Figure 8-9   **Current Day Forecast Screen**

Definition of Fields

Field [1] Split

The number or synonym of the split for which you want the Current Day Forecast report.

Field [2] Start Time

The beginning interval to be included in the forecast report.

Default: 0 :0

Range: 0-0:00 to 23:30.

Minutes must be either 00 or 30.

Field [3] Stop Time

The final interval to be included in the forecast report.

Default: 2-4:0

Range: 0-0:30 to 24:00.

Minutes must be either 00 or 30.

Ordering a Current Day Forecast Report

1   On the FORECAST menu, select the Report [ ] Current-Day option in the menu, and press [RETURN].

[A blank Current Day Forecast screen appears.]

2   Enter, in the Split: field, the number or synonym of the split to be covered by this report.

3   Enter, in military time, the start time in the `Start Time:` field and the stop time in the `Stop Time:` field to define the period to be covered in the report.

All minutes must be either `:00` or `:30`.

4   Press RETURN to generate the report immediately, or press COMMAND LINE to schedule the report for a later time.

[The Report Destination screen appears.]

5   Follow the directions on the Report Destination screen to finish ordering the report, and press RETURN again.

[If you pressed RETURN in Step 4, the report is generated immediately. If you pressed COMMAND LINE in Step 4, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Current Day Forecast Report Description

The following figure shows Current Day Forecast output to a terminal:

```
09/23/89                    CALL MANAGEMENT SYSTEM                   page 1

                              CURRENT DAY FORECAST

SPLIT: 1                                               DATE: 09/23/89


              ----OBJECTIVE----
              WEIGHTED          NUMBER    FORECAST    NUMBER          %
                CALL              OF        CALLS    POSITIONS       ACD
TIME          VALUE   DELAY     TRUNKS     CARRIED   REQUIRED        TIME
------------------------------------------------------------------------
12:00-12:30    210      5         25         167        15           79
12:30-13:00    210      5         25         203        15           85
13:00:13:30    210      5         25         199        15           84
13:30-14:00    200      5         26         245        15           90
14:00-15:00    200      5         26         340        19           90
------------------------------------------------------------------------
TOTAL                                        1154       79



   WARNING: CURRENT DAY data is unavailable for today, report data from 09/22/89
```

| SEARCH NEXT | SEARCH PREV | SEARCH | PREV PAGE | NEXT PAGE | EXIT | | |

Figure 8-10   Current Day Forecast Report Output on a Terminal

The SLKs for a terminal output of a forecast report have the following meanings:

SEARCH   Pressing this key invokes the string search *vi* command. This puts a slash (/) in the command line of the screen, allowing you to place any string of characters you desire after the slash. Then by pressing [RETURN], you will get the search function and be moved to the string's location in the report.

SEARCH PREV   Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT   Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.

NEXT PAGE   Moves you to the next page of the report.

PREV PAGE   Moves you to the previous page of the report.

EXIT   Returns you to the Current Day Report request screen.

Table 8-3   Current Day Forecast Output Explanation

FIELD	EXPLANATION
SPLIT	The split selected in the Current Day Report screen.
DATE	Normally, today's date. The Forecast Manager must execute before the request for this report.
TIME	Half-hour intervals designated for the forecast report in the Start Time and Stop Time fields in the Current Day Report screen.
WEIGHTED CALL VALUE	The expected time an agent will spend on each ACD call, including after-call work. The time is taken from the Call Characteristics Administration screen for the split. The actual Weighted Call Value can be calculated for the split by adding AVG TALK TIME and AVG AFTER CALL in the historical Split Reports.
DELAY	The projected time callers will wait before an agent answers. The time is taken from the Call Characteristics Administration screen for the split. The actual value can be seen in the Average Speed of Answer statistics in real-time or historical reports for this split.

Table 8-3   Current Day Forecast Output Explanation (Contd)

FIELD	EXPLANATION
NUMBER OF TRUNKS	The number of trunks assigned to the split. This number is taken from the Call Characteristics Administration screen. This number represents the maximum number of calls that can be connected to the split at a given time and acts as a ceiling on the number of **agents** that the system will forecast. The principle is that no ACD will ever use more agents than trunks in a split.
FORECAST CALLS CARRIED	The calls forecast to be received by this split. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
NUMBER OF POSITIONS REQUIRED	The number of agents needed to service the forecast call volume. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
% ACD TIME	The percent of time the number of agents required will spend on ACD calls during the half-hour interval. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
TOTAL	
TOTAL CALLS	Forecasted total of calls received.
TOTAL AGENTS	Column total (not the total agents needed).
WARNING	This message appears if the forecast manager did not execute for the current day. The data represents the last day the Forecast Manager **did** run.

Special Day Report

Purpose	To forecast agent requirements for a special day.
Dependencies	Forecast — Special Days Administration. The Forecast Manager must have executed to gather data for the last occurrence of the Special Day. Read permission for the split.

Special days are those days (holidays, bad weather days, promotional days, and so on) that have unusual call traffic. You use the Special Day Report screen to order a split forecast report for a special day. You can also use this screen to alter call characteristics for a specific forecast report.

However, for the special day forecast to run, the particular day must have been previously identified on the Special Days Administration screen. Also, the Special Days file must already have at least one day's historical data for the day you want to forecast. Therefore, if historical data from the special day has never been processed by the Forecast Manager, you cannot order a special day forecast report for that day.

You can refer to the Special Days Administration screen to display a list of special days already established for a split.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────┐
│ Call Management System                    Switch_Name:Up or Down   Time│
└──────────────────────────────────────────────────────────────────────┘
                        SPECIAL DAY FORECAST
    1 Split: 1_____
                          2 Special day: _1/_1
                          3 Start Time: 12:00
                          4 Stop Time: 18:00

          5 Use Special Call Characteristics: y

                    Growth Factor Percentages
                  6 Weighted Call Value: 120%
                          7 System: 120%
                          8 Delay: 100%

   ┌──────────────────────────────────────────────────────────┐
   │ Error and confirmation messages appear in this field.     │
   └──────────────────────────────────────────────────────────┘
  ┌────┐┌────────┐┌────┐┌────────┐┌────┐┌──────┐┌────────┐┌──────┐
  │    ││COMMAND ││    ││MAIL    ││    ││EXIT  ││PRINT   ││HELP  │
  │    ││LINE    ││    ││        ││    ││      ││SCREEN  ││KEYS  │
  └────┘└────────┘└────┘└────────┘└────┘└──────┘└────────┘└──────┘
```

Figure 8-11   Special Day Forecast Screen

Definition of Fields

Field 1 Split

The split for which the Special Day Forecast is desired.

Field 2 Special Day

The date of the Special Day being forecast.

Field 3 Start Time

The beginning interval, in military time, that you want the forecast to cover.

Default: 0 :0

Range: 0-0:00 through 23:30

Minutes must be either 00 or 30.

Field 4 Stop Time

The ending interval, in military time, that you want covered by the report.

Default: 2-4:0

Range: 0-0:30 through 24:00

Minutes must be either 00 or 30.

Field 5 Use Special Call Characteristics?

Enter either *y* (yes) or *n* (no). ''Yes'' means the forecast will use the special, system-wide call characteristics (WCV, Delay, Number of Assigned Trunks) that are currently in effect for Split 0. ''No'' means the forecast will use the call characteristics established for the split requested in field 1.

Default: n.

Field ⬚6⬚ Weighted Call Value

The percentage increase (100 through 1000) or decrease (1 through 100) in the weighted call value (WCV) that applies to this special-day forecast. This field allows you to easily change Weighted Call Value without readministering the Call Characteristics Administration screen. This percentage can be applied to the split's WCV or the WCV defined for Split 0, if you selected Split 0 in field 5 of this screen.

Default: 1-00

Range: 1 through 1000

Field ⬚7⬚ System

The percentage increase (100 to 1000) or decrease (1 to 100) in call traffic growth between the previous special day and this one (usually a 1-year span). An entry of 100 means call traffic on the forecast Special Day will be similar to traffic on the last occurrence of the Special Day.

Default: 1-00

Range: 1 through 1000

Field ⬚8⬚ Delay

The percentage increase (100 to 1000) or decrease (1 to 100) you project for the delay characteristic originally established for this split (or Split 0, if selected) on the Call Characteristics Administration screen. An entry of 100 means the delay on the forecast Special Day will be similar to the delay on the previous occurrence of the Special Day.

Default: 1-00.

Range: 1 through 1000

Generating a Special Day Forecast

1   On the FORECAST menu, select the Reports [ ] Special-Day option
    and press RETURN.

    [The blank Special Day Forecast screen appears.]

2   Enter the number of the split for which the special day will be forecast in the
    Split: field. Valid entries are measured-split numbers or synonyms.

3   Enter the special day's date in the Special day: field.

        You can determine what special days are available for each split by
        looking in the Forecast — Special Days Administration screen.

4   Overwrite the defaults as desired in the Start Time:, Stop Time:, Use
    Special Call Characteristics?, Weighted Call Value:,
    System:, and Delay: fields.

        Use military time for the start and stop time. All minutes must be
        either :00 or :30.

        The Weighted Call Value, System, and Delay fields take values from 1
        to 1000.

5   Press RETURN to generate the report immediately, or press COMMAND LINE to
    schedule the report for a later time.

    [The Report Destination screen appears.]

6   Follow the directions on the Report Destination screen to finish ordering the report,
    and press RETURN again.

    [If you pressed RETURN in Step 5, the report is generated immediately. If you
    pressed COMMAND LINE in Step 5, the Program Editor in the Schedule subsystem
    appears so you can schedule the report.]

Special Day Forecast Report Description

The following figure shows sample Special Day forecast output to a terminal.

```
09/23/89            CALL MANAGEMENT SYSTEM                    page 1

                   Forecast Special Day Report

SPLIT: 1

FORECAST BASED ON: 01/01/89
SYSTEM GROWTH FACTOR: 100%

OBJECTIVE GROWTH FACTORS: WEIGHTED CALL VALUE = 120%  DELAY: 100%
SPECIAL CALL CHARACTERISTICS: YES

              ----OBJECTIVE-----
              WEIGHTED            NUMBER    FORECAST    NUMBER      %
                CALL                 OF       CALLS   POSITIONS   ACD
     TIME      VALUE    DELAY     TRUNKS    CARRIED   REQUIRED    TIME
-----------------------------------------------------------------------
15:00-15:30     120       30        10         89         6       69
15:30-16:00     120       30        10        109         6       95
16:00-16:30     120       30        10        120         7       95
17:00-17:30     120       45        15        175        10       79
17:30-18:00     120       45        15        210        11       90
-----------------------------------------------------------------------
TOTAL                                         703        40
```

| SEARCH NEXT | SEARCH PREV | SEARCH | | PREV PAGE | NEXT PAGE | | EXIT | | |

Figure 8-12   Special Day Forecast Report Output on a Terminal

The SLKs for a terminal output of a forecast report have the following meanings:

SEARCH   Pressing this key invokes the string search *vi* command. This puts a slash (/) in the command line of the screen, allowing you to place any string of characters you desire after the slash. Then by pressing RETURN, you will get the search function and be moved to the string's location in the report.

SEARCH PREV   Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT   Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.

NEXT PAGE   Moves you to the next page of the report.

PREV PAGE   Moves you to the previous page of the report.

EXIT   Returns you to the Special Day Forecast Report request screen.

Table 8-4   Special Day Forecast Output Explanation

FIELD	EXPLANATION
SPLIT	The split selected in the Special Day Report screen.
FORECAST BASED ON	The special day selected in the Special Day Report screen.
SYSTEM GROWTH FACTOR	The projected percentage increase or decrease of the split's call volume from the previous Special Day to the forecast Special Day.
OBJECTIVE GROWTH FACTORS: WEIGHTED CALL VALUE DELAY	The percentage that WCV and Average Call Delay will increase (100 to 1000) or decrease (1 to 100) from the previous Special Day to the forecast Special Day. These percentages are originally defined on the Call Characteristics Administration screen, but you can change them here for the specific report you are ordering.
SPECIAL CALL CHARACTERISTICS	The decision whether to use, for this report, the Split 0 special call characteristics.
TIME	Half-hour intervals in the Special Day that were selected in the Special Day Report screen.
WEIGHTED CALL VALUE	The expected time an agent will spend on each ACD call, including after-call work. The time is taken from the call characteristics for either the specific split or Split 0, selected in the `Use Special Call Characteristics?` field of the Special Day Report screen. This time may also be modified by the Growth Factor Percentage for WCV entered on the Special Day Report screen. The actual Weighted Call Value can be calculated for the split by adding AVG TALK TIME and AVG AFTER CALL in the historical Split Reports.
DELAY	The projected time callers will wait before an agent answers. The actual value can be seen in the Average Speed of Answer statistics in real-time or historical reports for this split. The time can be for the specified split or Split 0.
NUMBER OF TRUNKS	The number of trunks assigned to the split, or assigned to Split 0, on the Call Characteristics Administration screen. This number represents the maximum number of calls that can be connected to the split at a given time and acts as a ceiling on the number of **agents** that the system will forecast. The principle is that no ACD will ever use more agents than trunks in a given split.

Table 8-4   Special Day Forecast Output Explanation (Contd)

FIELD	EXPLANATION
FORECAST CALLS CARRIED	The number of calls forecast to be received by this split. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
NUMBER OF POSITIONS REQUIRED	The number of agents needed to service the forecast call volume. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
% ACD TIME	The percent of time the number of agents required will spend on ACD calls during the half-hour interval. See the ''Algorithms for Forecast Report Items'' at the end of this chapter.
TOTAL	
TOTAL CALLS	Forecasted total of calls received.
TOTAL AGENTS	Column total (not the total agents needed).

Agent Positions Required

Purpose   To forecast the number of agents needed for a number of calls carried,
given a hypothetical set of call characteristics for any half-hour-interval.

You use the Agent Positions Required screen to order an Agent Positions Required Report. You
also use this screen to create a hypothetical set of call characteristics on which to base the
report. Based on the call characteristics you enter, the Agent Positions Required report lists
various levels of calls carried for the hypothetical half-hour interval and the number of agents
that could handle each level. This comparison of agents to calls is independent of any
particular split or half-hour interval, and you use the comparison as a quick means of
forecasting your staffing needs.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────────┐
│ Call Management System                        Switch_Name:Up or Down   Time│
└──────────────────────────────────────────────────────────────────────────┘

            FORECAST -- AGENT POSITIONS REQUIRED


    ┌1┐  Objective weighted call value: 120
              ┌2┐  Objective Delay:  10
            ┌3┐  Number of Trunks:  20




  ┌────────────────────────────────────────────────────────────┐
  │  Error and confirmation messages appear in this field.      │
  └────────────────────────────────────────────────────────────┘
  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐
  │      │ │COMMAND│ │MAIL  │ │      │ │      │ │EXIT  │ │PRINT │ │HELP  │
  │      │ │LINE  │ │      │ │      │ │      │ │      │ │SCREEN│ │KEYS  │
  └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘
```

Figure 8-13   **Agent Positions Required Screen**

Definition of Fields

Field ⓵ Objective Weighted Call Value

The total seconds per call you think an agent should spend, including ACD talk time and after-call work.

Field ⓶ Objective Delay

The time, in seconds, that you think a caller should wait before receiving an answer from an agent.

Field ⓷ Number of Trunks

The expected number of trunks to be assigned.

Ordering an Agent-Positions-Required Forecast

1   On the FORECAST menu, select the Reports [ ] Agent-Positions-Required option and press RETURN.

[The blank Agent Positions Required screen appears.]

2   Enter the number of seconds of objective weighted call value in the Objective weighted call value: field.

3   Enter the number of seconds of average queue delay in the Objective Delay: field.

4   Enter the number of trunks required in the Number of Trunks: field.

> This can be an actual number or a hypothetical one for system-design modeling purposes.

5   Press RETURN to generate the report immediately, or press COMMAND LINE to schedule the report for a later time.

[The Report Destination screen appears.]

6   Follow the directions on the Report Destination screen to finish ordering the report, and press RETURN again.

[If you pressed RETURN in Step 5, the report is generated immediately. If you pressed COMMAND LINE in Step 5, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

NOTE   The Agent Positions Required report can tie up a terminal for several hours. It is recommended that you schedule the Agent Positions Required report through the Schedule subsystem so it can run in the background.

Agent Positions Required Report Description

The following figure shows a sample Agent Positions Required Report displayed on a terminal.

```
01/13/90                CALL MANAGEMENT SYSTEM              Page 1

                    Agent Positions Required Report

OBJECTIVE WEIGHTED CALL VALUE = 120
OBJECTIVE DELAY = 10
NUMBER OF TRUNKS = 20

# Positions Req.  # Calls Carried
---------------- ---------------
         1-1
         2-3
         3-9
         4-19
         5-29
         6-49
         7-59
         8-69
         9-89
        10-99
        11-109
        12-129
        13-149
        14-168
        15-199
        16-222
        17-246
        18-270
        19-276*
        20-276*

 * Number of Calls Carried is the theoretical maximum based on parameters.
```

| SEARCH
NEXT | SEARCH
PREV | SEARCH | PREV
PAGE | NEXT
PAGE | EXIT | | |

Figure 8-14　　**Agent Positions Required Report Output on a Terminal**

The SLKs for a terminal output of a forecast report have the following meanings:

SEARCH　　　　Pressing this key invokes the string search *vi* command. This puts a slash (/) in the command line of the screen, allowing you to place any string of characters you desire after the slash. Then by pressing $\boxed{\text{RETURN}}$, you will get the search function and then be moved to the string's location in the report.

SEARCH PREV　　Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT	Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.
NEXT PAGE	Moves you to the next page of the report.
PREV PAGE	Moves you to the previous page of the report.
EXIT	Returns you to the Agent Positions Required Report request screen.

Table 8-5   Agent Positions Required Forecast Output Explanation

FIELD	EXPLANATION
OBJECTIVE WEIGHTED CALL VALUE	The expected agent time on each ACD call, including after-call-work, as specified in the Agent Positions Required Report screen.
OBJECTIVE DELAY	The expected time callers will wait before an agent answers, as specified in the Agent Positions Required Report screen.
NUMBER OF TRUNKS	The expected number of trunks to be used, as specified in the Agent Positions Required Report screen. This number acts as a ceiling on the number of agents that the system will forecast. The principle is that no ACD will ever use more agents than trunks in a split.
POSITIONS REQUIRED / CALLS CARRIED	The positions required/ calls carried columns form a table showing the projected relationship between a number of calls and the staffing needed to service that number, given a set of call characteristics. When you know the number of agents you have, you can find the call volume those agents can handle; or when you know the number of calls you will get, you can find the necessary staffing to handle the calls.

Trunk Engineering Report

Purpose	To model facilities performance.
Dependencies	Forecast — Trunk Group Blocking Percentage Administration.
	Daily data for the month used for the report must be available
	from the Daily Historical Database.
	Read permission for the trunk group(s).

You use the Trunk Engineering Report screen to order the Trunk Engineering Forecast report. This report does not actually forecast future performance and call traffic. Instead, it analyzes historical data for the month and trunk group(s) you specify and finds the number of trunks each trunk group should have had to meet the blocking percentages you targeted on the Trunk Group Blocking Administration screen.

You can base the forecast report on historical data from any one of the previous 12 months. Of course, you must be sure that the data for your base month has been compiled and that the data has not yet been removed from the database (see Archive Parameters in Chapter 11).

Screen Description

```
┌────────────────────────────────────────────────────────────────────────────┐
│ ┌──────────────────────────────────────────────────────────────────────┐ │
│ │ Call Management System                        Switch_Name:Up or Down    Time │ │
│ └──────────────────────────────────────────────────────────────────────┘ │
│                                                                          │
│                         Trunk Engineering Forecast                       │
│                                                                          │
│                                                                          │
│     1  Month: current                                                    │
│                                                                          │
│     2  Trunk Group(s):20,21,22_____   │
│                                                                          │
│                                                                          │
│                                                                          │
│                                                                          │
│   ┌──────────────────────────────────────────────────────────────────┐  │
│   │   Error and confirmation messages appear in this field.           │  │
│   └──────────────────────────────────────────────────────────────────┘  │
│   ┌─────┐ ┌────────┐ ┌─────┐ ┌────────┐ ┌─────┐ ┌────────┐ ┌──────┐ ┌──────┐ │
│   │     │ │COMMAND │ │     │ │ MAIL   │ │     │ │ EXIT   │ │PRINT │ │HELP  │ │
│   │     │ │LINE    │ │     │ │        │ │     │ │        │ │SCREEN│ │KEYS  │ │
│   └─────┘ └────────┘ └─────┘ └────────┘ └─────┘ └────────┘ └──────┘ └──────┘ │
└────────────────────────────────────────────────────────────────────────────┘
```

Figure 8-15   Trunk Engineering Forecast Screen

Definition of Fields

Field ☐1 Month

The month of historical data you want used for the report. Your choices are "current," "previous," and 1 through 12. If you select 11 and you are in July, the report will use data from November of the *previous* year. If you select 4 and you are in July, the report will use data from April of the *current* year.

Default: current

Field ☐2 Trunk Group(s)

The trunk group(s) you want the report to cover. Enter numbers only. Enter, if desired, a list of numbers separated by commas or spaces, a range of numbers separated by a hyphen, or both.

Ordering a Trunk Engineering Forecast

1   On the FORECAST menu, select the Reports [ ] Trunk-Engineering option and press RETURN.

[A blank Trunk Engineering Report screen appears.]

2   Enter, in the Month: field, the month you would like the report to cover.

The choices are "current," "previous," or 1 through 12.

3   Enter, in the Trunk Group(s): field, the trunk group(s) to be covered in the report. Use numbers, not synonyms.

4   Press RETURN to generate the report immediately, or press COMMAND LINE to schedule the report for a later time.

[The Report Destination screen appears.]

5   Follow the directions on the Report Destination screen to finish ordering the report, and press RETURN again.

[If you pressed RETURN in Step 4, the report is generated immediately. If you pressed COMMAND LINE in Step 4, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Trunk Engineering Forecast Report Description

The following figure shows a Trunk Engineering Forecast output to a terminal:

```
09/23/89              CALL MANAGEMENT SYSTEM          Page 1

                      TRUNK ENGINEERING FORECAST

MONTH: 8/89


                BUSY      OBJECTIVE     ACTUAL    NUMBER   ACTUAL
                HOUR      BLOCKING      BLOCKING  TRUNKS   NUMBER
TRUNK GROUP     CCS       FACTOR %      FACTOR %  REQUIRED TRUNKS
-----------------------------------------------------------------
20-131            0           0           51       20
21-346            0           2           74       15
22-31             0           0           33       24
23              xxx          xx           xx      xxx      xxx
24              xxx          xx           xx      xxx      xxx
25 (1WAY_IN)     39           0            4       50       41









    NO DATA AVAILABLE FOR TRUNK GROUPS: 18-19, 27, 29, 30-40
```

| SEARCH NEXT | SEARCH PREV | SEARCH | PREV PAGE | NEXT PAGE | | EXIT | | |

NOTE The x's for trunk groups 23 and 24 mean that the user does not have read permission for these trunk groups. This limitation is administered in the Administration— Trunk Group Access screen. The message at the bottom of the screen/ printout means there is no data for these trunk groups in the month selected.

The SLKs for a terminal output of a forecast report have the following meanings:

SEARCH　　　　　Pressing this key invokes the string search *vi* command. This puts a slash (/) in the command line of the screen, allowing you to place any string of characters you desire after the slash. Then by pressing RETURN, you will get the search function and be moved to the string's location in the report.

SEARCH PREV　　Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT	Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.
NEXT PAGE	Moves you to the next page of the report.
PREV PAGE	Moves you to the previous page of the report.
EXIT	Returns you to the Trunk Engineering Forecast Report request screen.

Table 8-6   Trunk Engineering Forecast Report Output Explanation

FIELD	EXPLANATION
MONTH	The month selected in the Trunk Engineering Forecast screen.
TRUNK GROUP	The trunk group(s) selected in the Trunk Engineering Forecast screen.
BUSY HOUR CCS	The total time, expressed in CCS (hundreds of call seconds), that the trunks in a trunk group are busy during the average busy hour of the month selected. See the "Algorithms for Forecast Report Items" at the end of this chapter.
OBJECTIVE BLOCKING FACTOR %	Blocking percentage you specified for the trunk group in the Trunk Group Blocking Percentage screen.
ACTUAL BLOCKING FACTOR %	The estimated blocking percentage that CMS found for the trunk group during the busiest hour of the month. The calculation of this value involves actual traffic into the trunk group and queuing theory. The algorithm estimates the number of calls that were probably blocked based on the percentage of time all trunks were busy.
NUMBER OF TRUNKS REQUIRED	The number of trunks that a trunk group should have had to meet the objective trunk group blocking percentage. See the "Algorithms for Forecast Report Items" at the end of this chapter.
ACTUAL NUMBER TRUNKS	Number of trunks currently assigned to the trunk group.

Algorithms for Forecast Report Items

An algorithm is a series of mathematical steps used to get a result. CMS uses the algorithms described in this section to generate the following six forecast items:

> Forecast Calls Carried (Long-term, Current Day, and Intraday)
>
> Forecast Calls Carried (Special Day)
>
> Number of Positions Required (Long-term, Current Day, Intraday, and Special Day)
>
> Percent ACD Time (Long-term, Current Day, Intraday, and Special Day)
>
> Busy-Hour CCS (Trunk Engineering Report)
>
> Number of Trunks Required (Trunk Engineering Report)

Table 8-7 lists the terms used in the algorithms.

Table 8-7   Legend of Forecasting Terms

FORECAST ACRONYM	MEANING
AB	Actual Blocking
BD	Base Date
CCS	Centum (hundreds of) Call Seconds
CPD	Calculated Probable Delay
FCC	Forecast Calls Carried
NCC	Number of Calls Carried (includes ACD calls answered and abandoned from the historical database)
NPR	Number of Positions Required
NTR	Number of Trunks Required
OB	Objective Blocking
OD	Objective Delay
OWCV	Objective Weighted Call Value
PD	Probable Delay
SGF	System Growth Factor
STF	Seasonal Trending Factor
WANCC	Weighted Average Number of Calls Carried
WC	Weighting Coefficient
WCV	Weighted Call Value

Algorithm for Forecast Calls Carried (Long Term, Current Day, and Intraday)

This algorithm is used to compute Forecast Calls Carried (FCC) for each half-hour interval in the Long Term, Current Day, and Intraday forecasts:

1   Find the Weighted Average Number of Calls Carried (WANCC):

> Determine the day of the week of the forecast date. Find the actual Number of Calls Carried (NCC) in each half-hour interval of the same weekdays in each of the 3 weeks before the current date. Multiply these numbers by the assigned weighting coefficients.

> Divide the product for each half-hour interval by the sum of the weighting coefficients assigned to that half-hour.

The equation for WANCC for each half-hour interval is as follows:

$$WANCC = \frac{(NCC_1 \times WC_1) + (NCC_2 \times WC_2) + (NCC_3 \times WC_3)}{(WC_1 + WC_2 + WC_3)}$$

2   Find the Seasonal Trending Factor (STF).

> Find the actual NCC for the seasonal trend base date (usually 1 year ago). This NCC includes the NCC for the whole day, not just one half-hour interval. Multiply the base date's NCC by 3.

> Divide this product by the sum of the daily NCC for the days 1, 2, and 3 weeks before the base date.

The equation for STF is as follows:

$$STF = \frac{NCC_{BD} \times 3}{(NCC_{BD\ 1\ week} + NCC_{BD\ 2\ weeks} + NCC_{BD\ 3\ weeks})}$$

3   Divide the System Growth Factor (SGF) by 100. For example, if the SGF were 100, this step would produce an SGF of 1.

4   Multiply the factors found from the previous three steps together to get the Forecast Calls Carried.

The final equation for FCC is as follows:

$$FCC = WANCC \times STF \times \frac{SGF}{1-00}$$

Algorithm for Forecast Calls Carried (Special Days)

The algorithm used to compute FCC for each half-hour interval in the Special Day is as follows:

1   Find the actual Number of Calls Carried (NCC) for each half-hour in the previous corresponding Special Day.

2   Divide the System Growth Factor by 100.

3   Multiply the factors from the previous two steps.

The equation for Forecast Calls Carried for each half-hour in a Special Day is as follows:

$$FCC = NCC_{Prev\ Spec\ Day} \times \frac{SGF}{1-00}$$

Algorithm for Number of Positions Required

This algorithm is used to determine the Number of Positions Required (NPR) for each half-hour in the Long Term, Special Day, Intraday, and Current Day reports:

| NOTE | This algorithm is not used to determine the NPR for the Agent Positions Required report. |

1   Find the forecasted arrival rate of calls to the split for each half-hour.

   Find the FCC for each half-hour according to the appropriate Forecast Calls Carried algorithm.

   Divide the FCC by the number of seconds per half-hour that the split is available for calls (normally 1800).

   The equation is:

$$Call\ Arrival\ Rate\quad FCC/\ 1\text{-}800$$

2   Select an arbitrary number of agents.

3   Using the call arrival rate, the number of agents, and the established Objective Weighted Call Value for each half-hour, calculate how long each ACD call will have to wait (Probable Delay) before being answered.

4   Compare the Probable Delay (PD) to the Objective Delay (OD) established on the Call Characteristics Administration screen.

5   If the PD is longer than the OD, increase the number of agents by one. If the PD is shorter than the OD, decrease the number of agents by one.

6   Calculate a new Probable Delay using the new number of agents.

7   Repeat Steps 4 through 6 until the PD reaches the closest possible mathematical approximation of the OD. The number of agents that makes PD = OD is the Number of Positions Required.

Algorithm for Percent ACD Time

This algorithm is used to project the percentage of time for each half-hour that a split's forecasted number of agents will be busy and unable to answer additional incoming calls. The algorithm is used in the Current Day, Special Day, Long Term, and Intraday reports.

1   Calculate the time in each half-hour that all agents are occupied by multiplying the Forecast Calls Carried (FCC) by the Objective Weighted Call Value (OWCV) specified on the Call Characteristics Administration screen. This calculation gives the total time in seconds that will be needed to handle all expected calls during the half-hour interval.

$$Time\ Occupied = FCC \times OWCV$$

2   Calculate the total agent time available per half-hour by multiplying the Number of Positions Required by 1800. 1800 is used because there are 1800 seconds in a half-hour.

$$Available\ Agent\ Time = NPR \times 1\text{-}800$$

3   Calculate the percentage of time agents will spend on ACD calls for the half-hour interval by dividing the total time all agents are occupied by the available agent time for the period.

$$\%\ ACD\ TIME = \frac{FCC \times OWCV}{NPR \times 1\text{-}800}$$

Algorithm for Busy-Hour CCS (Trunk Engineering Report)

This algorithm is used to determine the amount of usage of each trunk group during the busiest hour of the selected month.

1   Search the daily records of the selected trunk group for the selected month and identify the 5 peak or busiest days.

2   Find the trunk group's busiest hour in each of the 5 days.

3   Calculate the average trunk occupancy (number of seconds in a *seized* status) for the busiest hours in those 5 days. This is done by adding the total time trunks are seized in the 5 selected busy-hours, then dividing the sum by 5 (the number of busy-hours).

$$Average\ Busy\ Hour \quad \frac{Total\ Trunk\ Occupancy\ (in\ secs)\ Of\ Busy\ Hours\ In\ 5\ Busy\ Days}{5}$$

4   Divide the number of seconds for the average busy hour by 100 to get the Centum Call Seconds (CCS) for the hour.

$$Average\ Busy\ Hour\ CCS \quad \frac{Average\ Busy\ Hour\ (in\ seconds)}{1\text{-}00}$$

5   Adjust the basic CCS value for the average busy hour to account for the actual trunk group blocking percentage. This blocking percentage is an estimate based on the percentage of time all trunks were busy (%ATB) on the historical Trunk Group reports for the days included in the Average Busy Hour calculation. For example, if all trunks in a trunk group were busy for more than 10 percent of the time during the busy hour, the CCS would be adjusted upward by 10 percent.

$$Busy\ Hour\ CCS \quad Average\ Busy\ Hour\ CCS \quad (1 \quad \%ATB)$$

Algorithm for Number of Trunks Required (Trunk Engineering Report)

This algorithm is used to determine the number of trunks required to meet the objective blocking level for a trunk group in a selected month.

1   Determine the actual blocking % (AB) for the trunk group in the selected month.

2   Compare AB to the Objective Blocking % (OB) as specified on the Trunk Group Blocking Percentage Administration screen.

3   Depending on how AB and OB compare, increase or decrease the number of trunks by one and repeat Steps 1 and 2 until OB = AB. The final number of trunks required is the number that roughly makes OB = AB.

General Information

Use the Exceptions subsystem to:

>   Define exceptional conditions you want CMS to report for ACD events involving agents, splits, and trunk groups

>   Generate reports on exceptions.

An exception is a cumulative total of ACD events occurring within a half-hour interval that meets or exceeds certain conditions you have defined. For example, you may define the maximum number of calls waiting as 12. Thereafter, if the number of calls waiting reaches 12 or more, CMS will record an exception. As another example, you can define 2 as the maximum number of times that a trunk may be in use for 150 seconds or more. Thereafter, if any trunk is in use 2 or more times for 150 seconds, CMS will record an exception.

You define exception conditions for events in splits or trunk groups (see Tables 9-1 and 9-2) using the administration screens listed on the Exceptions Menu in Figure 9-1. Depending on the event, you may define a condition that will trigger an exception as a number of occurrences ("Threshold") or a number of occurrences in which a specified time limit ("Time") has been reached or exceeded. If you set 150 seconds as the time limit on trunk usage, but you only want an exception recorded when 150 seconds has been reached twice, you place a 2 in the "Threshold" field and 150 in the "Time" field.

NOTE	If you enter a "Time" condition for an event, you must also enter a "Threshold" condition for the same event. The maximum number you can enter as an exception condition is 999.

Exception conditions apply **only** to the ACD events occurring within a **half-hour** interval. When the half-hour interval changes, all ACD event occurrences are cleared, and CMS begins to count event occurrences again starting from zero. Therefore, you should ensure that your exception conditions may realistically trigger exceptions within a half-hour interval (which lasts 1-800 seconds).

For example, if you set an exception to occur when a trunk has been busy 3 times for more than 600 seconds, CMS will never find an exception because 3   600 seconds equals 18-00 seconds, the length of an entire half-hour interval. Likewise, if you set an exception to occur if an agent spends more than 300 seconds on 6 or more calls, CMS will never find an exception.

Exceptions defined or changed while the ACD is active become effective immediately. The Exception subsystem notifies you of exceptions in one of two ways:

1   On CMS real-time reports, messages display when the exceptions occur.

   When you receive an exception notice, the $\boxed{\text{EXCEPT}}$ screen-labeled key will also appear. You can press $\boxed{\text{EXCEPT}}$ to get a list of all exceptions that have occurred in the current report-viewing session.

2   In one of the two reports available through the Exceptions subsystem.

   You order exception reports for splits or trunk groups using the two report screens listed on the Exceptions Menu in Figure 9-1. Because CMS retains exception data for 7 days, unless you specify fewer days on the Archive Parameters screen (see Chapter 11, ''Maintenance''), you can order exception reports on activity for up to 7 days in the past.

Exceptions Menu

You can use the screens listed in the Exceptions Menu (Figure 9-1) to define your exception conditions and order exception reports.

NOTE	Although the Exceptions menu lists the reports screens first, you must set up your exception conditions before you order reports. Therefore, this chapter presents the Exception Administration procedures **before** Exception Report procedures.

```
 Call Management   System                        Switch_Name:Up   or Down     Time


                              EXCEPTIONS


                   Reports
                   [ ] Splits
                   [ ] Trunk-Groups

                   Administration
                   [ ] Splits
                   [ ] Trunk-Groups




                                                 EXIT    PRINT    HELP
                                                         SCREEN   KEYS
```

Figure 9-1   The Exceptions Menu

Split Exceptions Administration

Purpose	To establish exceptions for a split.
Dependencies	Write permission on the split if you are changing exception conditions
	Notification comes through real-time or exception reports.

Use the Exception Administration (Splits/ Agents) screen to establish exception conditions for events involving agents and splits. On the basis of the conditions you establish, CMS will record exceptions and report them to you either as they occur (with a message displayed on the Real-Time Reports) or when you order a split exception report.

> **NOTE** The exception messages that display on a real-time report will depend on the split permissions for the user that is viewing the report.

You may define exception conditions for several events. In the Threshold field, you define a condition as a number of occurrences. In the Time field, you define a condition as a maximum or minimum number of seconds in duration. If you enter a number in the Time field, you must also enter a number in the Threshold field. If you do not enter conditions for an event, the Threshold and Time fields will display the default entry "off," and no exception data will be recorded for that event.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────────────────────────────────────────┐ │
│ │ Call Management  System                    Switch_Name:Up   or Down     Time  │ │
│ └─────────────────────────────────────────────────────────────────────────────┘ │
│                         Exception Administration (Splits/Agents)                 │
│  ⟨1⟩  Split: 1_____                                        │
│                                                                                  │
│        Exception Type              ⟨2⟩  Threshold    ⟨3⟩  Time                    │
│        Agent Time Available (idle)       off              off                    │
│        Agent Time in RING                off              off                    │
│        Agent Time on ACD Call (MAX)      off              off                    │
│        Agent Time on ACD Call (MIN)      off              off                    │
│        Agent Time in ACW                 off              off                    │
│        Agent Time on ACW Outgoing Call   off              off                    │
│        Agent Time on ACW Incoming Call   off              off                    │
│        Agent Time in AUX Work            off              off                    │
│        Agent Time on AUX Outgoing Call   off              off                    │
│        Agent Time on AUX Incoming Call   off              off                    │
│        Time for ACD Call on Hold         off              off                    │
│                                                         Page 1 of 2              │
│ ┌──────────────────────────────────────────────────────────────────────────┐   │
│ │   Error and confirmation messages appear in this field.                    │   │
│ └──────────────────────────────────────────────────────────────────────────┘   │
│ ┌────────┐┌───────┐┌───────┐    ┌───────┐┌───────┐ ┌───────┐┌───────┐┌───────┐  │
│ │ CHANGE ││       ││       │    │       ││ NEXT  │ │ EXIT  ││ PRINT ││ HELP  │  │
│ │        ││       ││       │    │       ││ PAGE  │ │       ││ SCREEN││ KEYS  │  │
│ └────────┘└───────┘└───────┘    └───────┘└───────┘ └───────┘└───────┘└───────┘  │
└─────────────────────────────────────────────────────────────────────────────────┘
```
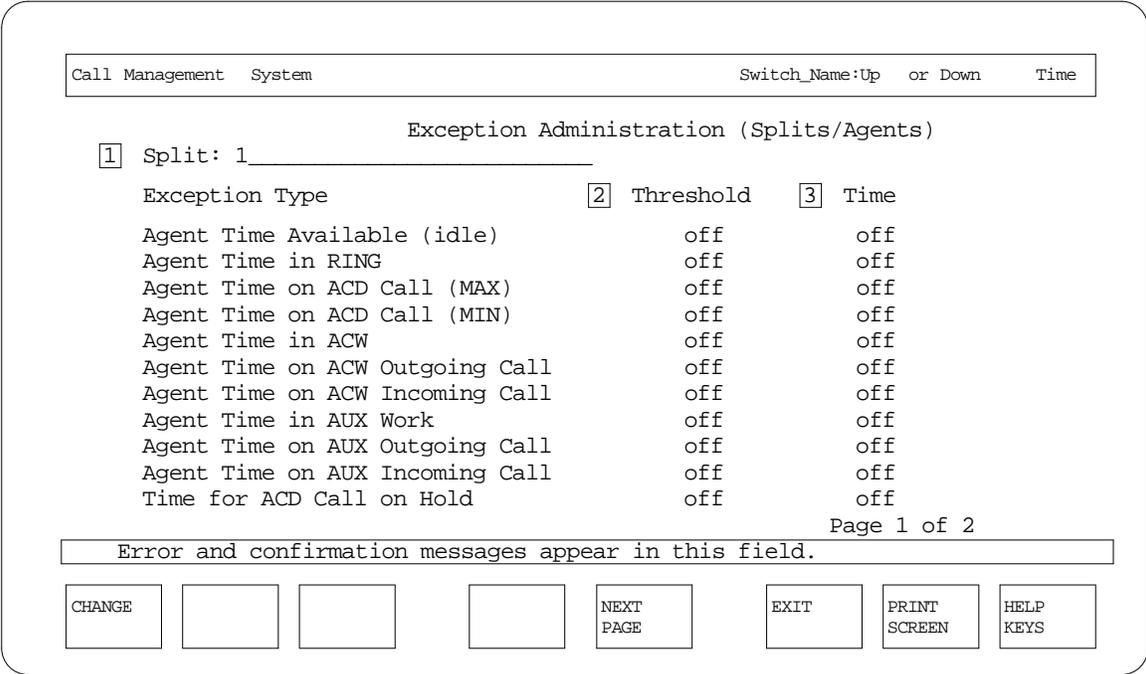
Figure 9-2   Screen Displaying Page 1 of Split Exceptions

```
╭─────────────────────────────────────────────────────────────────────────╮
│  ┌──────────────────────────────────────────────────────────────────┐   │
│  │ Call Management System                   Switch_Name:Up or Down   Time │ │
│  └──────────────────────────────────────────────────────────────────┘   │
│                                                                           │
│                      Exception Administration (Splits/Agents)             │
│  1  Split: 1                                                              │
│                                                                           │
│       Exception Type                  2  Threshold      3  Time           │
│                                                                           │
│       Number of ACW Out Calls/Agent          off                         │
│       Number of ACW In Calls/Agent           off                         │
│       Number of AUX Out Calls/Agent          off                         │
│       Number of AUX In Calls/Agent           off                         │
│       Login Identification                    off                         │
│                                                                           │
│       Time for Call Waiting                   off            off          │
│       Number of Calls Waiting                 off                         │
│       Number of Calls Abandoned               off                         │
│       Number of Intraflowed-Out Calls         off                         │
│       Number of Intraflowed-In Calls          off                         │
│                                                                           │
│                              Page 2 of 2                                  │
│  ┌──────────────────────────────────────────────────────────────┐       │
│  │  Error and confirmation messages appear in this field.        │       │
│  └──────────────────────────────────────────────────────────────┘       │
│  ┌────────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌───────┐ │
│  │ CHANGE │ │       │ │       │ │ PREV  │ │       │ │ EXIT  │ │ PRINT │ │ HELP  │ │
│  │        │ │       │ │       │ │ PAGE  │ │       │ │       │ │ SCREEN│ │ KEYS  │ │
│  └────────┘ └───────┘ └───────┘ └───────┘ └───────┘ └───────┘ └───────┘ └───────┘ │
╰─────────────────────────────────────────────────────────────────────────╯
```

Figure 9-3   Screen Displaying Page 2 of Split Exceptions

Definition of Fields

Field 1 Split

The split number or synonym for which you want to administer exceptions.

Field 2 Threshold Fields

The number of event occurrences that **meets or exceeds** certain conditions will cause an exception to be reported. Also the number of times the time limit can be reached or exceeded before an exception is generated — applies only to fields with a time specification. For example, if you want to set a maximum time on After Call Work, but only want an exception when the time has been reached on three different occasions, place a 3 in the **Threshold** field for "Agent Time on ACW (MAX)." If you want to be notified of every occurrence, place a 0 or 1 in this field.

Defaults: Off (no exceptions will be recorded).

Field 3 Time Fields

The time limitation in seconds you want to trigger an exception. Only some exceptions have a time field. They are shown in the time columns in Figures 9-2 and 9-3 with an "off" default specification. Remember that exceptions are cleared when the half-hour interval changes, and a half-hour interval contains 180-0 seconds. Therefore, to receive an exception, the number of seconds you enter must

be less than 1800 seconds. For other conditions and examples, see the "General Information" description at the beginning of this chapter.

Defaults: Off (no exceptions will be recorded).

Definitions of Split Exception Events

The split events for exception conditions are defined in the following table:

Table 9-1   Split Exception Events

SPLIT EXCEPTIONS	EXPLANATION
Agent Time Available (idle)	The time any agent spends in AVAIL (that is, idle) after which you want notification.
Agent Time in Ring (only on Generic 2 with ring-state enabled)	The maximum time a call can ring at an agent's voice terminal before an exception is pegged.
Agent Time on ACD Call (MAX)	The high-end time any agent is on an ACD call about which you desire notification.
Agent Time on ACD (MIN)	The low-end time any agent is on an ACD call about which you want notification.
Agent Time in ACW	A maximum time any agent is in ACW over which you want notification.
Agent Time on ACW Outgoing Call	A maximum time any agent is in an ACW outgoing call over which you want notification.
Agent Time on ACW Incoming Call	A maximum time any agent is in an ACW incoming call over which you want notification.
Agent Time in AUX Work	Notification point for any agent being in AUX work.
Agent Time on AUX Outgoing Call	Notification point for any agent on an outgoing call in AUX work.
Agent Time on AUX Incoming Call	Notification point for any agent on an AUX incoming call.
Time for ACD Call on Hold (Generic 2 and System 85, R2V4 only)	Notification point for any call on hold at an agent's extension.
Number of ACW Out Calls/ Agent	Number of ACW outgoing calls by any agent above which you want notification.
Number of ACW In Calls/ Agent	Number of incoming calls per agent in ACW above which you want notification.

Table 9-1   Split Exception Events (Contd)

SPLIT EXCEPTIONS	EXPLANATION
Number of AUX Out Calls/ Agent	Number of outgoing calls in AUX work per agent above which you want notification.
Number of AUX In Calls/ Agent	Number of incoming calls in AUX work per agent above which you want notification.
Login Identification	Login Violations, the attempt to log in with an ID that is not in the Dictionary.
Oldest Call Waiting	Notification when the oldest unanswered call waiting in queue reaches the point you specify.
Number of Calls Waiting	Notification when the number of calls in queue reaches the point you specify.
Number of Calls Abandoned	Notification when the number of abandoned calls per half-hour reaches the point you specify.
Number of Intraflowed-Out Calls	Notification when the intraflowed-out calls in a half-hour interval reaches the point you specify.
Number of Intraflowed-In Calls	Notification when the number of intraflowed-in calls in this half-hour reaches the point you specify.

Creating or Changing Exception Settings

1   On the EXCEPTIONS menu, select the Administration [ ] Splits-
    Agents option and press RETURN.

    [A blank Exception screen appears with just the Split:
    field (field 1) displayed.]

2   In the blank, enter the number or synonym of the split whose exceptions you are
    administering.

3   Press RETURN.

    [The full Split Exceptions screen appears with the current exception settings for the
    split you have specified.]

4   To change or add exceptions, enter an integer in the Threshold column next to
    the exception you are setting. This number is the number of occurrences of the
    event or the number of times the Time field value must be reached for the
    exception to take place.

5   Then, in the Time column overwrite off or the current value with a time in
    seconds.

        This is only for time-oriented exceptions. For threshold exceptions, the
        Time column accepts no input.

6   Press CHANGE.

    [The exceptions will be turned on.]

Trunk Group Exceptions Administration

Purpose   To set exceptions for a trunk group.

Dependencies   Notification of exceptions comes through real-time or exception reports.

Must have write permission for trunk group to change exception conditions.

Use the Exception Administration (Trunk Groups) screen to establish exception conditions for events involving trunk groups. On the basis of the conditions you establish, CMS will record exceptions and report them to you either as they occur (with a message displayed on the real-time reports) or when you order a trunk group exception report.

| NOTE | The exception messages that display on a real-time report will depend on the trunk group permissions for the user that is viewing the report. |

You may define exception conditions for up to five events. In the Threshold field, you define a condition as a number of occurrences. In the Time field, you define a condition as a maximum or minimum number of seconds in duration. If you enter a number in the Time field, you must also enter a number in the Threshold field. If you do not enter conditions for an event, the Threshold and Time fields will display the default entry "off," and no exception data will be recorded for that event.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────────┐
│  ┌─────────────────────────────────────────────────────────────────────┐  │
│  │ Call Management System                    Switch_Name:Up or Down   Time│ │
│  └─────────────────────────────────────────────────────────────────────┘  │
│                                                                            │
│                      Exception Administration (Trunk Groups)               │
│     1  Trunk Group: _____                           │
│                                                                            │
│        Exception Type                    2  Threshold  3  Time             │
│        Time Trunk in Use (MAX)               off          off              │
│        Time Trunk in Use (MIN)               off          off              │
│        Time Trunk Maintenance Busy           off          off              │
│        Number of Trunks In Use               off                           │
│        Number of Trunk Failures              off                           │
│  ┌─────────────────────────────────────────────────────────────────┐      │
│  │   Error and confirmation messages appear in this field.         │      │
│  └─────────────────────────────────────────────────────────────────┘      │
│  ┌──────┐ ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐│
│  │CHANGE│ │      │ │      │   │      │ │      │  │EXIT  │ │PRINT │ │HELP  ││
│  │      │ │      │ │      │   │      │ │      │  │      │ │SCREEN│ │KEYS  ││
│  └──────┘ └──────┘ └──────┘   └──────┘ └──────┘  └──────┘ └──────┘ └──────┘│
└──────────────────────────────────────────────────────────────────────────┘
```
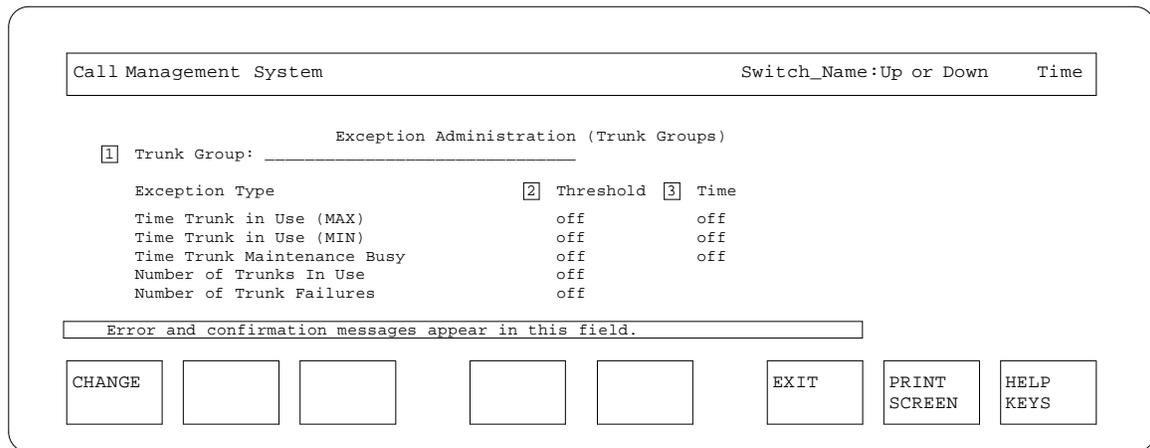
Figure 9-4   Trunk Group Exceptions Screen

Definition of Fields:

Field [1] Trunk Group

Enter the number or synonym of the trunk group for which you want to set exceptions.

Field [2] Threshold Fields

The number of event occurrences that **meets or exceeds** certain conditions (for example, *number* of trunk failures) that will cause an exception to be reported. Also the number of times the time limit can be reached or exceeded before an exception is generated — applies only to fields with a time specification. For example, if you set a maximum time for Trunk Time in Use, but only want to know when the time has been reached on three different occasions, place a 3 in the **Threshold** field for maximum Time Trunk in Use. If you want to be notified of every occurrence, place a 0 or 1 in this field.

Default: off (no exceptions will be recorded)

Field [3] Time Fields

The time limit in seconds set to trigger an exception. Only some exceptions have a time field. They appear on the screen with an "off" in the time column. Remember that exceptions are cleared when the half-hour interval changes, and a hour-hour interval contains 1800 seconds. Therefore, to receive an exception, the number of seconds you enter must be less than 1800 seconds. For other conditions and examples, see the "General Information" description at the beginning of this chapter.

Default: off (no exceptions will be recorded)

Definitions of Trunk Group Exception Events

The trunk group events for which you can set exception conditions are defined in the following table:

Table 9-2   Trunk Group Exception Events

EXCEPTION	EXPLANATION
Number of Trunk Failures	The number above which you desire notification.
Number of Trunks in Use	The number of trunks in the trunk group in use above which you desire notification.
Trunk Time in Use (MAX)	The time any trunk in the trunk group is in use above which you desire notification.
Trunk Time in Use (MIN)	The time any trunk in the trunk group is in use below which you desire notification.
Time Trunk Maintenance Busy	The time above which you desire notification.

Creating or Changing Exception Settings

1   On the `EXCEPTIONS` menu, select the `Administration [ ] Trunk-Groups` option and press `RETURN`.

[A blank Exception screen appears with just the `Trunk Group:` field (field 1) displayed.]

2   In the blank, enter the number or synonym of the trunk group whose exceptions you are administering.

3   Press `RETURN`.

[The full Trunk Group Exceptions screen appears with the current exception settings for the trunk group you have specified.]

4   To change or add exceptions, enter an integer in the `Threshold` column next to the exception you are setting. This number is the number of occurrences of the event or the number of times the `Time` field value must be exceeded for the exception to take place.

5   Then, if this is a time-oriented exception, in the `Time` column overwrite `off` or
    the current value with a time in seconds.

    > This is only for the top three exceptions. For the bottom two fields, the
    > `Time` column accepts no input.

6   Press `CHANGE`.

    [The exceptions will be turned on.]

Exception Reports (Splits/Agents)

Purpose	To generate a printed log of selected exceptions.
Dependencies	Exception Administration screens to define exceptional events. The Archive Parameters process to define how long exception data are retained. Read permission for the split.

Use the Exception Reports (Splits/Agents) screen to order split exception reports, which include exceptions for agents assigned to the splits. You may order separate reports for each split or one report for all splits. You can also order separate reports for each exception category or one report for all categories.

Exception data in your reports will be for those events for which you set conditions on the Exception Administration (Splits/Agents) screen. However, two event categories — Malicious Call and Audio Difficulty — do not follow this rule. Though you can select these categories for split exception reports, you do not set conditions for them. Instead, CMS automatically records all malicious calls and audio difficulties as exceptions and, if you choose, will display them in your report.

NOTE	"Time for ACD Call on Hold" exceptions are available only with Generic 2 or System 85, R2V4.

Screen Description

```
Call Management System                          Switch_Name:Up or Down     Time

                            Exception Reports (Splits/Agents)
  1  Date: -1_____       2  Split : _____
  3
     [ ] Agent Time Available (idle)     [ ] Audio Difficulty
     [ ] Agent Time in RING              [ ] Number of ACW Out Calls/Agent
     [ ] Agent Time on ACD Call (MAX)    [ ] Number of ACW In Calls/Agent
     [ ] Agent Time on ACD Call (MIN)    [ ] Number of AUX Out Calls/Agent
     [ ] Agent Time in ACW               [ ] Number of AUX In Calls/Agent
     [ ] Agent Time on ACW Outgoing Call [ ] Login - No Agent Name Assigned
     [ ] Agent Time on ACW Incoming Call
     [ ] Agent Time in AUX Work          [ ] Time for Call Waiting
     [ ] Agent Time on AUX Outgoing Call [ ] Number of Calls Waiting
     [ ] Agent Time on AUX Incoming Call [ ] Number of Calls Abandoned
     [ ] Time for ACD Call on Hold       [ ] Number of Intraflowed-Out Calls
     [ ] Malicious Call                  [ ] Number of Intraflowed-In Calls


   | Error and confirmation messages appear in this field.              |

  |       | COMMAND |       | MAIL  |       | EXIT  | PRINT  | HELP  |
  |       | LINE    |       |       |       |       | SCREEN | KEYS  |
```

Figure 9-5   Exception Reports (Splits/ Agents) Screen

Definition of Fields

Field 1   Date

The date for which you want the report. The number of past days' data available depends on the Archive Parameters screen. The default and maximum is 7 days. Dates are MM/ DD/ YY format or relative date (for example, -1 for yesterday).

Default: -1

Field 2 Split

The number or synonym of the split you want covered in the report.

Field ③ Exception Fields

This is where you specify which exceptions you want reported.

| NOTE | These exceptions must have been previously administered in the Exception Administration (Splits/ Agents) screen. |

Ordering a Split Exceptions Report

1   On the `EXCEPTIONS` menu, select the `Reports [   ] Splits-Agents` option and press ⟨RETURN⟩.

    [The Exception Report— Split/ Agent screen appears.]

2   Enter the date you want covered in the report in the `Date:` field using the MM/ DD/ YY format or the relative day format (*0* for today, *-1* for yesterday, and so on).

    Exception data is retained on your disk a maximum of 7 days.

3   Enter the number or synonym of the split you want covered by the exception report in the `Split:` field.

    Leave the `Split:` field blank if you want a report on all splits.

4   Enter an *x* in the brackets next to any exception category you want covered in the report.

    Leave all brackets blank if you want a report on all active exceptions.

5   Press ⟨RETURN⟩ to generate the report immediately, or ⟨COMMAND LINE⟩ to schedule the report for a later time.

    [The Report Destination screen appears.]

6   Follow the directions on the Report Destination screen to finish ordering the report, and press ⟨RETURN⟩ again.

    [If you press ⟨RETURN⟩, in Step 5, the report is generated immediately. If you pressed ⟨COMMAND LINE⟩ in Step 5, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Split Exception Report Description

The Split Exception Report displays split exceptions, with the time they occurred, for the date you specify. For each exception, the report also displays the agent involved, the agent's extension, and, for a Malicious Call or Audio Difficulty exception, the trunk's trunk group and its physical location on the switch.

```
9/23/87                        CALL MANAGEMENT SYSTEM                        Page 1

                         Daily Split Exception Summary for 9/22/87

                                                                    TRUNK  TRUNK
TIME   EXCEPTION                    THRESHOLD  TIME  SPLIT AGENT    EXTENSION GROUP  LOCATION
_____
07:34  Number of ACW OUT Calls/Agent 10              4     Ted Wilson  65590
07:45  Malicious Call                               4     Ellen White 65588    78    04.3.2.01.5
08:12  Agent time on ACD Call (MAX)  2        120          Ellen White 65588
08:30  Agent Time in RING            2        1     1     George Nite 65589


 ┌─────────┐ ┌─────────┐ ┌─────────┐   ┌─────────┐ ┌─────────┐   ┌─────────┐ ┌─────────┐ ┌─────────┐
 │ SEARCH  │ │ SEARCH  │ │ SEARCH  │   │ PREV    │ │ NEXT    │   │ EXIT    │ │         │ │         │
 │ NEXT    │ │ PREV    │ │         │   │ PAGE    │ │ PAGE    │   │         │ │         │ │         │
 └─────────┘ └─────────┘ └─────────┘   └─────────┘ └─────────┘   └─────────┘ └─────────┘ └─────────┘
```

Figure 9-6   Daily Split Exception Summary Screen

The screen-labeled keys for terminal output of an exception report have the following functions:

SEARCH   Pressing this key invokes the string search *vi* command. This puts a backslash (/) in the command line of the screen, allowing you to place any string or characters you desire after the backslash. Then by pressing RETURN you will get the search function and be moved to the string's location in the report.

SEARCH PREV   Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT   Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.

NEXT PAGE   Moves you to the next page of the report.

PREV PAGE   Moves you to the previous page of the report.

EXIT   Returns you to the Split Exception Report request screen.

Table 9-3   Item Reference for Split Exception Report

FIELD	EXPLANATION
Time	Time exception occurred
Exception	Type of Exception
Threshold	Value from administration screen
Time	Value from administration screen
Split	Split where exception occurred
Agent	Agent responsible for the exception
Extension	Agent's extension
Trunk Group	Reported for Malicious Call and Audio Difficulty only
Trunk Location*	Reported for Malicious Call and Audio Difficulty only

*The sample report is the Generic 2/ System 85/ DIMENSION PBX format.
Generic 1, Generic 2 Universal Module, and System 75 uses a letter
to represent the carrier.

Exception Reports (Trunk Groups)

Purpose	To generate a printed log of selected trunk group exceptions.
Dependencies	Exceptions — Trunk Group to set the exceptions. Archive Parameters to determine the number of days to retain exception data. Read permission for the trunk group(s).

Use the Exception Report (Trunk Group) screen to order exception reports on trunk groups. You may order separate reports for each trunk group or one report for all trunk groups. You can also order separate reports for each event or one report for all events.

The events that show data in your exception reports will be those for which you set conditions on the Exception Administration (Trunk Groups) screen. However, two event categories — Malicious Call and Audio Difficulty — do not follow this rule. Though you can select these events for trunk group exception reports, you do not set conditions for them. Instead, CMS automatically records all malicious calls and audio difficulties as exceptions, and, if you choose, will display them in your report.

The exception database can only hold a maximum of 1000 entries. If this database fills during the day, exceptions will still display in real-time reports but will not be saved in the database. Therefore, exceptions displayed in real-time reports after the database is full will not appear on an exception report for that day. An unformatted event will be logged in the error log every time an exception occurs that cannot be written in the exception database. To fix this problem, you may need to change the exception limits (they may be set too close to normal conditions). You can also change the archive parameters to store less days of exception data.

Screen Description

```
┌────────────────────────────────────────────────────────────────────────────┐
│                                                                              │
│   ┌─────────────────────────────────────────────────────────────────────┐   │
│   │ Call Management System                    Switch_Name:Up or Down   Time│  │
│   └─────────────────────────────────────────────────────────────────────┘   │
│                          Exception Reports (Trunk Groups)                    │
│      ┌─┐                          ┌─┐                                         │
│      │1│ Date: -1_____           │2│  Trunk Group: _____  │
│      └─┘                          └─┘                                         │
│                          ┌─┐ [ ]  Time Trunk in Use (MAX)                     │
│                          │3│ [ ]  Time Trunk in Use (MIN)                     │
│                          └─┘ [ ]  Time Trunk Maintenance Busy                 │
│                              [ ]  Number of Trunks in Use                     │
│                              [ ]  Number of Trunk Failures                    │
│                              [ ]  Malicious Call                             │
│                              [ ]  Audio Difficulty                           │
│   ┌──────────────────────────────────────────────────────────────────────┐  │
│   │  Error and confirmation messages appear in this field.               │  │
│   └──────────────────────────────────────────────────────────────────────┘  │
│   ┌─────┐ ┌─────────┐ ┌─────┐  ┌─────┐  ┌─────┐ ┌─────┐ ┌────────┐ ┌──────┐  │
│   │     │ │ COMMAND │ │     │  │     │  │     │ │EXIT │ │ PRINT  │ │HELP  │  │
│   │     │ │ LINE    │ │     │  │     │  │     │ │     │ │ SCREEN │ │KEYS  │  │
│   └─────┘ └─────────┘ └─────┘  └─────┘  └─────┘ └─────┘ └────────┘ └──────┘  │
│                                                                              │
└────────────────────────────────────────────────────────────────────────────┘
```

Figure 9-7   Exception Reports (Trunk Groups) Screen

Definition of Fields

Field ⬜1 Date

The date for which you want the report in MM/ DD/ YY format or relative day format. The number of past days' data available depends on the Archive Parameters screen. The default and maximum is 7 days.

Default: -1

Field ⬜2 Trunk Group

The synonym or number of the trunk group for which you want to generate an exception report.

Field ⬜3 Exception Fields

Exceptions available for trunk groups.

Requesting a Report

1   On the EXCEPTIONS menu, select the Reports [   ] Trunk-Groups
    option and press RETURN.

    [The Exception Trunk Group Report screen appears.]

2   Enter the date you want covered in the report in the Date: field using the
    MM/ DD/ YY format or the relative day format (*0* for today, *-1* for yesterday, and so
    on).

    Exception data is retained on your disk a maximum of 7 days.

3   Enter the number or synonym of the trunk group you want covered by the
    exception report in the Trunk Group: field.

    Leave the Trunk Group: field blank if you want a report on all
    trunk groups.

4   Enter an *x* in the brackets next to any exception category you want covered in the report.

> Leave all brackets blank if you want a report on all active exceptions.

5   Press RETURN to generate the report immediately, or COMMAND LINE to schedule the report for a later time.

[The Report Destination screen appears.]

6   Follow the directions on the Report Destination screen to finish ordering the report, and press RETURN again.

[If you press RETURN, in Step 5, the report is generated immediately. If you pressed COMMAND LINE in Step 5, the Program Editor in the Schedule subsystem appears so you can schedule the report.]

Trunk Group Exception Report Description

The Trunk Group Exception Report displays trunk group exceptions, with the time they occurred, for the date you specify. The report also displays the physical location on the switch of each trunk group in the report. For Malicious Call or Audio Difficulty exceptions, the report displays the agents that recorded the exceptions and the agents' extensions.

```
09/23/87                          CALL MANAGEMENT SYSTEM                              Page 1

                         Daily Trunk Group Exception Summary for 09/22/87

                                                         TRUNK    TRUNK
TIME      EXCEPTION                 THRESHOLD    TIME     GROUP    LOCATION     AGENT      EXTENSION
-------------------------------------------------------------------------------------------------
07:43     Number of Trunks in Use    24                  44       04.3.2.01.5
07:56     Audio Difficulty                                44       04.3.2.01.5  Ellen Klein 6990
08:07     Time Trunk in Use (MAX)     2          230      44       04.3.2.01.5



┌─────────┐ ┌─────────┐ ┌─────────┐   ┌─────────┐ ┌─────────┐   ┌─────────┐ ┌─────────┐ ┌─────────┐
│ SEARCH  │ │ SEARCH  │ │ SEARCH  │   │ PREV    │ │ NEXT    │   │ EXIT    │ │         │ │         │
│ NEXT    │ │ PREV    │ │         │   │ PAGE    │ │ PAGE    │   │         │ │         │ │         │
└─────────┘ └─────────┘ └─────────┘   └─────────┘ └─────────┘   └─────────┘ └─────────┘ └─────────┘
```

Figure 9-8   Daily Trunk Group Summary Screen

The screen-labeled keys for terminal output of an Exception report have the following functions:

SEARCH   Pressing this key invokes the string search *vi* command. This puts a backslash (/) in the command line of the screen, allowing you to place any string or characters you desire after the backslash. Then by pressing ⌈RETURN⌉ you will get the search function and be moved to the string's location in the report.

SEARCH PREV   Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT   Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.

NEXT PAGE   Moves you to the next page of the report.

PREV PAGE   Moves you to the previous page of the report.

EXIT   Returns you to the Trunk Group Exception Report request screen.

Table 9-4   **Item Reference for the Trunk Group Exception Report**

FIELD	EXPLANATION
Time	Time exception occurred
Exception	Type of exception
Threshold	Value from administration screen
Time	Value from administration screen
Trunk Group	Trunk group where exception occurred
Trunk Location*	Equipment location— numbering code used in switch administration
Agent	Agent responsible for the exception (Audio Difficulty and Malicious Call only)
Extension	Agent's extension (Audio Difficulty and Malicious Call only)

The sample report is the Generic 2/ System 85/ DIMENSION PBX format. Generic 1, Generic 2 Universal Module, and System 75 use a letter to represent the carrier.

General Information

You use the Administration subsystem to assign access permissions to CMS users. Three kinds of access permissions are required for a user:

> CMS subsystems access
>
> Split access
>
> Trunk group access.

In addition, within each category, you must assign read and/or write permissions to a user. Read permission means the user can search for and get data within a subsystem (read standard reports, for instance) for specific splits or trunk groups. Write permission means that the user can enter data and execute processes within a subsystem for specific splits and trunk groups.

When a user has neither read nor write permission for a subsystem, that subsystem will not appear among his or her main menu options. When a user has read permission only, the screen-labeled keys for administration of that subsystem, such as CHANGE, ADD, and DELETE, will not be active on that user's screen in the affected subsystems.

> **NOTE** A user cannot have write permission for a subsystem without also having read permission. Write-only permission is allowed, however, for splits or trunk groups because, for example, it may be necessary to intraflow calls to a split, though it may not be necessary to see reports on that split.

The CMS administrator is given a login ID at installation which gives him or her access to the entire system, which includes read and write permissions for all subsystems, splits, and trunk groups. However, secondary administrators, such as split supervisors, may require access to only a limited number of subsystems, splits, and trunk groups and may require only read or write permission for a particular category.

For example, if your call center has a split (called Split 1), with two trunk groups (22 and 23) assigned to it, the supervisor of Split 1 may have read and write access only for Split 1 and Trunk Groups 22 and 23. In addition, the supervisor will probably have read and write permission to several subsystems so that he or she can effectively administer Split 1 and Trunk Groups 22 and 23.

Normally, split supervisors will not need access to the Maintenance, Administration, or the UNIX system. However, you can give users any access permissions you deem necessary or desirable.
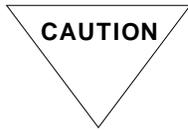
```
  ╲       CAUTION  ╱   If, for your own user ID, you turn off write permission for the Administration
   ╲              ╱    subsystem, you will no longer be able to administer permissions for yourself or
    ╲            ╱     any other user when you log back into CMS.
     ╲          ╱
      ╲        ╱
       ╲      ╱
        ╲    ╱
         ╲  ╱
          ╲╱
```

```
┌──────┐
│      │   Users granted access to the Administration subsystem can grant themselves access to
│ NOTE │   any other part of the system.
│      │
└──────┘
```

Administration Menu

The Administration menu lists the three screens you will use to assign access permissions:

```
╭────────────────────────────────────────────────────────────────────────────────╮
│                                                                                  │
│   ┌────────────────────────────────────────────────────────────────────────┐    │
│   │ Call Management System                        Switch_Name:Up      Time  │    │
│   └────────────────────────────────────────────────────────────────────────┘    │
│                                                                                  │
│                              ADMINISTRATION                                      │
│                                                                                  │
│                        [ ] System-Access                                         │
│                        [ ] Split-Access                                          │
│                        [ ] Trunk-Group-Access                                    │
│                                                                                  │
│                                                                                  │
│                                                                                  │
│                                                                                  │
│                                                                                  │
│   ┌────────────────────────────────────────────────────────────────┐            │
│   │  Error and confirmation messages appear in this field.          │            │
│   └────────────────────────────────────────────────────────────────┘            │
│   ┌─────┐ ┌─────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐         │
│   │     │ │     │ │      │  │      │ │      │ │ EXIT │ │PRINT │ │HELP  │         │
│   │     │ │     │ │      │  │      │ │      │ │      │ │SCREEN│ │KEYS  │         │
│   └─────┘ └─────┘ └──────┘  └──────┘ └──────┘ └──────┘ └──────┘ └──────┘         │
╰────────────────────────────────────────────────────────────────────────────────╯
```

Figure 10-1   The Administration Menu

System Access

Purpose   To establish user access permissions for CMS subsystems.
This screen is used to create new users, usually split supervisors.

You use the System Access screen to create CMS user IDs and to assign, view, or change access permissions for the appropriate subsystems. The user IDs you create become the users' CMS login IDs. You can also tell CMS whether to require a password from the user and whether to require the user to change his or her password.

In a multiple-ACD system, the same user ID cannot be used in different ACDs. For example, in a 4-ACD system, a total of four user IDs would be required to access CMS for each ACD. Also, no user ID for another UNIX system application can be the same as a CMS user ID.

NOTE	For any subsystem, a user may not have write permissions without read permissions.

NOTE	Also, any changes you make to permissions while the user is logged in will not take effect until that user logs in next.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System                        Switch_Name:Up        Time │ │
│  └──────────────────────────────────────────────────────────────────────────┘ │
│                                                                                │
│                        ADMINISTRATION -- SYSTEM ACCESS                         │
│    ┌1┐  User ID: Sarge____        ┌2┐  User Name: ET Suzuki_____        │
│                                 ┌3┐  Room Number: 200G_____                │
│                            ┌4┐  Telephone Number: x3440_____            │
│                        ┌5┐  Printer Destination: printer 1_____          │
│                      ┌6┐ Remove Existing Password? n                           │
│                  ┌7┐ Add/Change Password On Next Login? n                       │
│        ┌8┐    System Access    Read? Write?      System Access Read?  Write?    │
│                                                                                │
│                  REPORTS:        y     y            UNIX      y       y         │
│               DICTIONARY:        y     y            MAIL      y       y         │
│            CONFIGURATION:        y     y          PASSWORD    y       y         │
│                SCHEDULER:        y     y                                        │
│                 FORECAST:        y     y                                        │
│               EXCEPTIONS:        y     y                                        │
│  CUSTOM REPORTS CREATION:        y     y                                        │
│           ADMINISTRATION:        y     y                                        │
│              MAINTENANCE:        y     y                                        │
│  ┌──────────────────────────────────────────────────────────────────────┐     │
│  │ Error and confirmation messages appear in this field.                 │     │
│  └──────────────────────────────────────────────────────────────────────┘     │
│  ┌───────┐ ┌─────┐ ┌────────┐ ┌─────┐ ┌─────┐ ┌──────┐ ┌───────┐ ┌──────┐       │
│  │CHANGE │ │ADD  │ │DELETE  │ │     │ │     │ │EXIT  │ │PRINT  │ │HELP  │       │
│  │       │ │     │ │        │ │     │ │     │ │      │ │SCREEN │ │KEYS  │       │
│  └───────┘ └─────┘ └────────┘ └─────┘ └─────┘ └──────┘ └───────┘ └──────┘       │
└──────────────────────────────────────────────────────────────────────────────┘
```

Figure 10-2   The System Access Screen

Definition of Fields

Field 1 User ID

User ID of person being added or whose permissions are being viewed or changed. The User ID must have three to eight alphanumeric characters, with no blanks.

Field 2 User Name (optional)

Field 3 Room Number (optional)

Field 4 Telephone number (optional)

Field ⑤ Printer Destination

Identification of printer used by user.

Default: Default system printer

Field ⑥ Remove Existing Password?

Takes *y* or *n*. A *y* removes the user's password from the system. Allows the login ID to be used on subsequent logins with no password.

Field ⑦ Add/Change Password On Next Login?

Takes *y* or *n*. A *y* places the user in the Password Subsystem when the login ID is used next. By doing this, the system enables the user to change passwords the next time they log in. If you have never had a password on CMS, CMS is not expecting an existing password from you. You will be asked to enter a new password.

Field ⑧ System Access

Permissions for user to enter and use CMS subsystems. "Read" means user may view data in the subsystem; "write" means user may make administrative changes via the subsystem screens. If "read" is *n*, the subsystem is removed from the user's main menu.

Enter either *y* (yes) or *n* (no).

Default: *y*

| NOTE | The system will not allow a *y* in the "write" column with an *n* in the "read" column. |

"Write" permission has no meaning for the following features:

> UNIX system
>
> Mail
>
> Password.

"Read" permission confers the ability to use all three features to their full extent.

Adding a New User

1 On the ADMINISTRATION menu, select the [ ] System-Access option and press [RETURN].

   [A blank System Access screen appears.]

2 Enter the ID of the new user in the User ID field. Use at least three and up to eight alphanumerics and no blanks.

3 Enter the user's name in the User Name field. This is optional.

4 Enter the user's room in the Room Number field. This is optional.

5 Enter the user's phone number in the Telephone Number field. This is optional.

6 Enter the user's printer in the Printer Destination field. This is optional. If this field is left blank, the user's jobs will route to the default system printer.

7 To make a change in either the Remove Existing Password? field or Add/Change Password On Next Login or both, enter *y* or *n* in either place.

8 In the System Access field, enter *y* or *n* next to each system to which you want to allow or deny this user access.

9 Press [ADD].

   [The user and the specified permissions will be added to the CMS.]

Viewing User Access Permissions

1 On the ADMINISTRATION menu, select the [ ] System-Access option and press [RETURN]. [A blank System Access screen appears.]

2 Enter an existing user's ID in the User ID field.

3 Press [RETURN]. [The user's data and permissions will be displayed.]

Changing User Permissions or Data

1   On the `ADMINISTRATION` menu, select the `[ ] System-Access` option and press RETURN.

    [A blank System Access screen appears.]

2   Enter the user's ID in the `User ID:` field.

3   Press RETURN.

    [The user's permissions will be displayed.]

4   Enter *y* or *n* in the `Read?` and `Write?` fields next to any system to which you want to change the user's permissions.

5   Make any changes desired to the user's name, printer, phone, or office number.

6   Press CHANGE. The changed data will be written into the Administration database.

Deleting User Passwords

1   On the `ADMINISTRATION` menu, select the `[ ] System-Access` option and press RETURN.

    [A blank System Access screen appears.]

2   In the `User ID:` field, enter the login ID of the user whose password you are removing and press RETURN.

    [The data for that ID will be displayed.]

3   Enter a *y* either in the `Remove Existing Password?` field or `Add/Change Password On Next Login?` and press RETURN.

    [If you enter *y* in the `Remove Existing Password?` field, the user's password will be removed, and the user will not be prompted for a password on his or her next login attempt.]

    [If you enter *y* in `Add/Change Password On Next Login?` field, the user will be placed in the Password Subsystem at the next login attempt, where he or she can change passwords.]

Split Access

Purpose	To establish permission for a user to view and administer data concerning splits.
Dependencies	The administrator administering split permissions must have write permission for the Administration subsystem.

You use the Split Access screen to assign, view, or change users' access permissions to specific splits. Split Access permissions determine a CMS user's ability to access and administer agent data for a particular split. For each split, you can give users read and write permissions, read without write permissions, or write without read permissions.

Screen Description

```
Call Management System                        Switch_Name:Up        Time

                       ADMINISTRATION--SPLIT ACCESS

  [1]  User ID: sarge

  [2]  Split      Name                     Read?  Write?
         1      Sales                        y      y
         2      Service                      y      y
         3      Contract Negot.              y      y
         4      Wholesale                    y      y
         5-800-number (A)               y        y
         6-800-number (B)               y        y
         7      Night Service                y      y
         8      Problem Desk                 y      y
         9      Catalogue                    y      y
         10     Local promotions             y      y

  [3]  Split(s): _____
  [4]   Read?: _
  [5]   Write?: _                             [Page 1 of 6]


    Error and confirmation messages appear in this field.

 ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐
 │ CHANGE  │ │         │ │ SEARCH  │ │         │ │ NEXT    │ │ EXIT    │ │ PRINT   │ │ HELP    │
 │         │ │         │ │         │ │         │ │ PAGE    │ │         │ │ SCREEN  │ │ KEYS    │
 └─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘
```
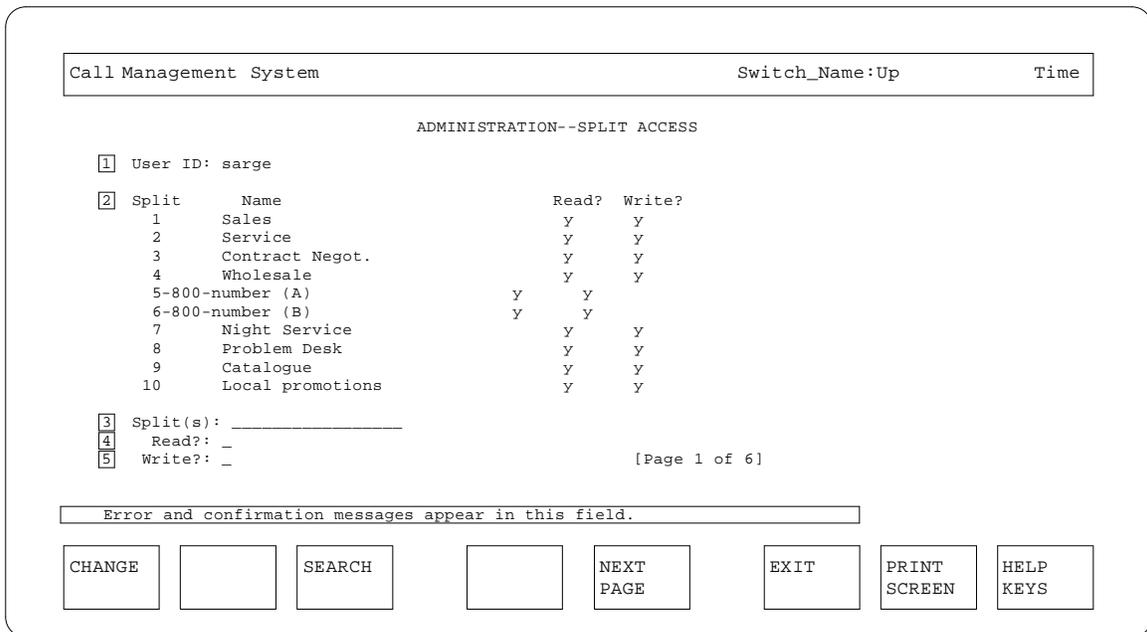
Figure 10-3   Split Access Screen

Definition of Fields

Field $\boxed{1}$ User ID

Identification of the user whose split permissions you are administering.

Field $\boxed{2}$ Split   Name   Read?   Write?

Split numbers, synonyms, and this user's permissions. The maximum possible number of measured splits (60), not the number in your system, are available in this screen.

"Read" means the user can view all data for this split. "Write" means the user can make administrative changes for the split. Examples of the latter would be moving split extensions, setting split parameters, and setting exceptions for the split.

Default: *y* for all splits, both for read and for write.

Field $\boxed{3}$ Split(s)

Field where split numbers are entered to administer access. Proper entries are individual splits separated by commas or spaces, ranges separated by hyphens, or "all."

Field $\boxed{4}$ Read?

Will the user have read permission to this split's call data?

Field $\boxed{5}$ Write?

Will the user have write permission on administrative controls for this split?

NOTE	A combination of a *y* in the "write" column for a split and an *n* in the "read" column *is* possible. This combination allows a user access to the intraflow and agent-move features on a split without the split's data appearing on that user's printouts.

Changing Split Access Permissions

NOTE	Use the change procedure for both new and existing users, since new users are automatically given default permissions.

1   On the ADMINISTRATION menu, select the [ ] Split-Access option and press RETURN.

    [A blank Split Access screen appears.]

2   In the User ID field, enter the user ID of the user whose permissions are being changed.

3   Press RETURN.

    [The current status of split permissions for this user will be displayed in the Split Name Read? Write? field. For a new user, all split permissions are defaulted to *y* (yes).]

4   Use the NEXT PAGE and PREV PAGE SLKs to scroll through multiple pages of splits.

5   In the Split(s): field, enter the numbers of splits for which this user's permissions will be changed. You may enter individual split numbers separated by spaces or commas, ranges separated by a hyphen, or "all." No synonyms are accepted.

6   In the Read?: and Write?: fields, enter *y* or *n* to enable or deny read or write access to particular splits for the user.

7   Press the CHANGE SLK.

    [All changes will be added to the database.]

Searching for User Split Access Permissions

1 On the ADMINISTRATION menu, select the [ ] Split-Access option
   and press RETURN.

   [A blank Split Access screen appears.]

2 Enter the user's ID in the User ID: field.

3 Press RETURN.

   [The first page of the current split permissions for this user will be displayed.]

4 To find the user's permissions on a nondisplayed split, enter the split number of
   interest in Split(s): field, and press SEARCH.

   [The page containing the permissions for that split will be displayed in the Split
   Name Read? Write? field.]

Trunk Group Access

Purpose	To establish permission for a user to view and administer data concerning CMS-measured trunk groups.
Dependencies	The administrator administering trunk group permissions must have write permission for the Administration subsystem.

You use the Trunk Group Access screen to assign, view, or change users' access permissions to specific trunk groups. For each trunk group, you can give users read and write permissions, read without write permissions, or write without read permissions.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  ┌─────────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System                    Switch_Name:Up          Time   │ │
│  └─────────────────────────────────────────────────────────────────────────┘ │
│                                                                               │
│                          ADMINISTRATION--TRUNK GROUP ACCESS                    │
│         [1] User ID: sarge                                                     │
│                                                                               │
│         [2] Trunk Group Name                   Read?  Write?                   │
│             1-961-1234 local               y       y                          │
│             2-961-1235 local               y       y                          │
│             3-800-number(A)                y       y                          │
│             4-961-1236                     y       y                          │
│             5-800-number(B)                y       y                          │
│             6-1-961-1237FX                 y       y                          │
│             7      Night_line                y       y                        │
│             8-1-961-3241FX                 y       y                          │
│             9-800-number(C)                y       y                          │
│             10-961-1237                    y       y                          │
│                                                                               │
│         [3] Trunk Group(s): _____                           │
│         [4]      Read?: __                                                     │
│         [5]      Write?: __                              [Page 1 of 21]        │
│  ┌─────────────────────────────────────────────────────────────────────────┐ │
│  │  Error and confirmation messages appear in this field.                   │ │
│  └─────────────────────────────────────────────────────────────────────────┘ │
│  ┌────────┐┌────────┐┌────────┐┌────────┐┌────────┐┌────────┐┌────────┐┌──────┐│
│  │CHANGE  ││        ││SEARCH  ││        ││NEXT    ││EXIT    ││PRINT   ││HELP  ││
│  │        ││        ││        ││        ││PAGE    ││        ││SCREEN  ││KEYS  ││
│  └────────┘└────────┘└────────┘└────────┘└────────┘└────────┘└────────┘└──────┘│
└───────────────────────────────────────────────────────────────────────────────┘
```
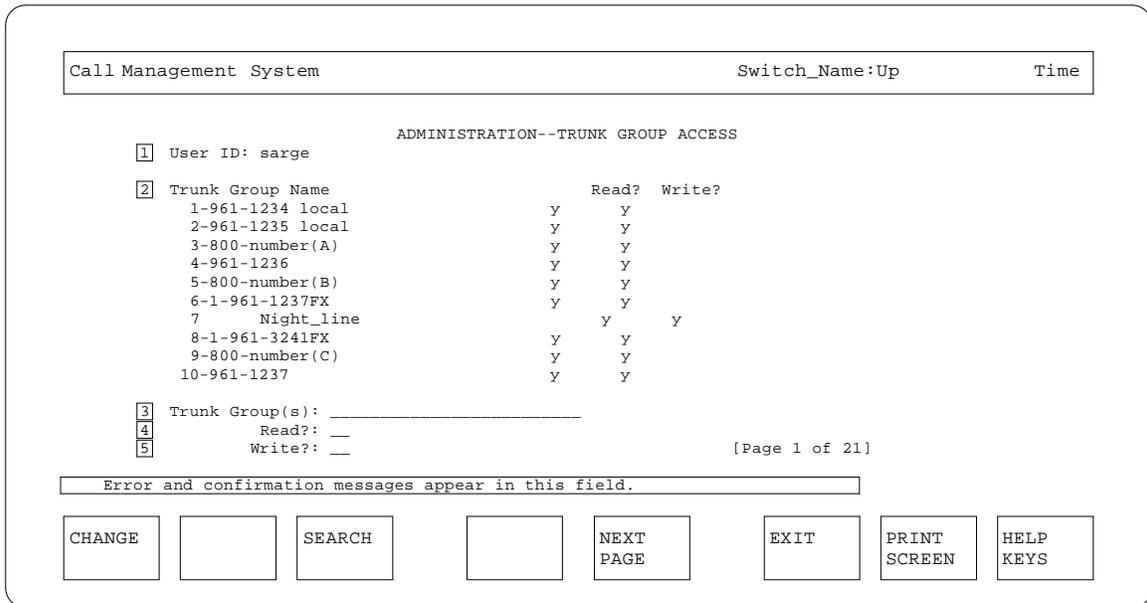
Figure 10-4   Trunk Group Permissions Screen

Definition of Fields

1 User ID

Identification of user whose trunk groups permissions you are administering.

2 Trunk Group   Name   Read?   Write?

Trunk group numbers, names, and this user's permissions.

"Read" means the user can view all data for this trunk group. "Write" means the user can make administrative changes for the trunk group. Examples of the latter would be moving trunk groups to different splits and setting exceptions for the trunk group.

Default: *y* for all trunk groups for both read and write.

3 Trunk Group(s)

Trunk group numbers for which permissions will be changed. Proper entries are individual trunk group numbers separated by commas or spaces, ranges separated by hyphens, or "all." No synonyms.

4 Read?

Will the user have read permission to this trunk group's trunk data?

5 Write?

Will the user have write permission on administrative controls for this trunk group?

Changing Trunk Group Permissions

NOTE Use the CHANGE SLK to set up new users' permissions, since all permissions are defaulted to "yes" for new users.

1   On the ADMINISTRATION menu, select the [ ] Trunk-Group-Access option and press RETURN.

[A blank Trunk Group Access screen appears.]

2   In the `User ID:` field, enter the user ID of the user whose permissions are being changed.

3   Press `RETURN`.

    [The current status of trunk group permissions for this user will be displayed in the `Trunk Group  Name  Read?  Write?` field.]

4   Use the `NEXT PAGE` and `PREV PAGE` SLKs to scroll through all pages of trunk groups.

5   In the `Trunk Group(s):` field, enter the numbers of the trunk groups for which you will change permissions. Enter individual trunk group numbers separated by spaces or commas, ranges separated by hyphens, or "all." Do not enter synonyms.

6   In the `Read?:` and `Write?:` fields, enter *y* or *n* to enable or deny read or write access to particular trunk groups for the user.

7   Press `CHANGE`.

    [All changes will be added to the database.]

Searching for User Trunk Group Access Permissions

1   On the `ADMINISTRATION` menu, select the `[ ] Trunk-Group-Access` option and press `RETURN`.

    [A blank Trunk Group Access screen appears.]

2   Enter the user's ID in the `User ID:` field.

3   Press `RETURN`.

    [The first page of the current trunk group permissions for this user will be displayed.]

4   To find the permissions on a nondisplayed trunk group, enter the trunk group's number in the `Trunk Group(s):` field, and press `SEARCH`.

    [The page containing the permissions for that trunk group will be displayed in the `Trunk Group  Name  Read?  Write?` field.]

General Information

Maintenance includes necessary housekeeping tasks for CMS, such as:

Backing up and restoring CMS historical data

Scheduling the time intervals at which CMS retrieves data for use in historical and forecast reports

Setting the length of time CMS stores data

Administering the error log, which is used to diagnose errors that occur in the system

Maintaining the link between CMS and the switch

Administering the number of splits measured by CMS.

Maintenance Menu

You perform the tasks using the screens listed on the Maintenance Menu (Figure 1-1-1):

```
Call Management System                        Switch_Name:Up          Time

_____

                              MAINTENANCE
                        [ ] Backup-Data
                        [ ] Restore-Data

                        [ ] Archive-Parameters
                        [ ] Daily-Data-Archive

                        [ ] Session-Status

                        [ ] Error-Log

                        [ ] Forecast Manager

     Error and confirmation messages appear in this field.

 ┌──────┐ ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐
 │      │ │      │ │      │  │      │ │      │ │ EXIT │ │PRINT │ │HELP  │
 │      │ │      │ │      │  │      │ │      │ │      │ │SCREEN│ │KEYS  │
 └──────┘ └──────┘ └──────┘  └──────┘ └──────┘ └──────┘ └──────┘ └──────┘
```
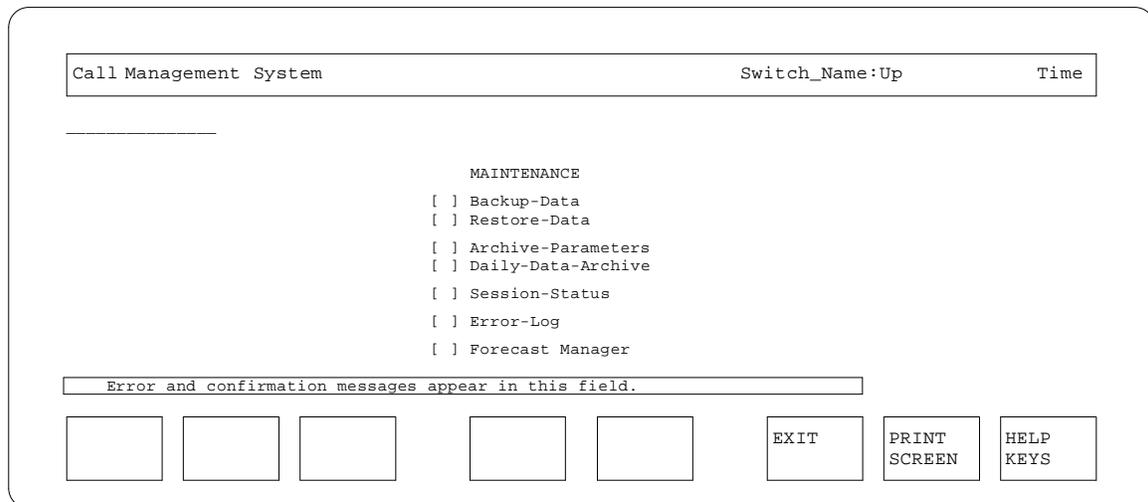
Figure 11-1   Maintenance Menu

Data Backup

Purpose   To back up CMS contents on tape.

The Data Backup feature lets you protect your CMS data against accidental losses due to system crashes, disk crashes, power outages, and so forth. Data Backup also saves any changes made to the following UNIX system files:

/usr/spool/cron/atjobs	System file for scheduled jobs
/usr/lib/cron/at.allow	System file for permissions to schedule jobs
/etc/inittab	System file for background programs
/etc/group	System file for user IDs
/etc/passwd	System file for passwords

You must back up separately the data for each ACD in your system. Therefore, if you have multiple ACDs, you must log into CMS for each ACD to back up the data.

Since new data is written each day, it should be backed up each day. Management of the tapes used, storage, security, marking, etc., are key elements in assuring that, if a restore is needed, it can be done quickly and accurately. A sufficient supply of tapes should be kept on hand to rotate the tapes. This allows several backup tapes to be available at all times. One common scheme is to keep seven tapes in stock and recycle them weekly. That is, in an environment where backups are performed daily, a new tape is mounted each day of the week, and each week the sequence is repeated.

Data backup can be scheduled; a technician or administrator need not be present. The tape must be correctly mounted, and the drive must be in the "on-line" mode. The tape can then be left unattended, and the scheduled backup can proceed on its own.

NOTE If you schedule a backup that requires two tapes, it will fail because the second tape will not be mounted. Your CMS mail will tell you if your scheduled backup fails. Also, printed output from the backup will indicate the need for a second tape where the backup fails. You can then begin to manually back up the CMS.

NOTE If the host computer is a 3B2/310 or 3B2/400 with a Cartridge Tape Controller (CTC) and a standard cartridge tape drive, the cartridge tape must be formatted. If a cartridge tape has not been formatted, see Chapter 12, "UNIX System," for the Formatting Tape procedures.

If the host computer is a 3B2/310, 3B2/400, 3B2/500 or 3B2/600 with a Small Computer System Interface (SCSI) cartridge tape drive, the cartridge tapes used with SCSI cartridge tape drives do not require formatting.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                    Switch_Name:Up      Time │    │
│  └──────────────────────────────────────────────────────────────────┘    │
│                                                                           │
│                       MAINTENANCE --  DATA BACKUP                         │
│                                                                           │
│      The number of FORMATTED tapes necessary to backup the CMS is 1 (0.91)│
│                                                                           │
│      Mount the tape and press the return key to start                     │
│                                                                           │
│                                                                           │
│    ┌──────────────────────────────────────────────────────┐              │
│    │  Error and confirmation messages appear in this field.│              │
│    └──────────────────────────────────────────────────────┘              │
│  ┌─────┐ ┌─────┐ ┌─────┐  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐    │
│  │     │ │     │ │     │  │      │ │      │ │ EXIT │ │PRINT │ │HELP  │    │
│  │     │ │     │ │     │  │      │ │      │ │      │ │SCREEN│ │KEYS  │    │
│  └─────┘ └─────┘ └─────┘  └──────┘ └──────┘ └──────┘ └──────┘ └──────┘    │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 11-2   Data Backup Screen

NOTE
For a 3B2 use a DC6320 tape cartridge. 3B2 cartridges are orderable using Price Element Code (PEC) 8100-000. The Data Backup feature on the 3B2 can read the header information on the tape and will prompt you when your tape needs replacing.

CMS automatically displays the number of tapes you will need to back up your data. CMS also displays, in parentheses, an approximate percentage of tape space needed for a backup. When 0.95 (9-5 percent) appears on the Data Backup screen, you should no longer schedule backups and should, instead, manually backup CMS data.

Backing Up Data

1   On the `MAINTENANCE` menu, select the `[  ] Backup-Data` option and press
    RETURN.

    [You will see the following screen if you have a 3B2/ 310 or 3B2/ 400 computer.]

```
Call Management System                          Switch_Name:Up            Time


                     MAINTENANCE -- DATA BACKUP


The number of FORMATTED tapes necessary to backup the CMS is 1 (0.91)

Mount the tape and press the return key to start
```

[You will see the following screen if you have a 3B2/ 500 or 3B2/ 600 computer.]

```
Call Management System                          Switch_Name:Up          Time


                    MAINTENANCE -- DATA BACKUP


The number of cartridge tapes needed to backup the CMS data is 1 (0.91)

Mount the tape and press the return key to start
```

2   Mount or insert the backup tape.

   For a 3B2, insert a cartridge tape into the tape drive, making sure the exposed tape is to the right. Lock the drive.

   | NOTE | If the host computer is a 3B2/ 310 or 3B2/ 400 with a Cartridge Tape Controller (CTC) and a standard cartridge tape drive, the cartridge tape must be formatted. If a cartridge tape has not been formatted, see Chapter 1-2, "UNIX System," for the Formatting Tape procedures. |

   For a scheduled backup, perform this step later, for example, before you go home at night, rather than now. If the tape is not installed properly before you leave at night, the scheduled backup will fail.

3   To schedule the backup, press COMMAND LINE. To do the backup now, press RETURN.

   [If you press COMMAND LINE, you will be moved to the Schedule subsystem, where you can schedule the backup.]

   > Do not press COMMAND LINE if the backup requires two or more tapes. A multitape backup should not be scheduled because it would require someone to be present to install the second tape. When a second tape is required, you will receive a message on your backup printout requesting that you mount a second tape.

[If you press RETURN, the backup will begin. It may take up to 3 hours, depending on the size of your database. The following message will appear on the message line of your screen:

```
1-4100   CMS Data Backup in progress
```

You will then see a series of CMS file names print out on the screen. This means that these files have been copied onto the backup tape. Your system printer will also print out the backed-up file names.]

When the backup is complete, you will see the following message in the message line:

```
Backup operation finished
```

If the backup requires two or more tapes, you will see the following message:

```
Please mount new tape. Press return.
```

4 Repeat Step 2 for each additional tape required for backup and press RETURN.

5 If the host computer is a 3B2/ 600 with multiple ACDs, repeat the entire data backup procedure under the login ID (*acd1, acd2, acd3,* or *acd4*) for each ACD whose data you want to back up.

Data Restore

Purpose	To allow recovery of files from the data-backup tape.
Dependencies	Availability of a backup tape. A console terminal must be available and powered on.
Limitations	The Restore Data process puts the UNIX operating system in a *single-user mode.*

You use the Data Restore screen to restore CMS data that has been lost due to system crashes, disk crashes, power outages, and so forth. You can restore all CMS data files or only those databases and/ or files you designate. In a multiple-ACD CMS, you can restore data for only the ACD in which you are currently logged. Therefore, you must log into each ACD for which you want to restore CMS data.

When you restore data, the UNIX operating system will go into single-user mode. As a result, all users except you will be logged off of CMS, and all other CMS processes will be stopped. CMS will deliver a warning to all other users before the restore begins.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────────┐
│ Call Management System                          Switch_Name:Up      Time   │
└──────────────────────────────────────────────────────────────────────────┘

                          MAINTENANCE - RESTORE DATA

      WARNINGS

            All other system activity will be stopped during restore

            CMS data will no longer be collected and archived during restore


        Do you wish to continue? n

     ┌────────────────────────────────────────────────────────────┐
     │  Error and confirmation messages appear in this field.       │
     └────────────────────────────────────────────────────────────┘
 ┌──────┐ ┌──────┐ ┌────────┐   ┌────────┐ ┌────────┐ ┌──────┐ ┌──────┐ ┌──────┐
 │      │ │      │ │        │   │        │ │        │ │EXIT  │ │PRINT │ │HELP  │
 │      │ │      │ │        │   │        │ │        │ │      │ │SCREEN│ │KEYS  │
 └──────┘ └──────┘ └────────┘   └────────┘ └────────┘ └──────┘ └──────┘ └──────┘
```
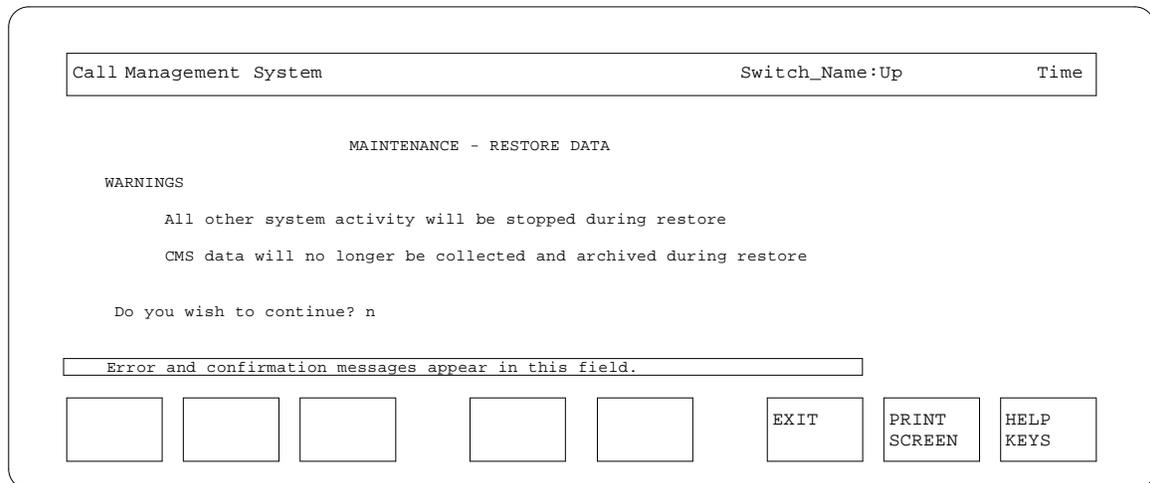
Figure 11-3   Data Restore Screen

Restoring Data
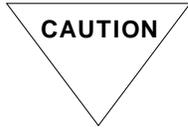
<div style="border:1px solid #000; display:inline-block">CAUTION</div> To perform data restore, the Console Terminal must be powered on. If it is not, the UNIX system routines that are used to do the restore cannot operate. If you have questions about the Console Terminal, refer to the *3B2 CMS Installation and Maintenance* (5-85-215-104) document.

1   Mount or insert in the proper drive the tape that contains the latest backup copy of the CMS historical database (see instructions under Data Backup).

2   In a multiple-ACD system, type your CMS Login ID and password for the ACD that generated the data you want to restore.

3   On the `MAINTENANCE` menu, select the `[ ] Restore-Data` option and press `RETURN`.

[The Restore Data screen appears, similar to the screen shown in Figure 11-3.]

4   Enter *y* in the `Do you wish to continue?` prompt field, and press `RETURN`.

[The restore routines will be invoked, and the system will begin to change states to *single-user mode.* The first screen dialogue that will be returned to the screen will be as follows:]

```
Call Management  System                                Switch_Name:Up              Time

  broadcast warning message to all users

Broadcast Message from <username>  (console)* [day date time]
  The system will be shut down in 15 seconds
  Please log off now.
```

*   This element appears only if the restore is administered from the system console terminal.

[The dialogue will continue to scroll down the screen, as the system prepares to enter single-user mode. Finally, a message will appear as follows:]

```
Call Management  System                               Switch_Name:Up          Time

To continue the restore,
   please type in "/cms/bin/sh_restore" and push the return key

To return to multi-user state and end restore,
   please type in "/etc/init 2" and push the return key
```

[Before you take any action, however, the single-user mode will be entered automatically with the following dialogue:]

```
Call Management  System                               Switch_Name:Up          Time

INIT: New run level: S

INIT: SINGLE USER MODE
#
```

NOTE	In single-user mode, CMS interacts with only one terminal and shuts down all others until the restore is complete.

5   Type */cms/bin/sh restore* next to the system prompt (#) and press RETURN.

[The restore process will begin, and the following prompt will appear:]

```
Call Management  System                              Switch_Name:Up              Time

               MAINTENANCE -- RESTORE DATA

 File Name
```

6   If you want the whole CMS file system restored, make no entry after `File Name`. Simply press RETURN. If you want to perform a partial restore, type the name of the file, database, or directory you want restored next to the `File Name`, and press RETURN. For partial restores, use one of the following formats:

> **Historical database.** You can specify a single file for restoration by using the following format:
>
> */cms/acdn/dsave/ [file name]*
>
> where the *n* is the number of the ACD you are logged in under.
>
> Typing * instead of a file name in the preceding format means "restore all historical databases."

The files you can restore at one time or separately are listed in the following table:

Daily Files	Half-hour Files
dagent	*hagent*
dsplit	*hsplit*
dtgrp	*htkgrp*
dtrunk	*htrunk*
ddn	*hdn*
dvector	*hvector*

UNIX system files. You can also specify each of the following UNIX system files for restoration by typing the complete file pathname as shown.

/usr/spool/cron/atjobs	System file for scheduled jobs
/usr/lib/cron/at.allow	System file for permissions to schedule jobs
/etc/inittab	System file for background programs
/etc/group	System file for user IDs
/etc/passwd	System file for passwords

Custom Report program directory or files. You can also restore the directory containing your Custom Report program files or a single program file for a Custom Report. To restore a single Custom Report program file, type:

/cms/acdn/reports/historical/source/[report name]

or

/cms/acdn/reports/realtime/source/[report name]

Typing * instead of a report name will restore all program files for either historical or real-time custom reports. You can also enter two or more database, file, or directory names at one time by typing the first name, pressing the down arrow key, and typing the next name.

[The files will be displayed on this screen under the heading `File Name` as they are restored from the backup tape. This process may take up to 8 hours depending on the size of your database.]

[When the restore is complete, the CMS *Login* prompt will appear.]

7 Repeat this procedure for each ACD in a multiple-ACD CMS.

NOTE	You should be familiar with the UNIX system file and directory structure before attempting a partial restore.

Archive Parameters

Purpose	To administer the archiving periods for historical CMS data.
Dependencies	Daily Data Archive to write to the daily historical files each day.
Defaulted fields	All

The CMS disk can store up to 387 days' worth of daily data and up to 31 days' worth of half-hour data. These are the default **archive parameters**. The Archive Parameters screen is used to set the length of time data is stored for different daily and half-hour files. For example, if you wanted to maintain some of your daily files only 90 days, you could change the default of 3-87 days to 90 with the Archive Parameters process.

Data archiving requirements vary from CMS installation to CMS installation. You will have to determine the best mix of data types for your CMS, based on the following:

> Available disk space; the basic system (application code) aside from archived data occupies about 50 Mbytes. For information on the amount of disk space available with different 3B computers, see the *3B Call Management System Planning, Configuration, and Implementation Guide* (5-85-215-601).

> Size of the ACD system (number of agents, trunks, etc.).

> The historical and forecast reporting patterns in the system.

Because the historical database will probably be the largest occupant of your disk, you can use the Archive Parameters screen to reduce the amount of historical data archived and decrease the disk space used by your system. Table 11-1 gives you an idea of how much disk space your system would occupy if you retained the default archiving parameters.

If your system does not exactly match any of the examples in the table, estimate the disk occupancy of your system by interpolation from the two systems nearest yours.

The amount of disk space used is proportional to the number of days for which you save half-hour and daily data. A day's worth of half-hour data uses approximately 12 times as much disk space as 1 daily record. So, 31 days of half-hour data uses approximately the same amount of space as 387 days of daily data.

Therefore, if you changed all the 31-day parameters to 15 and all 387-day parameters to 194 (thereby reducing the archiving days in half in both cases), you would reduce the occupancy by half. Of course, you can set parameters in different ways to achieve the same disk-space savings.

Your CMS reporting priorities will also determine how you set archive parameters. For example, you might reduce the number of archive days on daily trunk, trunk group, and agent

Table 11-1   **Disk Occupancy of Databases of Various Systems**

SYSTEM SIZE	MBYTES OF DISK REQUIRED WITH DEFAULT PARAMETERS
5-0 agents, 5 splits, 6 trunk groups, 60 trunks, one 8-hour shift	1-2
1-00 agents, 10 splits, 12 trunk groups, 1-20 trunks, one 8-hour shift	2-3
1-00 agents, 10 splits, 12 trunk groups, 1-20 trunks, two 8-hour shifts	4-0
5-00 agents, 50 splits, 60 trunk groups, 600 trunks, one 8-hour shift	1-14
5-00 agents, 50 splits, 60 trunk groups, 600 trunks, two 8-hour shifts	2-00

records, yet keep all 387 days' worth of daily split records since they are needed for long-term forecasting. (In particular the daily agent file can be extremely large — for example, up to 66 Mbytes on a 3B2/ 400. The daily trunk file uses up to 23 Mbytes on a 3B2/ 400.) And if you are not interested in long-term forecasting, you could reduce all four daily data categories.
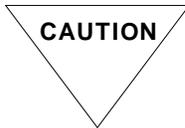
> **CAUTION** If you want to reduce any default parameters, do so before your system exceeds the new parameters you want to set. Once the system has archived data exceeding those parameters, it will be difficult to release the used disk space back to the system.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                    Switch_Name:Up      Time│    │
│  └──────────────────────────────────────────────────────────────────┘    │
│                                                                           │
│                      MAINTENANCE -- FILE SAVE PARAMETERS                   │
│                                                                           │
│              Half Hour Files                      Daily Files             │
│                                                                           │
│            ┌──┐                          ┌──┐                             │
│            │ 1│  Agent Data: 31_ days    │ 5│  Agent Data: 387 days       │
│            │ 2│  Split Data: 31_ days    │ 6│  Split Data: 387 days       │
│            │ 3│  Trunk Data: 31_ days    │ 7│  Trunk Data: 387 days       │
│         ┌──┐                          ┌──┐                                 │
│         │ 4│ Trunk Group Data: 31_ days│ 8│ Trunk Group Data: 387 days    │
│                                                                           │
│                                       ┌──┐                                 │
│                                       │ 9│  Exception Data: 7__ days      │
│                                     ┌──┐                                   │
│                                     │10│  Special Days Data: 15_ days     │
│                                                                           │
│  ┌──────────────────────────────────────────────────────────────────┐    │
│  │  Error and confirmation messages appear in this field.           │    │
│  └──────────────────────────────────────────────────────────────────┘    │
│  ┌──────┐┌──────┐┌──────┐ ┌──────┐┌──────┐┌──────┐┌──────┐┌──────┐       │
│  │CHANGE││      ││      │ │      ││      ││EXIT  ││PRINT ││HELP  │       │
│  │      ││      ││      │ │      ││      ││      ││SCREEN││KEYS  │       │
│  └──────┘└──────┘└──────┘ └──────┘└──────┘└──────┘└──────┘└──────┘       │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 11-4   Archive Parameters Screen

Definition of Fields

Fields ⟨1 through 10⟩   Number of days to save data by file type

Defaults and maximums:

— Half Hour Files — 31 days

— Daily Files — 387 days

— Exception Data — 7 days

— Special Days Data — 15 days.

Changing a File-Save Period

1 On the MAINTENANCE menu, select the   [ ] Archive-Parameters
   option and press RETURN.

   [The Archive Parameters screen with the current parameters appears.]

2 Change any of the archive periods by overtyping the current value. The default
   value, shown in Figure 11-4, is the maximum value for any category of data.

3 Press CHANGE.

   [The number of days entered in each field will be the new archive period for the
   type of files associated with that field. After the period specified, the addition of a
   new day's data will cause the earliest day's data to be removed from the file.]

Daily Data Archive

Purpose
To archive half-hour data into daily files on disk.
Half-hour historical data is automatically archived
on disk in your system. Daily Data Archive summarizes those
half-hour records into daily records.

Limitations
An archive can access half-hour data up to 31 days in the
past, depending on the archive parameter specified for half-
hour data (see the Archive Parameters procedures).

CMS automatically records and stores ACD historical data in half-hour increments. However, this half-hour data must be summarized into daily data before it can be used in reports such as the weekly and monthly historical reports. You use the Daily Data Archive screen to schedule this summary of half-hour data into daily data.

Though you can run a daily data archive at any time to gather and summarize half-hour data from up to 31 days in the past, you should schedule the archive to run after every work day to ensure that all half-hour data is recorded as daily data. The best time to schedule running of the archive is at night, after 12:30 a.m., to avoid congesting the system during busy daytime hours and to ensure that the day's last half-hour of data is archived. Also, since many other scheduled tasks will depend on the daily data generated from the daily data archive, the daily data archive should be the first scheduled task when the work day is over.

| NOTE | The Daily Data Archive process will not run unless you schedule it on the Daily Data Archive screen. |

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────────────┐    │
│  │ Call Management System                   Switch_Name:Up        Time   │    │
│  └──────────────────────────────────────────────────────────────────────┘    │
│                                                                               │
│                          DAILY DATA ARCHIVE                                   │
│     ┌─┐                                                                       │
│     │1│ Indicate the base day for historical data accumulation: -1           │
│     └─┘                                                                       │
│                                                                               │
│                                                                               │
│                                                                               │
│                                                                               │
│     ┌─────────────────────────────────────────────────────────────────┐      │
│     │ Error and confirmation messages appear in this field.           │      │
│     └─────────────────────────────────────────────────────────────────┘      │
│  ┌──────┐ ┌──────┐ ┌──────┐  ┌──────┐  ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐  │
│  │      │ │COMMAND│ │     │  │      │  │      │  │EXIT  │ │PRINT │ │HELP  │  │
│  │      │ │LINE  │ │     │  │      │  │      │  │      │ │SCREEN│ │KEYS  │  │
│  └──────┘ └──────┘ └──────┘  └──────┘  └──────┘  └──────┘ └──────┘ └──────┘  │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 11-5   The Daily Data Archive Screen

Definition of Field

      Field ☐1

      The day whose data is being archived, either as a relative or absolute date.

      Default: -1

NOTE	Daily Data Archive **must be invoked** either manually or on a scheduled basis for CMS to create a long-term archive of daily records for historical reporting. The Daily Data Archive screen can be used to schedule daily archives (its main purpose) or to perform archive procedures on a 1-time basis. The latter task is normally for redoing archives that failed as scheduled archives.

Scheduling Daily Data Archive

1   On the MAINTENANCE menu, select the   [ ] Daily-Data-Archive
    option and press RETURN.

    [The Daily Data Archive screen appears.]

2   Enter the date of the day to be archived in field 1.

    The date can take the -n, relative day form (where n is 0 or a positive
    integer), or it can take the MM/ DD/ YY form. When the Daily Data
    Archive screen is used to set up a regular archive schedule, the entry
    should be -1 for yesterday. You can also place a -0 (today) and from -2
    through -31 in this field; -0 would archive the half-hour data starting
    with midnight last night up through the last half-hour interval—in
    other words, a partial day.

    All daily records for days from the present back to the day specified
    will be rearchived.

3   Press COMMAND LINE, if you specified -1, to schedule the process sometime after
    1-2:30 a.m. This allows the final half-hour's data from the prior day to become
    available to the archive process.

    [A command line will be created, and you will be placed in the Scheduler
    subsystem.]

    NOTE Half-hour data is retained for a maximum of 31 days; therefore archiving
    can be performed a maximum of 31 days in the past.

Executing Daily Data Archive Now

1   On the `MAINTENANCE` menu, select the `[ ] Daily-Data-Archive` option and press RETURN.

[The Daily Data Archive screen appears.]

2   In field 1, type the date or relative day of the day you want to archive. All data back to the day specified will be replaced; you cannot rearchive only one day's data unless it is yesterday's.

> You can rearchive data a maximum of 31 days in the past. That is the maximum and default amount of time the CMS can retain the half-hour files out of which the archived daily files are made.

3   Press RETURN.

[The following message will appear:]

```
Call Management System                          Switch_Name:Up          Time


                          DAILY DATA ARCHIVE
    1   Indicate the base day for historical data accumulation -1

            Do you want daily dsave to run now? n




     Error and confirmation messages appear in this field.
```

	COMMAND LINE				EXIT	PRINT SCREEN	HELP KEYS

4   Change the *n* to a *y* and press $\boxed{\text{RETURN}}$.

The following message appears in the confirmation area of the screen.

$\boxed{\text{The DSAVE MANAGER has been successfully started in the BACKGROUND}}$

You will receive a Mail message when the archive has completed.

$\boxed{\textbf{NOTE}}$ Large databases could take several hours to run.

Error Log

Purpose   To generate a printout or display of the error log.
           Also, to administer the log's length.

Sometimes called CERR log, the CMS Error Log is a chronological output of unusual conditions, warnings, information, and errors detected by CMS. The main purpose of the log is to aid you in working on system problems and to aid AT&T Services personnel in clearing problems in your system.

Screen Description

```
┌──────────────────────────────────────────────────────────────────────────┐
│ ┌──────────────────────────────────────────────────────────────────────┐ │
│ │ Call Management System                    Switch_Name:Up        Time │ │
│ └──────────────────────────────────────────────────────────────────────┘ │
│                                                                            │
│                        MAINTENANCE - ERROR LOG                             │
│                                                                            │
│             ┌───┐                                                          │
│             │ 1 │  Allowed Number of CMS Error Log Entries: 200            │
│             └───┘                                                          │
│                                                                            │
│                                                                            │
│   ┌────────────────────────────────────────────────────────────┐          │
│   │  Error and confirmation messages appear in this field.      │          │
│   └────────────────────────────────────────────────────────────┘          │
│ ┌───────┐┌─────────┐┌────────┐  ┌──────┐  ┌──────┐ ┌──────┐┌──────┐┌──────┐│
│ │CHANGE ││COMMAND  ││REPORT  │  │MAIL  │  │      │ │EXIT  ││PRINT ││HELP  ││
│ │       ││LINE     ││        │  │      │  │      │ │      ││SCREEN││KEYS  ││
│ └───────┘└─────────┘└────────┘  └──────┘  └──────┘ └──────┘└──────┘└──────┘│
└──────────────────────────────────────────────────────────────────────────┘
```

Figure 11-6   Error Log Administration Screen

Definition of Field

Field $\boxed{1}$ Allowed Number

The maximum number of error-log records you want the error log to keep. When this number is reached, the oldest record is removed.

Default: 2-00

Generating a Log Output

1   On the `MAINTENANCE` menu, select the `[ ] Error-Log` option and press ⟨RETURN⟩.

    [The Error Log screen appears.]

2   Press ⟨REPORT⟩.

    [You will be prompted as to whether you want a display (terminal output), printout (printer output), or a report stored in a file.]

3   Enter *t, p*, or *f*, and press ⟨RETURN⟩.

    [If you enter *f* to send the report to a file, you will also be prompted to enter the file name or path.]

Sample Error Log

The following is a sample of an error log. Note that, when you are viewing the log on your screen, you have been moved to the UNIX system *vi* editor environment. However, you cannot edit the log; it is read-only.

The error log is sequential beginning with the latest record. The number of records included in the log can be administered. The procedure for administering the error log appears later in this section. It is not necessary for you as CMS administrator to understand these errors, but the information is provided if you wish to learn to diagnose system problems yourself.

Error Log

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│  ┌─────────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System                     Switch_Name:Up      Time │ │
│  └─────────────────────────────────────────────────────────────────────┘ │
│                                                                           │
│            09/23/89           CALL MANAGEMENT SYSTEM         Page 1        │
│                                                                           │
│                              Error Log Report                             │
│        Mon Sep 23 08:45:34 1989 SIP=scr_id, 0=src_err_num                 │
│        93-06 - FSTATE; itn 383 (899) was SEIZED from SEIZED               │
│            CMSsip=process, facmsgs.c=file, 249=line_num, 0=dups           │
│            WARN=event, 1=acd, 0=alarm_id,           =term                 │
│        Mon Sep23 08:45:45 1989 SIP=scr_id, 0=scr_err_num                  │
│        80-13 - msgsnd() failed; id=b                                      │
│            CMSsip=process, ipc_layer.c=file, 193=line_num, 24=dups        │
│            WARN=event, 1=acd, 0=alarm_id                                  │
│        Mon Sep 23 08:45:59 1989 SIP=scr_id 0=scr_err_num                  │
│        99-04 - Session with switch has been established                    │
│            CMSsip=process, appl_layer.c=file, 760=line_num 0=dups         │
│            INFO=event, 1=acd, 0=alarm_id            =term                 │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│  ┌──────┐ ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐   ┌──────┐ ┌────┐ ┌────┐ │
│  │SEARCH│ │SEARCH│ │SEARCH│   │PREV  │ │NEXT  │   │EXIT  │ │    │ │    │ │
│  │NEXT  │ │PREV  │ │NEXT  │   │PAGE  │ │PAGE  │   │      │ │    │ │    │ │
│  └──────┘ └──────┘ └──────┘   └──────┘ └──────┘   └──────┘ └────┘ └────┘ │
└─────────────────────────────────────────────────────────────────────────┘
```

The SLKs for a terminal output of an Error Log report have the following meanings:

SEARCH   Pressing this key invokes the string-search *vi* command. This puts a backslash (/) in the command line of the screen, allowing you to place any string of characters you desire after the backslash. Then by pressing ⎡RETURN⎤ you will get the search function and be moved to the string's location in the report.

SEARCH PREV   Once you have done a search, you can press this key to return to the previous instance of the string in the file.

SEARCH NEXT   Once you have done a search, you can press this key to move ahead to the next instance of the string in the file.

NEXT PAGE   Moves you to the next page of the report.

PREV PAGE   Moves you to the previous page of the report.

EXIT   Returns you to the Error Log screen.

Log entries consist of the following information, as shown in the Table 11-2:

Table 11-2   Definitions of Entries on the Error Log

Log Item	Definition
Date	The log contains the date and time when the error was detected.
Source ID (src id)	This tells you the source of the error. The significant outputs here would be the UNIX system or INFORMIX — sources outside CMS that have their own error codes.
Source Error Number (src err num)	This tells you the number of the error within the source process. You can use this to look up the error-recovery action in the UNIX system (UNIX system errno) or INFORMIX manuals.
The error code and text	A-4-digit error code and text are on the same line in the log. Expanded information on the error is available in the INFORMIX *txt cerr* file. The procedure to get expanded information appears later in this section.
Process	This tells which CMS process detected the error.
File and Line Number	These tell you the source code file within the CMS process and the line number which detected the error (CMS is shipped in object code form).
Duplicates (dups)	This tells you how many times the same error has occurred within a brief period. A threshold of 10 occurrences per day exists before dups reports anything. Separate occurrences are not logged after the dups threshold has been reached.
Event	This tells you the severity of the error. There are three levels, INFO (information, no disruption of processing), WARN (warning, no disruption, potential problem), and FATAL (serious malfunction).
ACD (acd)	This tells you the internal number of the switch where the error occurred. It will always be acd=1 in systems linked to a single switch.
Alarm ID	The alarm number. A sufficient number of errors with the same ID will generate a remote alarm at the AT&T remote maintenance site. For more information on remote alarming, see Chapter 1, ''Introduction.''
Terminal (term)	The internal number of the terminal (tty01, tty02, etc.) attached to the process detecting the error. This can indicate terminal-related problems.

Administering the Error Log

1   On the `MAINTENANCE` menu, select the `[ ] Error-Log` option and press `RETURN`.

[The Error Log screen appears.]

2   Enter the maximum number of error records you want kept in the database file. You may enter any value from 0 to 900. Note that more disk space is required for larger numbers of records, but less history for troubleshooting is available when you keep fewer records. If you have questions on disk usage, check with your technician.

3   Press `CHANGE`.

Getting Expanded Information About an Error

1   Select the `UNIX` system option from the CMS main menu.

[The UNIX system prompt (*$*) appears.]

2   Change UNIX system directories by entering the following command:

```
$ cd  /cms/maint/text
```

3   Press `RETURN`.

[You will get a new *$* prompt.]

4   Enter the command *informix* and press RETURN.

```
$ informix
```

The INFORMIX master menu will appear.

5   Select Option 1, PERFORM.

[You will get a menu of textfiles.]

6   Select the *exp cerr* option— the error text file.

7   Follow the instructions to get expanded error information. You request this by Source Error Number of the error message, so be sure to have that available. It is in the Error Log.

Forecast Manager

Purpose   To schedule forecast manager processing.
           The forecast manager archives Special Day data in the
           forecast system, creates a Current Day Forecast,
           deletes the previous day's Current Day Forecast,
           and places today's administrative changes (e.g., creation
           of a new special day) in the forecast system.
Limitation Should be run during off-peak hours
           to avoid congesting the system.

The Forecast subsystem generates forecast reports in large part by manipulating half-hour historical data. However, to generate Special Day forecast reports, historical data must be retrieved from the half-hour historical database and placed in the forecast database by the Forecast Manager. You use the Forecast Manager screen to schedule this archiving of data into the forecast database. If for some reason the Forecast Manager has been inactive, you can have it go back and retrieve Special Day data from up to 31 days in the past.

The Forecast Manager also generates the Current Day forecast using half-hour data from the previous 3 weeks. Therefore, Current Day forecasts will not be accurate until CMS has collected half-hour data for the 3 weeks immediately preceding the day you order a report. Although the Forecast Manager generates the Current Day forecast automatically, you will still have to order the forecast using the appropriate screen in the Forecast subsystem.

Though you can run the Forecast Manager at any time, you should run it after every work day or soon after 12:30 a.m. to ensure the capture of all half-hour data for the previous day and to avoid using processor time during normal operations.

NOTE When the Forecast Manager completes a run, CMS enters a message on the Error Log to show whether the run has been successful. However, the following message in your Error Log,

"Current day forecast created, but may be incomplete."

does not ordinarily mean the collection of forecast data has been unsuccessful. Rather, it merely indicates that the Forecast Manager has collected data only for the splits you have active, and that CMS has looked for, but not found, data in the rest of the 60 possible splits for your ACD.

On the other hand, if additional forecast messages appear in the Error Log with the preceding message, an actual problem may exist with your forecast data collection.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│  ┌─────────────────────────────────────────────────────────────────┐ │
│  │ Call Management System                    Switch_Name:Up    Time │ │
│  └─────────────────────────────────────────────────────────────────┘ │
│                                                                       │
│                                                                       │
│                   MAINTENANCE -- FORECAST MANAGER                     │
│                                                                       │
│     ┌─┐                                                               │
│     │1│   Please indicate the base day for the forecast report data: -1_____ │
│     └─┘                                                               │
│                                                                       │
│                                                                       │
│                                                                       │
│  ┌──────────────────────────────────────────────────────┐            │
│  │   Error and confirmation messages appear in this field. │          │
│  └──────────────────────────────────────────────────────┘            │
│  ┌─────┐ ┌───────┐ ┌─────┐  ┌──────┐ ┌──────┐  ┌──────┐ ┌──────┐ ┌──────┐ │
│  │     │ │COMMAND│ │     │  │      │ │      │  │EXIT  │ │PRINT │ │HELP  │ │
│  │     │ │LINE   │ │     │  │      │ │      │  │      │ │SCREEN│ │KEYS  │ │
│  └─────┘ └───────┘ └─────┘  └──────┘ └──────┘  └──────┘ └──────┘ └──────┘ │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 11-7   Forecast Manager Screen

Definition of Field

Field ⃞1 Base Day

The single field on this screen contains the day or date from which the forecast manager retrieves data and archives it in the forecast database. The forecast manager places Special Day forecast data plus administration data from forecast administration screens in a forecast database and generates a current day forecast. Normally, it is scheduled to do this daily. This field asks you which day's data you want the manager to archive. As a rule, it is yesterday's data — which is entered as -1. But it can be any MM/ DD/ YY format date in the past, or any relative day in the past such as -10, -4, and so on. The circumstances for *not* putting -1 in this field would usually be that the normal, daily forecast manager execution failed to occur on a given day for some reason. The maximum number in this field is -31.

Default: -1

Administering the Forecast Manager

1   On the MAINTENANCE menu, select the [ ] Forecast-Manager option
    and press RETURN.

    [The Forecast Manager screen appears.]

2   In the Base Day field, type the base day desired — normally -1 for yesterday.
    In this mode, the manager can run daily, generating Current Day forecast everyday
    and archiving yesterday's administration inputs and Special Day data, if any. Any
    MM/ DD/ YY format date in the past (up to the half-hour-data archiving parameters
    limits you have set for your system) can be entered as well to gather Special Day
    data that was not collected previously.

3   Press COMMAND LINE or RETURN.

    [If you press COMMAND LINE, a command line will be created, and you will be placed
    in the Scheduler subsystem.]

    [If you press RETURN, you will be asked to confirm you choice. When you do, the
    forecast manager will immediately start processing in the background.]

Session Status

Purpose	To specify the number of splits being measured by CMS.
	Also to view the current status of the data link to the switch.
Dependencies	Switch (MAAP, SMT — DEFINITY Communications System, Generic 2 and System 85 ; SAT — DEFINITY Communications System, Generic 1 and System 75) translations defining configuration and measurement of the ACD, including extensions, trunks, trunk groups, and splits.

You use the Session Status screen to monitor the data link between the 3B and the switch. Additionally, you can disconnect the link using this screen — a task required when performing some types of administration on the switch. Finally, if you change the number of measured splits in the system, you must make an adjustment to this screen. Restrictions exist on the addition of splits. See Tables 1-1 and 1-2 in Chapter 1, "Introduction," for the limitations.

Screen Description

```
┌─────────────────────────────────────────────────────────────────────────┐
│ Call Management System                         Switch_Name:Up       Time  │
│                                                                           │
│                        MAINTENANCE -- SESSION STATUS                       │
│                   1  Link: _____                                    │
│               2  Session: _____                                       │
│                   3  CMS: _____                                         │
│                                                                           │
│               4  Local Time: __/__/__   __:__:__                          │
│               5  Switch Time: __/__/__   __:__:__                         │
│                                                                           │
│       6  Previous Interval (  ): _____                │
│       7   Current Interval (  ): _____                │
│                                                                           │
│                   8  Splits: __          12  Measured: __                 │
│            9  Agent Positions: __                                         │
│             10  Trunk Groups: __                                          │
│                 11  Trunks: __                                            │
│                                                                           │
│    Error and confirmation messages appear in this field.                  │
│                                                                           │
│  ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐ ┌──────┐ ┌──────┐ ┌──────┐ │
│  │ CHANGE │ │CONNECT │ │RELEASE │ │        │ │        │ │ EXIT │ │PRINT │ │ HELP │ │
│  │        │ │        │ │        │ │        │ │        │ │      │ │SCREEN│ │ KEYS │ │
│  └────────┘ └────────┘ └────────┘ └────────┘ └────────┘ └──────┘ └──────┘ └──────┘ │
└─────────────────────────────────────────────────────────────────────────┘
```
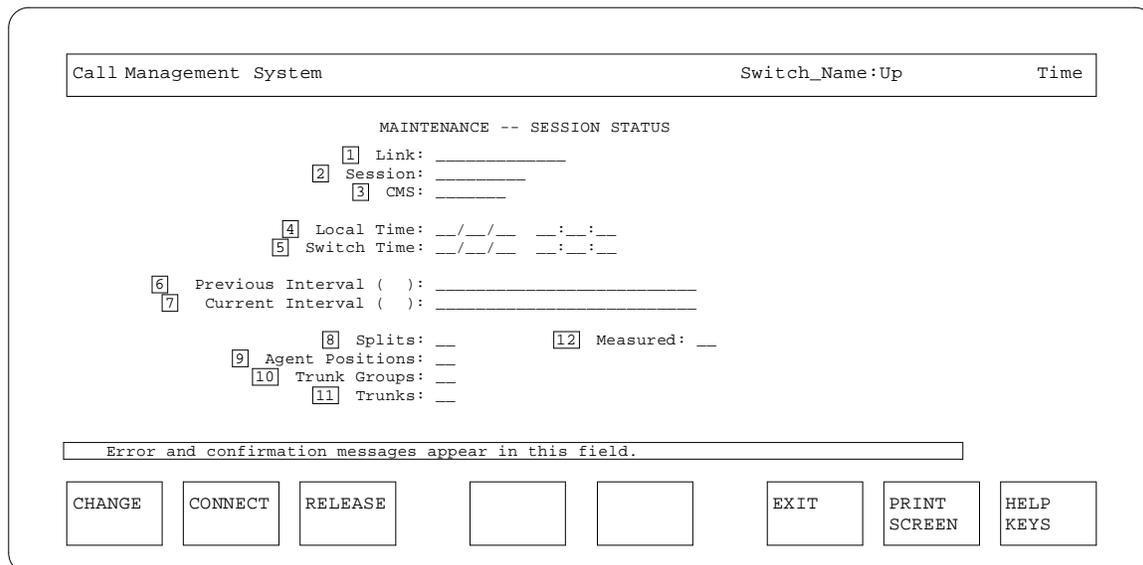
Figure 11-8   Session Status Screen

Definition of Fields

| NOTE | All fields are read-only except the `Measured:` field (field 12). |

Field ① Link

This field shows the status of the hardware and packet layer of the communication between the 3B and the switch. This is the lowest layer of the communication monitored by the Session Status screen. Possible status: "Down" or "Up." When you press the ⌈CONNECT⌋ button, the X.25 software attempts to bring up this layer. The status should go to "Up."

Field ② Session

This field shows the status of the session layer of link between the switch and the 3B. Possible status: "Quiescent," "Waiting Session Accept," and "Data Transfer." When the Link layer is "Up," the session layer goes through its initialization sequence from "Quiescent," to "Waiting Session Accept," to "Resynchronizing," to "Data Transfer," the last being (for normal operation) the steady state.

Field ③ CMS

This field shows the status of CMS layer of communication between 3B and switch. Possible status: "Quiescent," "Requesting Translations," "Data Transfer," "Busied-Out," and "Aborted — Retrying." As the session attempts to come up, the CMS layer should come up through the "Quiescent" and "Request Translations" states to "Data Transfer." "Busied Out" means the link was terminated from the switch. "Aborted" means the attempt to connect to the switch failed. An error message on the Session Status screen should clarify the reason for the aborted attempt — for example, invalid ACD translations entered at the switch.

Field ④ Local Time

Time recorded by 3B. An "out of sync" message in this field indicates a need to resynchronize the 3B and switch clocks.

Field ⑤ Switch Time

Time recorded by the switch. If an "approximate" message appears in this field, it is the 3B's attempt to estimate switch time during a link-down condition.

Field ⑥ Previous Interval

Status of the previous half-hour interval of the real-time database. Possible status: "Unconfigured," "Ready," "Archiving," or "Archived."

Field ☐7 Current Interval

Status of the current half-hour interval of the real-time database. Possible status: "Unconfigured," "Active," or "Quiescent."

Field ☐8 Splits

Displays the number of ACD splits being measured by CMS.

Field ☐9 Agent Positions

Displays the number of agent positions being measured by CMS.

Field ☐10 Trunk Groups

Displays the number of trunk groups being measured by CMS.

Field ☐11 Trunks

Displays the number of trunks being measured by CMS.

Field ☐12 Measured Splits

Entry field for number of splits the CMS will measure. This is an input/output field.

Administering the Number of Measured Splits

NOTE	You can change the number of measured splits in CMS only when the link between the switch and the 3B computer is "Down." Also, only the lowest, consecutively-numbered splits in the switch translations for the ACD can be measured. (Splits must be numbered sequentially beginning with the number one (1) for all PBXs.)

CAUTION	Before you increase the number of splits in the Session Status screen, you may have to execute the *swsetup* command to increase the shared memory allocation for the increased split. The shared memory allocation feature of the CMS (specified during the CMS software installation) sets the upper limit in the number of measured splits. See Chapter 12, "UNIX System," for more information on increasing measured splits and the *swsetup* command.

If new splits are going to be measured, it is also possible that additional disk storage capacity will be required in your 3B computer. You should recheck the assumptions used to select the present storage capacity of your system to see if the capacity will be exceeded when you add new splits. See Tables 1-1 and 1-2 in Chapter 1, "Introduction," and check with your AT&T Account Team.

1   On the MAINTENANCE menu, select the [ ] Session-Status option and press RETURN.

   [The Session Status screen appears.]

2   Press RELEASE.

   [The following question appears: Real-time data may be lost! Continue with RELEASE? n.]

3   Type *y* in response to the question.

   [This terminates the session. The Link field should read "Down," the Session field should read "Quiescent," and the CMS field should read "Quiescent."]

4   In the Measured field, type the number of splits you desire to be measured by CMS.

5   Press the CHANGE and CONNECT SLKs to resume communication between the switch and CMS.

   [The Link: field should change to "Up," the Session: field should change to "Data Transfer," and the CMS: field should change to "Data Transfer."]

> **NOTE** If the link comes up and the `Measured:` and the `Splits:` field are not equal, an error condition exists. The `Splits:` field reverts to 0. You may have to execute the *swsetup* command to increase the shared memory allocation for the increased split. See Chapter 12, "UNIX System."

Checking Session Status

1   On the `MAINTENANCE` menu, select the `[ ] Session-Status` option and press `RETURN`.

   [The Session Status screen appears.]

2   Check the `Link:`, `Session:`, and `CMS:` fields. A working session consists of the Link layer being "Up," the session layer being in the "Data Transfer" mode, and the CMS layer being in the "Data Transfer" mode.

3   Check the synchronization of the clocks. If they are more than 5 minutes apart, you should resynchronize them. Your side of this is the 3B; use the *sysadm datetime* command (3B2) to administer the 3B's clock. See the procedure for changing the 3B clock in Chapter 12, "UNIX System."
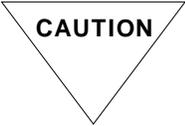
   > **CAUTION** The switch-3B communication will be interrupted with a resulting loss of data if, instead of changing the 3B's clock, you administer the switch's clock and make any backward change or a forward change of more than 5 minutes. If the change is forward by less than 5 minutes there will be no interruption, but the totals for the current half-hour's data will be invalidated by the reduction in the length of the current interval.

4   Monitor the two intervals of the real-time database. The current half-hour should be active, or the previous half-hour should be in an archiving phase. Each half-hour, the current half-hour portion of the real-time database is archived in the previous half-hour portion.

5   Check the `Splits:`, `Agent Positions:`, `Trunk Groups:`, `Trunks:`, and `Measured:` fields to assure that your expectations on configuration of the measured portion of the ACD are met.

Connecting the 3B and the Switch

1 On the MAINTENANCE menu, select the [ ] Session-Status option and press [RETURN].

[The Session Status screen appears.]

2 Note the status of the three layers of the link. They should be "Down," "Quiescent," and "Quiescent."

3 Press [CONNECT].

[The session should start to come up. The "Session" layer should change from "Quiescent," to "Waiting Session Accept," to "Data Transfer." The CMS layer should change from "Quiescent" to "Request Translations" to "Data Transfer."]

4 If the link fails to come up, perform the following diagnostic steps:

a Check for error messages on the Session Status screen. The reason for failure should be given.

b Use the [EXPANDED MESSAGE] SLK to clarify the error message, if necessary.

c If the Link layer fails to come up, check the cable connection between the 3B and the switch.

d Check with the switch administrator, the local technician, or the Remote Maintenance, Administration, and Traffic System (RMATS) to see that any "busy-outs" performed at the switch have been eliminated. If the Link layer fails to come up, it is possible that the interface process at the switch (the DCIU or PIB) has been busied out or disabled. If the CMS application layer fails to come up, it is possible that the CMS has been busied out.

e Review Chapter 3 in the *3B2 CMS Installation and Maintenance* (5-85-2-15-104) document, which covers initialization of the 3B including bringing up the PBX-3B link.

Terminating the 3B-Switch Link

This procedure must be performed when the number of measured splits is changed on the Session Status screen.

1   On the MAINTENANCE menu, select the `[ ] Session-Status` option and press RETURN.

   [The Session Status screen appears.]

2   Check the status of the link. It should be: "Up," "Data Transfer," and "Data Transfer."

3   Press RELEASE.

   [The following question appears: `Real-time data may be lost! Continue with RELEASE? n.`]

4   Type *y* in response to the question.

   [The status of the three layers should change to: "Down," "Quiescent," and "Quiescent."]

NOTES

General Information

You can access the UNIX system by logging in as *root* from the console terminal or by selecting the UNIX system option from the CMS main menu. Figure 12-1 illustrates access to the UNIX system from the CMS main menu.
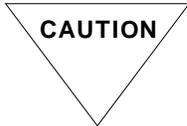
⬡ **CAUTION** Be careful when accessing the UNIX system to execute UNIX system commands. Damage can result to CMS because of incorrect use of the UNIX system commands. Before you execute any UNIX system command, be sure you know what effect it will have.
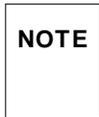
NOTE To perform some of the procedures in the UNIX system section of this chapter, you will need to know the *root* password for your system.

```
$




                                                                    EXIT
```

Figure 12-1   **UNIX System Screen**

CMS Directory Names

The most important UNIX system directory names are as follows:

Under */cms*:

acd1
acd2 ... (up to four)
acdmodel
acerpts
bin
cdisplays
creports
field
flatfiles
lib
loadasc
maint
reports
schemas
termsrc

Under */cms/acdn* (where n is the number of a separate directory for each ACD in a multi-ACD system):

admin
agtrace
db
dsave
except
maint
reports
schd
schdinfo
standard
users

Formatting Tapes (3B2/310 or 3B2/400)

The cartridge tapes must be formatted before you can back up data. To format the cartridge tapes, do the following.

| NOTE | If the 3B2/ 310 or 3B2/ 400 has a Small Computer System Interface (SCSI) cartridge tape drive, the cartridge tapes do not require formatting. |

1 Have a backup cartridge tape available.

2 Select the UNIX system option from the CMS main menu and press RETURN.

   [The UNIX system prompt $ appears.]

```
$
```

3 At the $ prompt, enter the following command:

```
$ su -
```

   and press RETURN.

4   Enter the *root* password at the prompt, and press [RETURN].

[The # prompt appears.]

```
#
```

5   At the # prompt, enter sysadm and press [RETURN].
[The following screen appears.]

```
           SYSTEM ADMINISTRATION
 1.  diagnostics     system diagnostics menu
 2.  diskmgmt        disk management menu
 3.  filemgmt        file management menu
 4.  machinemgmt     machine management menu
 5.  packagemgmt     package management menu
 6.  softwaremgmt    software management menu
 7.  syssetup        system setup menu
 8.  tapemgmt        tape management menu
 9.  ttymgmt         tty management menu
10.  usermgmt        user management menu
Enter a number, a name, the initial part of a name, or
? or <number>? for HELP, q to QUIT:
```

6   Enter **8** and press RETURN.

[The following screen appears.]

```
                    TAPE MANAGEMENT
1.   checkfsys     check a removable medium file system for errors
2.   compress      Compress file system
3.   format        Format removable cartridge tapes
4.   info          Display tape drive information
5.   makefsys      create a new file system on a removable medium
6.   mountfsys     mount a removable medium file system
7.   resetusage    Reset tape drive usage count
8.   umountfsys    umount a removable medium file system

Enter a number, a name, the initial part of a name, or
? or <number>? for HELP, ^ to GO BACK, q to QUIT:
```

7   Enter **3** and press RETURN.

[The following screen appears.]

```
Do you want the tape cartridge format verified? [default: y), n, q, ?]:
```

8   Enter y and press RETURN.

[The following screen appears.]

```
Enter the maximum number of passes allowed for this tape cartridge before
it should be discarded [ (default is 4000) q to QUIT ]:
```

9   Press RETURN to select the default.

[The following screen appears.]

```
Insert tape,
and press the <RETURN> key when ready [q]:
```

NOTE   Allow 5 minutes for the tape to retension.

10 Insert the tape, making sure the exposed tape is to the right. (For a Cartridge Tape
Controller [CTC] or a Small Computer System Interface [SCSI] cartridge tape drive,
the tape goes on the left side.) Lock the drive, and press RETURN.

[The tape will format in about 20 minutes.]

Backing Up the File Systems From the UNIX System Environment

You should back up the *root* (/) and the */usr* file systems on separate cartridge tapes. The number of cartridge tapes required to back up the CMS software will vary depending how many file systems the CMS software resides on:

> */cms* is on disk drive 1.
>
> */cmsdsk1* is on disk drive 2, if equipped.
>
> */cmsdsk2* is on disk drive 3, if equipped.
>
> */cmsdsk3* is on disk drive 4, if equipped.
>
> */cmsdsk4* is on disk drive 5, if equipped.

Before starting the backup procedures in this section, log in as *root* and execute the following commands to obtain the amount of remaining disk space. These commands provide information on the amount of available disk space and are not required to perform a backup:

```
# df -t > /usr/tmp/df
# lp /usr/tmp/df
# rm /usr/tmp/df
```

| NOTE | The file system information obtained from the printout of the **df -t** command should be kept for future reference. |

To back up the file systems from the UNIX system environment, do the following steps:

1   At the system console, log in as *root* and put the computer into the single-user state (run-level s) by executing the following command:

```
# shutdown –g60 –y –i1
```

▽ **CAUTION** Whenever you are in the single-user mode, the link is down and data is not being collected.

2   In the single-user state, execute the following command to mount all file systems:

```
# mountall
```
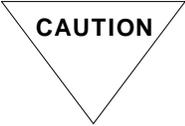
3   Obtain a cartridge tape for each file system.

NOTE If the host computer is a 3B2/ 310 or 3B2/ 400 with a Cartridge Tape Controller (CTC) and a standard cartridge tape drive, the cartridge tape has to be formatted. If a cartridge tape has not been formatted, refer to the section *Formatting Tapes (3B2/ 310 or 3B2/ 400)* in this chapter.

If the host computer is a 3B2/ 310, 3B2/ 400, 3B2/ 500 or 3B2/ 600 with a Small Computer System Interface (SCSI) cartridge tape drive, the cartridge tapes used with SCSI cartridge tape drives do not require formatting.

4   Execute the following command to access the File Management Menu:

```
# sysadm filemgmt
```

The following screen appears.

```
              FILE MANAGEMENT

1 backup      backup files from built-in disk to removable media
2 bupsched    backup reminder scheduling menu
3 diskuse     display how much of the built-in disks are being used
4 fileage     list files older than a particular date
5 filesize    list the largest files in a particular directory
6 hsbackup    high speed backup of file system
7 hsrestore   high speed restore of a file system
8 restore     restore files from "backup" & "store" media to built-in disk
9 store       store files and directories of files onto removable media

Enter a number, a name, the initial part of a name, or
? or <number>? for HELP, q to QUIT: 1
```

| NOTE | With a CTC, you will not see 6 and 7 (hsbackup and hsrestore). If you have a SCSI-based cartridge tape system, these high-speed commands can be used to back up the CMS file systems. See the following section, "High Speed Backup." |

5   Enter 1 and press RETURN.

[The following screen appears.]

```
Available file systems:
/           /cmsdsk1      /cmsdsk2      /cmsdsk3      /usr          ALL
/cms
Enter file system(s) you want to backup [?, q]:
```

NOTE   The file systems listed in the screen may vary. Each file system should be backed up on a separate formatted cartridge tape.

NOTE   The remainder of the *backup* procedures in this section are presented here only to show you how the **sysadm backup** command is used to back up the **/** file system.

6   Enter **/** and press RETURN.

[The following screen appears.]

```
Select complete or incremental backup [c, i, ?, q]:
```

7   Enter **c** and press ⃞RETURN⃞.

[The following question appears.]

```
Print each file name as it is copied? [y, n, ?, q]
```

8   Enter **y** to see each file name printed as it is copied to tape, or enter **n** if you don't and press ⃞RETURN⃞.

[The following screen appears.]

```
Select which drive to use:
    1 ctape1          2 diskette1
Enter a number, a name, the initial part of a name, or
? for HELP, q to QUIT:
```

9   Enter **1** to back up the file system onto the cartridge tape and press ⃞RETURN⃞.

With a SCSI, select the `qtape` option.

10 Label the cartridge tape for future reference.

[The following message appears.]

```
Before inserting the first part into the ctape1 drive, mark it:

        Complete Backup of /,
        Wed. 05/10/89, 03:07:22 PM
                part 1

Insert the medium in the ctape1 drive.  Press <RETURN> when ready [q]
```

11 Insert the cartridge tape into the disk drive and press RETURN.

[The following message appears.]

```
Do you want backup to perform a verify pass? [y, n, ?]
```

12 Enter **y** to verify that the files were properly copied from disk to tape and press RETURN.

[The following message appears.]

```
Available file systems:
/   /cms   /usr   ALL
Enter file system(s) you want to backup [?, q]:
```

13 Enter the name of the file system you want to back up and press RETURN.

14 Continue with the **sysadm backup** program to back up the CMS file systems (*/cms, /cmsdsk1, /cmsdsk2,* etc.).

15 Execute the following command to put the 3B2 computer back in the multiuser state:

```
# shutdown -g0 -y -i6
```

NOTE | Each CMS file system should be backed up on a separate cartridge tape. Be sure to mark the backup tapes as recommended by the **backup** program.

High-Speed Backup

If your host computer has a SCSI-based cartridge tape system, the **hsbackup** program can be used to back up the file systems associated with CMS. This process is faster than the standard **backup** program. However, the / and /usr file systems can only be backed up by using the standard **backup** program. For more information about the **hsbackup** program, refer to the *AT&T 3B2 Computer UNIX System V Release 3 System Administrator's Guide* (3-05-554).

| NOTE | Cartridge tapes containing file systems backed up with the **hsbackup** program can only be restored by using the **hsrestore** program. |

To back up the file systems from the UNIX system environment, do the following steps:

1   At the system console, log in as *root* and put the computer into the single-user state (run-level s)by executing the following command:

```
# shutdown –g60 –y –i1
```

| CAUTION | Whenever you are in the single-user mode, the link is down and data is not being collected. |

2   In the single-user state, execute the following command to mount all file systems:

```
# mountall
```

3   Obtain a cartridge tape for each CMS file system.

> **NOTE**   The cartridge tapes used with SCSI cartridge tape drives do not require formatting.

4   Execute the following command to access the File Management Menu:

```
# sysadm filemgmt
```

The following screen appears.

```
                 FILE MANAGEMENT
1 backup      backup files from built-in disk to removable media
2 bupsched    backup reminder scheduling menu
3 diskuse     display how much of the built-in disks are being used
4 fileage     list files older than a particular date
5 filesize    list the largest files in a particular directory
6 hsbackup    high speed backup of file system
7 hsrestore   high speed restore of a file system
8 restore     restore files from "backup" & "store" media to built-in disk
9 store       store files and directories of files onto removable media

Enter a number, a name, the initial part of a name, or
? or <number>? for HELP, q to QUIT: 1
```

5 Enter **6** and press ⌈RETURN⌉.

[The following screen appears.]

```
Which drive contains the file system that you want to backup?
    1 disk1           2 disk2           3 disk3           4 disk4
Enter a number, a name, the initial part of a name, or
? for HELP, q to QUIT:
```

6   Enter the disk that contains the file system you want to back up and press [RETURN].

[The following screen appears.]

```
Select the file system you wish to backup:
[ 8(fs:cms) (q for quit)]:
```

7   Enter the file system you want to back up and press [RETURN].

[The following messages appear.]

```
     The selected partition contains:
          File System Name "cms"; Label Name "3.2"; Size = 84078
```

```
Select which drive the file system will be copied to.
  1 disk1          3 disk3          4 disk4          5 qtape1
  2 disk2
Enter a number, a name, the initial part of a name or
? for HELP, q to QUIT:
```

8   Enter **qtape1** and press [RETURN].

[The following screen appears.]

```
Before inserting the first tape onto the drive, mark it:

        Volume Backup of cms
        sysadm hsbackup - 1 cartridge
        Wed. 05/10/89, 03:34:23 PM
```

9   Mark the tape before you insert it into the cartridge tape the drive.

[The following message appears.]

```
Insert the tape in the drive.  Press <RETURN> when ready. [q]
```

10 Insert the tape into the cartridge tape drive and press RETURN.

[The following messages appear.]

```
****************************************************************************
NOTE!!!
Before the hsbackup begins, you may receive warning messages from the "volcopy"
command.  These messages will require a response of "y" to continue.

The source is disk1 drive partition 8.
This drive is known as /dev/rdsk/c1d0s8 by volcopy.

The destination is qtape1 drive known as /dev/rmt/c1t2d0s1 by volcopy.

The number of blocks copied will be displayed at the end.
The volcopy supports the multi-cartridge/multi-drive feature.
Please refer to the manual page "volcopy(1m)" with questions.
****************************************************************************
Starting backup of cms:
```

| NOTE | The disk drive listed in the screen may vary. |

```
Tape 3.2, 2032 feet, 6250 BPI
You will need 1 tape(s).
(           The same size and density is expected for all tapes)
From: /dev/rdsk/c1d0s8, to: /dev/rmt/c1t2d0s1? (DEL if wrong)
Retensioning tape. Please wait.

Writing tape 1 of 1, VOL = 3.2
  END: 84078 blocks.

backup of  cms  onto /dev/rmt/c1t2d0s1 finished.
You may remove the tape when the rewind completes.

Press the RETURN key to see the filemgmt menu [?, q]:
```

11 Continue with the **sysadm hsbackup** program to back up the remaining CMS file systems (/ cmsdsk1, / cmsdsk2, etc.) or enter **q** to quit and press RETURN.

Each CMS file system should be backed up on a separate cartridge tape. Be sure to mark the backup tapes as recommend by the **hsbackup** program.

Changing the Date or Time

The UNIX system time is displayed at the top of most CMS screens, and the local time (UNIX system time) and the switch time are displayed in the "Session-Status" screen of the "MAINTENANCE" feature.

If the difference between the UNIX system time and the switch time is less than 5 minutes, you don't have to change the UNIX system time unless you have scheduled CMS programs that must run with no time tolerances.

Changing the UNIX system time or the switch time may cause a small distortion in the CMS data when the change is made. A small amount of data may also be lost when the change occurs. For example, if the UNIX system time is advanced, the switch connection is reestablished which causes a small amount of data to be lost.

> **NOTE** One of the most common causes of a time difference between the computer and the switch is daylight savings time. In the **sysadm setup** command, you are asked for the time-zone offset and daylight savings time. Answer **no** to the daylight savings time question. You must then manually change the date and time using the following procedures.

How to Change the Date or Time

To change the UNIX system time on the 3B2 computer, do the following steps:

1 At the system console terminal, log in as *root*.

2 Execute the following command to change the date or time:

```
# sysadm datetime
```

Follow the instructions printed on the screen to change the date and time. For more detailed information on your particular 3B2 computer, refer to your owner/operator manual.

3 To exit from the **sysadm datetime** program after you have changed the UNIX system time, enter "q".

Increasing Splits, Agents, Trunks, and Trunk Groups

The switch parameters (numbers of splits, agents, trunks, and trunk groups) in CMS must be equal to or greater than the numbers set up on the switch. When they are not, you must use the *swsetup* command to change the numbers in CMS.

| NOTE | If your system has Call Vectoring, you must also use this procedure to increase the number of VDNs and vectors. |

These numbers are initially established when your system is installed. However, you will have to change the numbers in CMS if either of the following events occur:

Your switch is upgraded to a new release

The number of measured splits, agents, trunks, or trunk groups is changed on the switch.
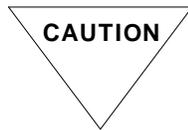
| CAUTION | If the number of measured splits, agents, trunk groups, or trunks exceed the quantities defined in the SHARED MEMORY ALLOCATION in CMS, the link between CMS and the switch will try **unsuccessfully** to initialize. **Also, during these initialization attempts, ACD agents will not be able to login or logout.** Therefore, before you increase the number of measured splits, agents, trunk groups, or trunks on the switch, you may need to increase the shared memory allocation quantities (s ws e t up command) on CMS. |

| NOTE | You can increase the number of measured splits using the Session Status screen (see Chapter 11, "Maintenance"). However, you must still use the *swsetup* command to increase the shared memory allocation quantites for the increase in splits. |

1   At the system console terminal, log in as *root* and execute the following commands:

```
# shutdown -g60 -y -i1
# mountall
# rmqueues
```

2   Next, execute the following command to verify that the queues were removed:

```
# ipcs -a
```

If all the queues were not removed, use the **ipcrm** command to remove them. [Refer to *Section 1* of the *UNIX System User Reference Manual*, (305-511).]

3   Execute the following command to change the switch parameters:

```
# /cms/bin/swsetup /cms/<ACDHOME>
```

Where <ACDHOME> equals *acd1, acd2, acd3,* or *acd4* (whichever applies).

4   Answer the questions to the **swsetup** script and make changes to the ACD as necessary.

The following two screen illustrations show the **swsetup** script.

NOTE	The field inputs shown in the following illustrations are only examples. The actual inputs that you enter may be quite different.

```
You must be in 'root' and in 'single-user' to make changes.

SWITCH IDENTIFICATION
        name: MAGIC_KINGDOM
        type: S85
     release: R2V3

Do you want to change switch identification (yes,no)? _

SWITCH CONNECTION
        link: 1
        port: 64
   time zone: 0

Do you want to change switch connection (yes,no)? _
```

```
SHARED MEMORY ALLOCATION
        splits: 40
        agents: 500
  trunk groups: 250
        trunks: 250
 unmeas trunks: 100

Do you want to change data base allocation (yes,no)? y
splits (1 - 60): _
agents (1 - 1024): _
trunk groups (0 - 255): _
trunks (0 - 1400): _
unmeasured facilities (100 - 1250): _

changes were saved successfully
$
```
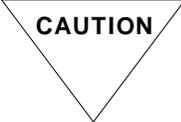
CAUTION   If the number of measured splits, agents, trunk groups, or trunks exceed the quantities defined in the SHARED MEMORY ALLOCATION in CMS, the link between CMS and the switch will try **unsuccessfully** to initialize. **Also, during these initialization attempts, ACD agents will not be able to login or logout.** Therefore, before you increase the number of measured splits, agents, trunk groups, or trunks on the switch, you may need to increase the shared memory allocation quantities (s ws e t up command) on CMS.

5   Execute the following command to put the 3B2 computer in the multiuser state:

```
# shutdown -g0 -y -i6
```

6   Log in as *acd1, acd2, acd3,* or *acd4* (whichever applies), and verify that the measured components listed on the Session Status screen are correct.

Viewing or Printing a Report Sent to a File

If you have sent a Standard Historical, Custom Historical, Exception, Forecast, or Agent Trace report to a file, you can view or print that report with the following procedure:

1   Select the UNIX option on the CMS Main Menu.

    [The UNIX screen appears.]

2   Type the following command and press $\boxed{\text{RETURN}}$ to view the report:

```
$ vi <report filename>
```

    [The report will appear on the screen.]

3   To leave vi, type ZZ or :wq. See Appendix A for more vi commands.

4   To print the report, type the following command and press $\boxed{\text{RETURN}}$:

```
$ lp <report filename>
```

    [The report will be printed on your default system printer.]

NOTE	If you do not remember the file name of your report, you can type *ls -C* at the $ prompt to get a list of all reports (in addition to other files) that have been sent to a UNIX system file.

Removing the Screen Flash on Historical Reports

When viewing historical reports or the Error Log, or when working in the UNIX or Schedule subsystems, the screen may flash when you press inappropriate keys or press movement keys excessively. Use this procedure to eliminate the flash.

1   Select the UNIX system option from the CMS main menu.

    [The UNIX system prompt (*$*) appears.]

2   If necessary, access your UNIX system user directory by entering the following command:

```
$ cd  /cms/acd[n]/users/[your user ID]
```

        n is the number of the ACD you are currently logged into.

3   Press ⌈RETURN⌉. You will get a new *$* prompt.

4   Enter the command *vi .exrc* and press ⌈RETURN⌉.

    [Your existing or a new *.exrc* file will appear.]

```
~
~
```

5   Enter *se noflash* and save it using *vi* editor commands (see Appendix A).

6   Press ⌈EXIT⌉ to exit the UNIX system.

    [The removal of the screen flash will take effect immediately. In place of the flash, a beeping sound will occur when you press inappropriate keys or press movement keys excessively.]

Administering a New Printer

This procedure shows you how to identify a new printer to the UNIX system and the 3B computer. Before you begin this procedure, make sure the printer is attached to the appropriate port on the 3B computer and you know the tty number of the port. Different types of printers require different 3B ports.

1   Log in as *root*. Supply the correct password when prompted.

2   Type the following command to list all your existing printers.

```
# lpstat -t
```

3   Execute the following command to go to the directory that contains the new printer administration program and other related files:

```
# cd /etc/feat/cms/lpsetup
```

4   Execute the following program to administer the new printer:

```
# ./setuppr
```

Follow the directions in the program until the new printer has been administered.

> **NOTE** If the printer model is "att475" or "att476", DIP 5 on switch SW24 of the printer must be "ON" (CLOSED), and DIP 6 on switch SW24 of the printer must be "OFF" (OPEN). Refer to the *Users Guide 470/471, 475/476 Printers* (9-99-700-303 IS) document for the AT&T 475 printer to

determine the location of switch SW24.

5   If the model name of the new printer is not listed as a selection in the program, exit from the program by pressing the ⌈DELETE⌋ or ⌈BREAK⌋ key and do the following steps:

   a   Make a copy of the *prntr.model* file and name it according to its printer model name:

```
# cp prntr.model <new_printer_model_name>
```

   b   Edit the new file:

```
# ed <new_printer_model_name>

    -- or --

# vi <new_printer_model_name>
```

   c   Follow the directions in the new file to set the "MODES" for the new printer. Write and quit the file.

   | NOTE | You may have to refer to your printer manual for MODE information. |

    d   Move the new file to the *CMSmodels* directory:

```
# mv <new_printer_model_name> CMSmodels
```

    e   Execute the following program again:

```
# ./setuppr
```

Follow the directions in the program until the new printer has been administered.

Administering a New Terminal

After a new terminal has been connected to the computer, the terminal options on the terminal have to be set, and the UNIX system has to be administered for the computer to recognize the new terminal. Check the installation and peripheral documentation for your computer model to ensure that the terminal is properly connected to the computer.

The 3B Call Management System supports the following display terminals:

AT&T DATASPEED 4425 Terminal

605 Business Communications Terminal (BCT)

> **NOTE** The 605 BCT has been manufacture discontinued (MD). CMS will still support this terminal; however, the 705 Multitasking Terminal has replaced the 605 BCT.

610 BCT

615 Multitasking (MT) Terminal

615 Color Multitasking Terminal (CMT). See *3B CMS Graphics Administration* (5-85-215-505) document for more information.

620 Multitasking Graphics (MTG) Terminal

705 Multitasking Terminal

AT&T 6500 Display Terminals (6528, 6529, 6538, and 6539) with vt220 emulation. See Appendix B, ''6500 Display Terminals'' for more information.

Terminal Options

The following figures show the preferred settings for the supported terminals. For the 6500 display terminals, see Appendix B.

> **NOTE** The figures show the settings for a 3B2 computer.

NOTE The baud rates shown in the figures are the maximum recommended rates. The Enhanced Ports cards supply a maximum throughput of 19.2K baud through 8 ports. The 4800 baud rate may have to be reduced if more than 4 ports to a card are used.

4425 Terminal

```
                                                              Version
                        CURRENT OPTIONS


            Speed  4-800        Return Key  CR        Transmission  char
            Duplex  full       Newline on LF  no       Line Send  keyed
      Send Parity  space          Autowrap  on        Block Send  unprot
     Check Parity  no               Cursor  *         Send From  cursor


     1-32 Columns  off             Keyclick  off        Edit Keys  send
   Memory Access  scroll         Margin Bell  *     Send Attributes  no
           Clock  asynch            Dialer  no       Autoanswer  no
    Wait for DSR  no       Answer on Connect  no           VT 52  no

      "Enter" Key  ⟨     Field Separator  ⟩     Block terminator  ⟨

  Answerback  |                                                        |

                    AUXILIARY PRINTER OPTIONS

        Printer Model  *        Flow Control  *
               Speed  *                Alarm  *

                                          row xxx  col  xxx
  ┌─────────┐ ┌──────┐ ┌──────┐  ┌────────┐ ┌──────┐  ┌──────┐ ┌───────┐ ┌────────┐
  │PREVIOUS │ │ NEXT │ │ STEP │  │DEFAULT │ │SAVED │  │ SAVE │ │ PRINT │ │MONITOR │
  │ FIELD   │ │FIELD │ │      │  │VALUES  │ │VALUES│  │ ALL  │ │SCREEN │ │ MODE * │
  └─────────┘ └──────┘ └──────┘  └────────┘ └──────┘  └──────┘ └───────┘ └────────┘
```

* User Preference

Figure 12-2   Terminal Options for a 4425 Terminal

If any of the 4425 terminal options are incorrect, see the manual that came with the terminal for instructions on how to change the options.

605 BCT

```
                        OPTIONS SETUP


        Communications                      User Preferences


Speed            4800              Columns          _80_
Send Parity      spac              Reverse Video    _no_
Check Parity     _no_              Bell             _on_
Local Echo       _off             Key Click        _off
Monitor Mode     _off             Scrolling        jump
Auto Wrap        _on_             Scroll Speed     med_
Newline on LF    _no_              Cursor Type      blck
Return Key       _CR_              Cursor Blink     _no_
Enter Key        <-               Labels           _on_
Terminal Mode    norm             Swap Delete/Del  _no_



DONE                                           605 BCT- 1.0

┌──────┐ ┌──────┐ ┌────────┐  ┌────────┐ ┌────────┐   ┌──────┐ ┌────────┐ ┌────────┐
│      │ │      │ │CHANGE  │  │DEFAULT │ │SAVED   │   │SAVE  │ │NEXT    │ │CLEAR   │
│      │ │      │ │OPTION  │  │VALUES  │ │VALUES  │   │      │ │SETUP   │ │TO END  │
└──────┘ └──────┘ └────────┘  └────────┘ └────────┘   └──────┘ └────────┘ └────────┘
```

Figure 12-3   Terminal Options for a 605 BCT

If any of the 605 BCT options are incorrect, refer to the *605 Business Communications Terminal, User's Guide* (9-99-300-299 IS) for instructions on how to change the options.

610 BCT

```
                        OPTIONS SETUP


        Communications                    User Preferences

Speed            4800            Columns          -80-
Send Parity      spac            Scrolling        jump
Check Parity     -no-            Reverse Video    -no-
Local Echo       -off            Volume           -1--
Monitor Mode     -off            Key Chck         -off
Auto Wrap        -on-            Cursor Type      blck
Newline on LF    -no-            Cursor Blink     -no-
Return Key       -CR-            Labels           -on-
Enter Key        <-

  [    ] [    ] [CHANGE] [DEFAULT] [SAVED ] [SAVE] [NEXT ] [CLEAR ]
                [OPTION] [VALUES ] [VALUES]        [SETUP] [TO END]
```

Figure 12-4   Terminal Options for a 610 BCT

NOTE   The "Volume" option in Figure 12-5 refers to the alarm bell. The settings range from 1 to 7, with 1 being the lowest volume.

If any of the 610 BCT options are incorrect, refer to the *User's Guide, 610 Business Communications Terminal* (9-99-300-270 IS) for instructions on how to change the options.

615 MT

```
                         OPTIONS SETUP


        Communications                     User Preferences


   I/O Card        idle            Cartridge        idle
   Speed           4800            Columns          _80_
   Send Parity     spac            Reverse Video    _no_
   Check Parity    _no_            Volume           _4__
   Local Echo      _off            Key Click        _off
   Encoding        _off            Scrolling        jump
   Generate Flow   _on_            Scroll Speed     med_
   Receive Flow    _off
   Pass Flow       _yes




   Monitor Mode    _off            Cursor Type      blck
   Auto Wrap       _on_            Cursor Blink     _no_
   Newline on LF   _no_            Labels           _on_
   Return Key      _CR_
   Enter Key       _CR_



                                              615 MT 1.1

   +----+  +----+  +--------+  +--------+ +--------+  +------+ +-------+ +--------+
   |    |  |    |  |CHANGE  |  |DEFAULT | |SAVED   |  |SAVE  | |NEXT   | |CLEAR   |
   |    |  |    |  |OPTION  |  |VALUES  | |VALUES  |  |      | |SETUP  | |TO END  |
   +----+  +----+  +--------+  +--------+ +--------+  +------+ +-------+ +--------+
```

Figure 12-5   Terminal Options for a 615 MT

If any of the 615 MT options are incorrect, refer to the *User's Guide, 615 Multitasking Terminal* (9-99-300-302 IS) for instructions on how to change the options.

615 Color MT

```
                         OPTIONS  SETUP

         COMMUNICATIONS                      USER PREFERENCES

     Speed              9-600        Columns             8-0
     Send Parity        none         Reverse Video       no
     Check Parity       no           Volume              4
     Local Echo         off          Key Click           off
     Encoding           off          Scrolling           jump
     Flow Control       DC1/DC3      Scroll Speed        medium
     Generate Flow      on           Alternate Keypad    off
     Receive Flow       off          Swap Delete/Del     no
     Pass Flow          yes



     Monitor Mode       off          Cursor Type         block
     Autowrap           on           Cursor Blink        no
     Newline on LF      no           Labels              on
     Return Key         CR           Foreground      ::::::::::
     Enter Key      :::::::           Background      ::::::::::
                                                      ::::::::::

                                             615 CMT 1.0

    [        ] [        ] [ CHANGE  ] [ DEFAULT ] [ SAVED  ] [ SAVE ] [ NEXT  ] [ CLEAR  ]
                           OPTION      VALUES      VALUES              SETUP     TO END
```

Figure 12-6   Terminal Options for a 615 CMT

If any of the 615 CMT options are incorrect, refer to the *User's Guide, 615 Color Multitasking Terminal* (9-99-300-570) for instructions on how to change the options.

| NOTE | After exiting the *Setup* screen, the screen you return to will be blank. To refresh the screen, press CTRL-L. This will return the CMS screen you were viewing before entering the *Setup* screen. |

| NOTE | While some color monitors will allow you to modify the foreground and background color schemes, the bar graph reports are most effective when used with a black and white combination of the foreground and background colors. |

620 MTG

```
                           OPTIONS SETUP


         Communications                        User Preferences


Speed             4800              Reverse Video   _no_
Send Parity       even              Volume          _4__
Check Parity      _no_              Key Click       _off
Local Echo        _off
Encoding          _off             Mouse Movement  _1:1
Generate Flow     _on_             Mouse Button 3  right
Receive Flow      _off
Pass Flow         _yes             Printer Type    5320
                                   Printer Alarm   _no_
                                   Printer Speed   1200
                                   Printer Parity  none


Monitor Mode      _off             Cursor Type     blck
Auto Wrap         _on_             Cursor Blink    _no_
Newline on LF     _no_             Labels          _on_
Return Key        _CR_
Enter Key         <...


                                          620/Basic - 1.1

 ┌──────┐┌──────┐┌────────┐ ┌────────┐┌────────┐  ┌──────┐┌──────┐┌──────┐
 │      ││      ││CHANGE  │ │DEFAULT │││SAVED   │  │SAVE  ││NEXT  ││CLEAR │
 │      ││      ││OPTION  │ │VALUES  │││VALUES  │  │      ││SETUP ││TO END│
 └──────┘└──────┘└────────┘ └────────┘└────────┘  └──────┘└──────┘└──────┘
```

Figure 12-7   Terminal Options for a 620 MTG

If any of the 620 MT options are incorrect, refer to the *User's Guide, 620 Multitasking Graphics Terminal* (9-99-300-211 IS) for instructions on how to change the options.

705 MT Terminal Options

The 705 MT Terminal replaces or emulates the 605 BCT terminal. To properly setup the terminal, you may need to change some of the options on the Terminal Setup screen.

The default options are correct with the exception of the "Port Mapping" option. This should be set so that it will read Port 2 for Main and Port 1 for AUX. Refer to the *705 Multi-Tasking Terminal User's Guide* (9-99-300-660) for instructions on how to change the options.

After making the change, the 705 MT options should be set to the settings outlined in the following windows.

User Preferences Window

```
                    USER PREFERENCES

        Lines                           24
        Columns                         80
        Reverse Video                   No
        Screen Saver               30 min.
        Scrolling                     Jump
        Scroll Speed                Medium
        Labels                          On
        Key Click                      Off
        Warning Bell                    On
```

Communications Options Window

```
                    COMMUNICATIONS OPTIONS

        MAIN                                           AUX

       Port 2         Port Mapping                    Port 1
        Host          Port Service                   Printer
        9600          Speed                            9600
       1 bit          Stop Bits                       1 bit
      7 bits          Data Bits                       7 bits
       Space          Send Parity                     Space
         No           Check Parity                      No
        Off           Local Echo                        -
        Off           Encoding                          -
    XON/XOFF          Generate Flow                 XON/XOFF
       None           Receive Flow                  XON/XOFF
        240           XOFF at                          240
          -           Transmit Limit                    -
         No           Answerback on Connect             -
       Main           Clear Communication Port         Aux
```

General Options Window

```
                    GENERAL OPTIONS

    PRIMARY/WINDOW 1                              WINDOW 2

         705          Emulation                       705
          No          Newline on LF                    No
      7 bits          Transmit Controls            7 bits
      Normal          Backspace Mode               Normal
    Unlocked          User Features                Locked
          No          Conceal Answerback               No
     (blank)          Answerback                  (blank)
```

Display Options Window

```
                       DISPLAY OPTIONS

        PRIMARY/WINDOW 1                              WINDOW 2

                Off       Monitor Mode                       Off
              Block       Cursor Type                      Block
                Off       Cursor Blink                       Off
                Yes       Display Cursor                     Yes
             Bottom       Status Line Position            Bottom
               Host       Status Line Type                  Host
            Multnatl      Character Mode                 Multnatl
            ISO Latn      International Font             ISO Latn
                 On       Autowrap                            On
```

Keyboard Options Window

```
                       KEYBOARD OPTIONS

        PRIMARY/WINDOW 1                              WINDOW 2

           Caps Lck       Caps/Shift Lock Key         Caps Lck
                 CR       <--                               CR
                <--       Enter Key                        <--
                Yes       Autorepeat                       Yes
                Yes       Margin Bell                      Yes
            Enabled       Compose Key                  Enabled
            Enabled       Break Key                    Enabled
                 US       Keyboard Language                 US
            Numeric       Numeric Pad                  Numeric
             Normal       Cursor Keys                   Normal
                 No       Swap Delete                        No
               None       Control Key Swapping            None
                  -       Legends                             -
                  -       User Defined Keys                   -
                 BS       Backspace Keys                     BS
```

Printer Options Window

```
                 PRINTER OPTIONS

PRIMARY/WINDOW 1                                    WINDOW 2

      Page        Select Print Region                 Page
    Normal        Print Mode                        Normal
      None        Printer Terminator                  None
  National        Printer Font Restriction        National
        No        Printer Alarm                         No
       Yes        Printer to Host                      Yes
```

How to Administer a New Terminal

1   Select the UNIX system option from the CMS main menu, and press RETURN .

2   Type the following command:

```
$ su -
```

and press RETURN . This changes your identification to the UNIX system to that of
root. You will be prompted for the *root* password. Enter it, and press RETURN .

3   Type the following command:

```
# sysadm ttymgmt
```

You will see a menu of options in tty management.

4   Select 3, *modtty*.

You will be given a list of ports on the 3B2 computer.

5   Type `ttynn` in the field requesting a port number for the new terminal, where the *nn* is the number of the port to which the new terminal is connected, and press RETURN. You will be given a set of options to select.

6   Specify the options as shown in the following screen:

```
tty <> new characteristics:
        State           on
        Hangup Delay    off
        Line Setting    4800
        Description     cms terminal
```

7   Press RETURN and q to enter your terminal-administration specifications into the system and quit the *ttymgmt* program.

Printing Reports When a Line Printer Is Broken

If your system has two line printers, you can maintain report production when a printer is broken by:

A   Continuing to send print jobs to the broken printer, and redirecting the queued jobs to a working printer with the UNIX system *lpmove* command.

B   Executing a UNIX system command to change the default system printer. This choice involves some changes to CMS screens as well.

C   Immediately replacing the broken line printer and continuing with production.

Procedure A — How to Redirect Print Jobs

1   Select the UNIX system option from the CMS main menu and press [RETURN].

    You should get the UNIX system prompt $.

2   Disable the printer by executing the following command:

```
$ disable -r"<reason printer is broken>" <printer_name>
```

The *r* option for the **disable** command allows you to send a message to a user who submits a print job to a disabled printer. The message is sent to the user via the mail facility.

3   Type the command su root and press [RETURN] to reidentify yourself to the system as *root*.

    You will be prompted for the *root* password.

4   Type the password and press [RETURN].

    You should get the *root* prompt #.

5   To redirect jobs in the print queue, execute the following commands:

```
# /usr/lib/lpshut
# /usr/lib/lpmove brokenprintername  workingprintername
# /usr/lib/lpsched
```

pressing RETURN after each.

NOTE   The italicized strings are user-supplied.

This shuts off the line-printer scheduler, moves the queued jobs to a working printer, and restarts the scheduler.

The queued jobs should now print on the working printer.

You will have to repeat this procedure later if additional jobs are submitted and queued to the broken printer.

Procedure B — How to Change the Default Printer

1   Select the UNIX system option in the CMS main menu and press RETURN.

You will get the UNIX system $ prompt.

2   Type the command su root and press RETURN to reidentify yourself to the system as *root*.

You will be prompted for the *root* password.

3   Type the password and press RETURN.

You should get the *root* prompt #.

4 Type the following command:

```
# /usr/lib/lpadmin -dworkingprinter
```

NOTE The italicized string is user-supplied.

5 Press [RETURN].

> This changes the default system printer from the broken unit to a working printer.

6 When you see the *root* prompt (#), press the [EXIT] SLK twice to return to the CMS main menu.

7 Select the ADMINISTRATION option, and select the [ ] System-Access option on the Administration menu. Press [RETURN] for each.

8 Type the ID of one user of your CMS in the User ID:_____ field.

9 Press [RETURN].

> The data appears for the named user.

10 In the Printer Destination:_____ field, type the name of the working printer.

11 Press the [CHANGE] SLK.

> The new printer will become the destination for this user's print jobs.

12 Repeat Steps 8 through 11 for all CMS users who use the system printer.

13 Press [EXIT] twice.

14 On the CMS main menu, select the SCHEDULE option.

15 In the Schedule menu, select the `[  ] Scheduler` option.

16 Press the [MORE KEYS] and [LIST] SLKs.

> A list of all schedule programs should appear.

17 Write down the names of all programs that contain a printer specification. If you are not sure of a given name, write it down anyway.

18 Press [EXIT].

> The Schedule menu should appear.

19 Select the `[  ] Program Editor` option.

> The Program Editor screen should appear.

20 Type the first name on your list in the `Program Name: _____` field.

21 Press the [EDIT] SLK.

> You will be placed in the *vi* editor environment, in the file containing the command lines for the program named.

22 Make the required changes to the printer name in the command lines using the *vi* editor.

| NOTE | To perform a "global change," to one program in the *vi* editor environment, press [ESC] and type a colon. Then enter the command `g/`*oldprinter*`/s//`*newprinter*`/gp` and press [RETURN]. The italicized printer names are site-specific. |

---

23 Press the [WRITE] SLK to save your changes.

24 Repeat Steps 20, 21, 22, and 23 for all affected programs.

25 Press [EXIT] to return to the Program Editor.

> Now all print requests in your system will go to the working printer.

> Be sure to reverse this procedure when your broken printer comes back on line.

Appendix A: The UNIX System Visual Editor (vi)

Further information on *vi* is available in the UNIX system user's guide published for your particular computer. You should have one of these guides available for reference, as what appears in this appendix is a subset of the total capability of *vi* editing functions.

Editing and Control Commands for vi

Moving the Cursor

COMMAND	ACTION
l	Move to the right
h	Move to the left
k	Move up
j	Move down
b	Move back to previous word
B	Move back on word past punctuation
w	Move to next word
W	Move to next word past punctuation
e	Move to end of current word
$	Move to the end of the line
0	Move to the beginning of the line
' '	Move to the previous position
1G	Go to line 1
5G	Go to line 5
G	Go to last line
M	Move to middle of screen
L	Move to last line on screen
-	Move to the beginning of the previous line
RETURN	Move to the beginning of the next line

Adding Text

All of the following commands put you into an *append* or *insert* mode. You **must** press the [ESC] key to return to the *command* mode.

COMMAND	ACTION
a	Add text after the cursor
A	Add text at the end of the line
i	Insert text before the cursor
R	Replaces current characters
o	Open a new line below the cursor
O	Open a new line above the cursor
C	Change the text after the cursor
cw	Change current word
cc	Change current line

Leaving vi

COMMAND	ACTION
:w [RETURN]	Writes the file to disk
:q [RETURN]	Quits vi
:q!	Quits vi and changes are **not** saved
:w q	Writes and quits vi
ZZ	Writes and quits vi

Other Commands

COMMAND	ACTION
Y	Yank the current line
5Y	Yank 5 lines (could be any number of lines)
P	Put the yanked line above the cursor
p	Put the yanked line below the cursor
u	Undo the last command
U	Restore current line
J	Join the current line with the next line
/ abc	Search forward for the string "abc"
?abc	Search backward for the string "abc"

Deleting Text

COMMAND	ACTION
x	Delete a character
r	Replace a character
dw	Delete word
dd	delete entire line
D	Delete rest of line

Scrolling/Paging Text

COMMAND	ACTION
CNTL d	Scroll down
CNTL u	Scroll up
CNTL f	Forward page
CNTL b	Backward page
CNTL l	Refresh screen

General Information

The 6500 display terminals allow a common terminal interface to connect with synchronous and asynchronous hosts. The 3B CMS supports the following 6500 display terminals that have a vt220 terminal emulation:

> 6-528
>
> 6-529
>
> 6-538
>
> 6-539.

> **NOTE** | The station manager who administers the 6500 display terminals must administer the asynchronous link from the 6544 station cluster controller to the 3B CMS host computer using the Station Manager feature of the 6500 Multifunction Communications System. The station manager must also set up and administer the terminal. See the *6500 Station Manager's Guide, Issue 6* (9-99-300-106 IS) document for more information.
>
> The 6500 Station must be operating with Generic 3.0 software. If the 6500 Station is operating with software prior to Generic 3.0, the 6500 terminals will not have full functionality when accessing the 3B CMS.

You can dial up a 3B CMS host computer if it has "dial-in" capability and your 6500 terminal has "dial-out" capability. Check with your station manager for the configuration supported by your 6500 terminal.

Recommended Display Settings for the 6-500 Display Terminals

Use the following procedure to verify the recommended display settings for your terminal.

NOTE	For more information on changing the display settings, see the user's guide for your 6-500 display terminal.

1   To check the display settings on your terminal, place the cursor in the "Async" window and press the ‎PF4‎ key. The "Set Up Directory" screen (Figure B-1) appears.

```
Set Up Directory    (Use CURSOR L/R to position and ENTER to Select Field)

  Clear Display     Clear Comm    Reset Terminal     Default Settings

  Recall Settings     Save Settings     [Display Set Up]     General Set Up

  Communications Set Up   Keyboard Set Up     Tab Set UP

                                Set UP
                                (PF4)
```
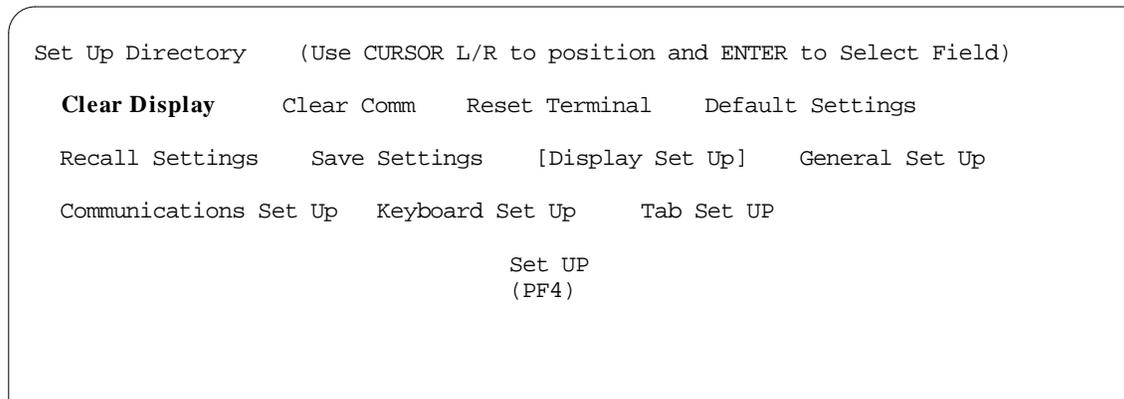
Figure B-1   Set Up Directory Screen

2   Move the cursor with the left or right arrow keys to "Display Set Up", and press ‎Enter‎. The "Display Set Up" screen (Figure B-2) appears.

```
Display Set Up   (Use CURSOR L/R to position and ENTER to toggle field value)

To Next Set Up        To Directory       80 columns

Interpret Control Characters        Auto Wrap

                                       Set UP
                                       (PF4)
```

Figure B-2   Display Set Up Screen

3   Verify the settings and move the cursor to "To Next Set Up". Press $\boxed{\text{Enter}}$. The "General Set Up" screen (Figure B-3) appears.

```
General Set Up  (Use CURSOR L/R to position and ENTER to toggle field value)

To Next Set Up       To Directory       User Defined Keys Unlocked

VT200, 7 Bit Controls                 Numeric Keypad      New Line = CR

User Features Unlocked      Application Cursor Keys

                                 Set UP
                                 (PF4)
```

Figure B-3   General Set Up Screen

| NOTE | **When accessing 3B CMS, the arrow keys will not operate properly if the "Application Cursor Keys" option has not been set.** |

4   Verify the settings and move the cursor to "To Next Set Up". Press [Enter]. The "Communication Set Up" screen (Figure B-4) appears.

```
Communication Set Up  (Use CURSOR L/R to position and ENTER to toggle field values)

To Next Set Up       To Directory      Speed=1200        8 bits, No Parity

No Parity Detect          No Local Echo        Enable XOFF

                                       Set UP
                                       (PF4)
```

Figure B-4   Communication Set Up Screen

5   Verify the settings and move the cursor to "To Next Set Up". Press [Enter]. The "Keyboard Set Up" screen (Figure B-5) appears.

```
Keyboard Set Up    (Use CURSOR L/R to position and ENTER to toggle field values)

To Next Set Up     To Directory      Margin Bell      Break

Auto Answerback

Answerback=                                    Not Concealed

                          Set UP
                          (PF4)
```

Figure B-5   Keyboard Setup Screen

6   Verify the settings and move the cursor to ''To Next Set Up''. Press ⌊Enter⌋. The ''Tab Set Up'' screen (Figure B-6) appears.

```
Tab Set Up   (Use CURSOR L/R to position and ENTER to select tab settings)

To Next Set Up      To Directory      Clear All Tabs      Set 8 column Tabs

       T       T       T       T       T       T       T       T       T
123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

                               Set UP
                               (PF4)
```

Figure B-6   Tab Setup Screen

7   Verify the settings and move the cursor to ''To Directory''. Press ⌊Enter⌋. The ''Set Up Directory'' screen (Figure B-7) appears.

```
Set Up Directory    (Use CURSOR L/R to position and ENTER to Select Field)

  Clear Display      Clear Comm    Reset Terminal     Default Settings

  Recall Settings     Save Settings    [Display Set Up]     General Set Up

  Communications Set Up   Keyboard Set Up      Tab Set UP

                               Set UP
                               (PF4)
```

Figure B-7   Set Up Directory Screen

8 **If you have modified any of the settings, do the following to save the new settings:**

    a   Move the cursor to "Save Settings".

    b   Press the [Enter] key.

        The message "Saved" should appear at the bottom of the screen.

9 Press the [PF4] key to exit the setup screens.

How to Log Into the 3B CMS

With a 6500 display terminal you can have two types of connections: Direct and Remote. The procedures given and the following note apply to both connections.

NOTE When Modem/Dial ([PF3] key) displays, you **do not** have a connection.

To break a connection, press the [SHIFT] and the [PF5] keys.

The 6500 terminals do not automatically clear the screen after breaking a connection or logging off. To clear the screen:

1 Press [PF4].

   [The "Set Up Directory Screen" (Figure B-1) appears and **Clear Display** will be highlighted.]

2 Press the [Enter] key.

   [`Done` appears.]

3 Press [PF4] again.

   [Screen is cleared.]

Logging In Using a Direct Connection

1 Press the [PF3] key (Modem/Dial).

2 If the host computer name for 3B CMS **is** displayed, press the [PF2] key (Select).

   [The `login` prompt appears.]

3 If the host computer name for 3B CMS is **not** displayed, press the [PF1] key (Next) until the correct host is displayed. Then press the [PF2] key (Select).

   [`login` appears.]

4 Enter your login ID and press [RETURN].

   [The `password:` prompt appears.]

5 Enter your password (it will not appear on the screen) and press [RETURN] again.

   [You will then see one of the following two screens.]

```
        UNIX System V Release  3.1.1 AT&T 3Bx
        unix
        Copyright (c) 1984, 1986, 1987 AT&T
        All Rights Reserved
        Call Management System <600 SCSI> (Version 2.2n, Issue 1.1)
        you have mail

        Select the terminal you will use from the following list:

                605     4410      5410       6528

                610     4425      5425       6529

                615                          6538

                620                          6539

        Enter selection:
```

or

```
If your terminal type is 6539, press RETURN.

Otherwise, enter the new terminal name:
```

6   If you received the first screen, enter your terminal type and press $\boxed{\text{RETURN}}$. If the
second screen appears, just press $\boxed{\text{RETURN}}$.

[The following message (Figure B-8) screen appears after logging into CMS.]

```
TERMINAL 65xx

CMS functions are available using the shifted program-function-keys (PFKs).
The top row of keys, PF13 through PF20 are the active function keys.

FUNCTION KEY EXAMPLE:

 [CHANGE]  [ ADD  ]  [DELETE]  [      ]  [       ]  [ EXIT ]  [PRINT ]  [ HELP ]
                         To use the EXIT function:
                                      press [SHIFT]-[PF18]

Most screens can also be used with the un-shifted PFKs.

                         To use the EXIT function for these screens, you may:
                                      press [PF18]

NOTE:  For some screens, like reports displayed to the terminal, the PFK
       function names will not be displayed.  Even though the names are
       not visible, the keys will still be active.  To check which functions
       are available in these screens,  refer to the CMS Administration Guide.

Press "RETURN" when ready to continue.
```

Figure B-8   Login Message for 6500 Terminals

7   Read the information on the screen, and press [RETURN] when you are ready to
     continue.

Logging In Using a Remote Connection

The 6500 terminals support several different modems, and the following procedures are an example of one of those modems. Your modem may require different login procedures; see your station manager for the procedures. See the *6500 Station Manager's Guide, Issue 6* (9-99-3-00-106 IS) document and the *User's Guide 6538/6539 Displays, Issue 4* (9-99-300-122 IS) document for the supported modems and asynchronous operation.

Analog Connection Using a DATAPHONE II Automatic Caller

1 Obtain the extension or external number for the CMS machine port.

2 Press the [PF3] key (Modem/Dial).

3 Press the [PF1] key (Next) until the CMS machine name displays.

4 Press the [PF2] key (Select) and press [RETURN].

   ["Dial, Enter Command Or H For Help" appears.]

5 Enter the CMS extension or external number, and press [RETURN].

   ["Dialing" and the dialed number appear, and you hear ringing.]

   ["Answered" appears.]

   ["login" appears.]

6 Enter your login ID, and press [RETURN].

   [The password: prompt appears.]

7 Enter your password (it will not appear on the screen), and press [RETURN] again.

   [You will then see one of the following two screens.]

```
        UNIX System V Release  3.1.1 AT&T 3Bx
        unix
        Copyright (c) 1984, 1986, 1987 AT&T
        All Rights Reserved
        Call Management System <600 SCSI>  (Version 2.2n, Issue 1.1)
        you have mail

        Select the terminal you will use from the following list:

                605     4410     5410     6528

                610     4425     5425     6529

                615                       6538

                620                       6539

        Enter selection:
```

or

```
If your terminal type is 6539, press RETURN.

Otherwise, enter the new terminal name:
```

8   If you received the first screen, enter your terminal type and press RETURN. If the
     second screen appears, just press RETURN.

     [The following screen appears after logging into CMS.]

```
TERMINAL 65xx

CMS functions are available using the shifted program-function-keys (PFKs).
The top row of keys, PF13 through PF20 are the active function keys.

FUNCTION KEY EXAMPLE:

 [CHANGE]  [ ADD  ]  [DELETE]  [      ]  [      ]  [ EXIT ]  [PRINT ]  [ HELP ]

                        To use the EXIT function:
                                        press [SHIFT]-[PF18]

Most screens can also be used with the un-shifted PFKs.

                        To use the EXIT function for these screens, you may:
                                        press [PF18]

NOTE:  For some screens, like reports displayed to the terminal, the PFK
       function names will not be displayed.  Even though the names are
       not visible, the keys will still be active.  To check which functions
       are available in these screens,  refer to the CMS Administration Guide.

Press "RETURN" when ready to continue.
```

9   Read the information on the screen, and press ⌈RETURN⌉ when you are ready to
    continue.

Screen-Labeled Keys/Programmable Function Keys

The SLKs at the bottom of your screen are in inverse video. The "PF" (Programmable Function) keys are the top row of keys on your terminal. The "PF" keys, PF13 through PF20, on the top of your terminal keyboard correspond to the SLKs at the bottom of your screen.

NOTE	On most screens, you can press the PF key to activate an SLK. However, when using the vi editor, the UNIX system, Password, and Mail functions, you must press the SHIFT and the corresponding PF# key at the same time.

The SLKs on the 6500 terminals display only 1 line with 8 characters each. Therefore, changes were made to some of the original labels. The original labels and the new replacement labels are shown in the following table.

Original Labels	New Labels
PREV PAGE	PREVPAGE
NEXT PAGE	NEXTPAGE
PREV ITEM	PREVITEM
NEXT ITEM	NEXTITEM
PREV MESSAGE	PREV MSG
NEXT MESSAGE	NEXT MSG
PREV DATA	PREVDATA
CURR DATA	CURRDATA
PRINT SCREEN	PRINT
PRINT REPORT	REPORT
REPORT PARAMS	PARAMS

SLKs and the vi Editor

When using the vi editor, the screen-labeled keys are **not** displayed but **are** still active. The PF keys will only operate by pressing the [SHIFT] key and the corresponding [PF#] key at the same time. To check the SLKs for each screen and the corresponding PF keys, see the appropriate chapter in this document.

The vi editor accesses the following:

Main Menu Item	Submenu Item
Reports	Standard and Custom Historical
Forecast	Reports
Exceptions	Reports
Maintenance	Error-Log
Schedule	Program Editor

SLKs and the UNIX System

When accessing the UNIX system from the CMS main menu, the [EXIT] SLK is not displayed.

To exit from the UNIX system, first press [RETURN] to clear the command line. Then at the $ prompt, do one of the following:

Press [SHIFT] and [PF18].

Hold the [Ctrl] key down and press the [D] key.

Type the word "exit" and press [RETURN].

SLKs With MAIL and PASSWORD

The SLKs **are** displayed in MAIL and PASSWORD but will only operate by pressing the [SHIFT] key and the corresponding [PF#] key.

What a Switch Does

A **switch** is an electronic device that processes dialed phone numbers and connects calls to the proper destinations. The telephone company switch in your local area is called a **Central Office (CO)**. A switch at a company or organization that processes internal calls and partially processes external calls is called a **PBX** (Private Branch Exchange) system. However, throughout this appendix, "switch" is used to refer to a company or organization's PBX. The following AT&T switches are used by large companies for call processing:

> DEFINITY Communications System, Generic 3i
>
> DEFINITY Communications System, Generic 1
>
> System 75 (R1V3)
>
> System 75 XE (R1V3)
>
> DEFINITY Communications System, Generic 2
>
> System 85 (R2V3)
>
> System 85 (R2V4)
>
> DIMENSION 600 and 2000 System switches, with Feature Package (FP) 8, Version 3.8.

Trunks, Trunk Groups, and Extensions

Incoming calls to a company first pass through the CO and then pass to the company switch over **trunks** (telephone lines that carry calls between two switches, between a CO and a switch, or between a CO and a phone)*. The CO receives dialed digits from the caller, processes the digits, and seizes a trunk that is assigned those digits. After the CO seizes a trunk, it sends a continuing transmission to the destination phone or switch, and no other calls can be sent over that trunk until the current call disconnects.

Since a trunk can carry only one call at a time, **trunk groups** are usually created for incoming calls to a switch. A trunk group is a group of trunks that are assigned to the same digits. With a trunk group, the CO receives the digits of a dialed phone number and checks the trunk group assigned to that number to see if any of the trunks are available. The CO then seizes an available trunk. As many simultaneous calls can be made over a trunk group as there are trunks in that trunk group. A trunk group, therefore, can carry multiple calls for the same phone number. When a trunk group carries incoming calls (that is, calls made outside the

---

* Trunks can carry incoming calls, outgoing calls, or both. However, the Automatic Call Distribution (ACD) feature and the 3B Call Management System are primarily concerned with incoming trunks.

company's switch location) to the switch, the switch then connects the calls to their proper destinations within the company.

The switches previously listed, in addition to connecting outside calls to the proper destinations, are also like private COs for company employees. That is, employee phones are connected to a switch by telephone lines called **extensions**. Extensions are then assigned 3-, 4-, or 5-digit numbers within the switch software, and these numbers become the employee phone numbers for internal (intra-company) calls.

Direct Inward Dial Processing

Extension numbers may also serve as the final digits of employee phone numbers for incoming calls. That is, the CO may assign only a 2-, 3-, or 4-digit prefix to a trunk group. Then, when a 7-digit employee phone number is dialed, the call is processed as follows:

1   CO processes the prefix of the dialed number, then seizes a trunk in the trunk group that is assigned that prefix.

2   The CO passes the remaining digits of the dialed number to the switch.

3   The switch recognizes the remaining digits as an employee extension number and sends the call to that extension.

This kind of processing is called **Direct Inward Dialing** (DID). With DID processing, incoming trunks do not connect the CO directly to an employee's phone; instead, the incoming trunks are pooled by the switch, and this pool of trunks is then shared by employee phones.

As an example of DID processing, say that Employee A has the external phone number 5-38-1000 and the extension number 1000. Employee B has the phone number 538-9999 and the extension number 9999. The steps in completing calls to Employees A and B might be as follows:

1   Employee A's client dials 538-1000.

2   The CO serving Employee A's company identifies the digits 538- (the common prefix for all phone numbers to that company) and seizes Trunk 1 in the trunk group assigned the digits 538.

3   The CO passes the digits 1000 to the switch at Employee A's company.

4   The switch identifies the digits 1000 as Employee A's extension number and sends the call to Employee A's extension.

5   Employee A's phone rings and Employee A answers.

6   Meanwhile, Employee B's client dials 538-9999.

7   The CO identifies the digits 538- and seizes Trunk 2 in the trunk group assigned the digits 538.

8   The CO passes the digits 9999 to the switch.

9   The switch identifies the digits 9999 as Employee B's extension number and sends the call to Employee B's extension.

10   Employee B's phone rings and Employee B answers.

While Employees A and B continue to talk, Trunks 1 and 2 in the 538- trunk group will not accept any more calls, so another call beginning with the digits 538 will seize yet another trunk in the trunk group.

Automatic-In Processing

Besides DID, **automatic-In** processing can also be used. With automatic-in processing, the CO processes all of the digits of an incoming call. The CO then seizes a trunk from the trunk group, but, since processing is complete, the call connects directly to a destination identified in the switch software. That destination can be a phone, a **queue** (in which callers wait to be answered in the order in which their call was received), or special treatment like an announcement, disconnect, or automatic (forced) busy signal.

The Attendant

Incoming calls can also go to a switch **attendant**. A switch attendant is a person who manually routes calls to their proper destinations using an attendant console (which is like a call switchboard). Normally an attendant serves as an internal operator who transfers calls to the proper extensions. Often, a switch will actually have more than one attendant, and all of the switch's attendants will answer calls to the **attendant queue**, which holds calls until an attendant can assist the caller. The attendant queue receives internal calls made from employee extensions, and also receives incoming calls through DID processing and automatic-in processing. Attendant call handling varies, depending on the company's needs. However, if the attendant has an automatic-in number, the automatic-in number will normally be the number published in the phone book, and the DID number will most likely be used by off-site employees who only know the attendant's extension number.

In addition to an attendant queue, a switch can also have a **Centralized Attendant Service (CAS)**, which is used when the company has more than one switch. CAS is an attendant or group of attendants that simultaneously handles calls for all of the company switches. CAS can only be established on a Generic 2, System 85, DIMENSION PBX, or an enhanced Generic 3i/ Generic 1/ System 75. However, the CAS can route calls to and receive calls from a normal

Generic 3i/ Generic 1/ System 75, as well as a Generic 2/ System 85 or DIMENSION PBX, as long as the Generic 3i/ Generic 1/ System 75 resides in the company's switch network.

Figure C-1 illustrates a switch that has an attendant and extensions, and uses both DID and automatic-in processing of calls.


```
SWITCH

                    ┌──────────────┐
                    │  Attendant   │
Auto-in Trunk Group │  5-38-1000   │        Calls connected
5-38-1000           │     or       │        through attendant
                    │   Ext. 1001  │
                    └──────────────┘

            Calls dialed to
            attendant extension

DID Trunk Group
Prefix 538-

            Calls dialed to
            employee extensions
                                          ┌──────────────┐
                                          │  Ext. 2000   │
                                          └──────────────┘

                                          ┌──────────────┐
                                          │  Ext. 2001   │
                                          └──────────────┘

                                          ┌──────────────┐
                                          │  Ext. 2002   │
                                          └──────────────┘
```

- - - - - - - -   = Switch software connections
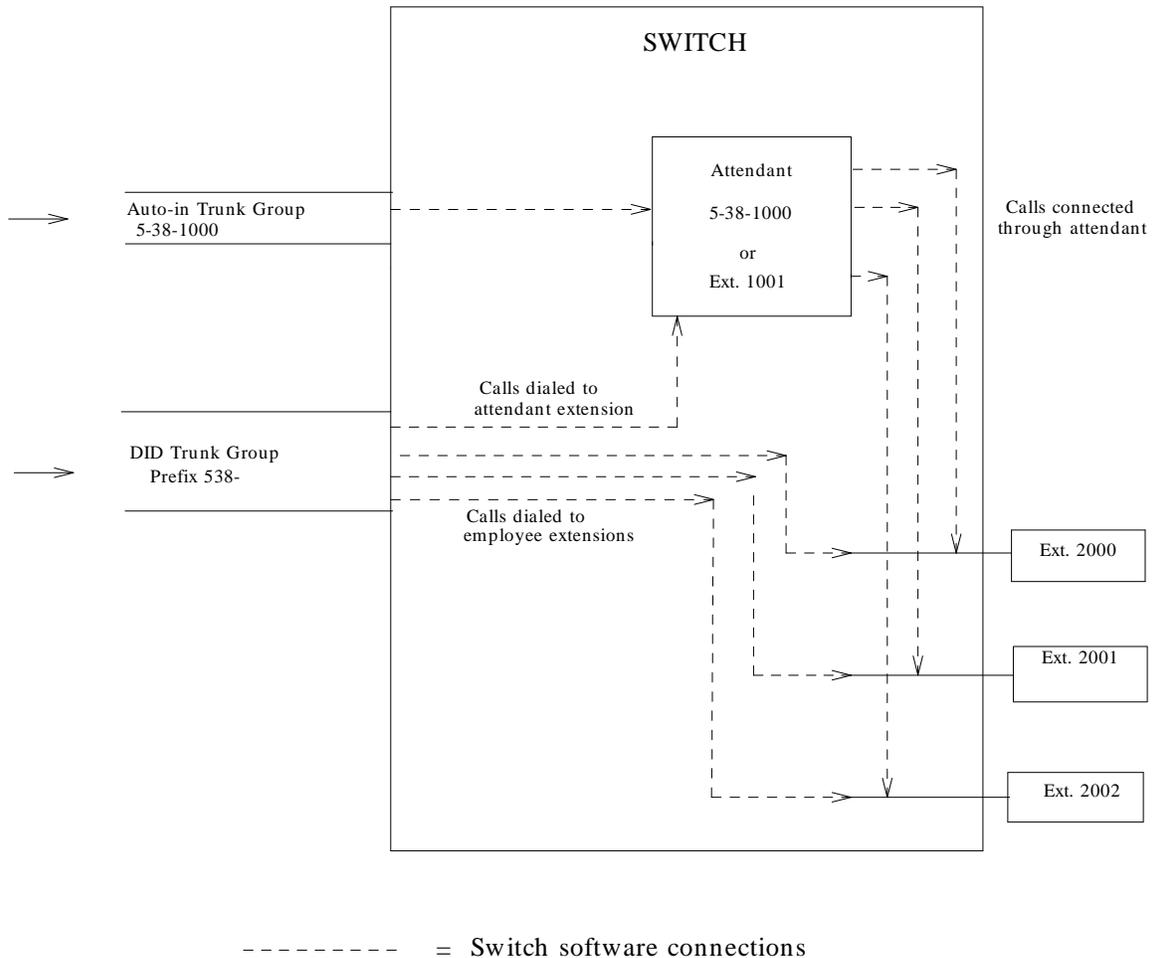
Figure C-1   Typical Call Processing on a Switch — Without an ACD

What the ACD Does

If the company operates a high-volume call answering center (for example, a catalogue sales center, a reservations center, or a customer service center), certain trunk groups will carry large numbers of calls with one or a few specific purposes. A trunk group might carry a 1-8-00-nationwide reservations number, a local customer service number, or a regional sales number. To answer calls on those trunk groups, the company can establish groups of extensions to receive those calls. A group of extensions that receives special-purpose calls from one or a few trunk groups is called a **split**. An employee who answers calls to an extension in a split is called an **agent**. The phone an agent uses is called a **voice terminal**, which usually has buttons with which an agent can transfer calls, put calls on hold, request the next call to the split, or prevent split calls from coming to that agent's voice terminal.

The **Automatic Call Distribution (ACD)** is additional software installed on the switch that automatically distributes incoming calls to available extensions within splits. The ACD on a Generic 3i/ Generic 1/ System 75 switch can distribute calls to up to 32 splits; on a Generic 2/ System 85 switch, the ACD can distribute calls to up to 60 splits; on a DIMENSION PBX switch, the ACD can distribute calls to up to 30 splits.

NOTE	If the Call Vectoring feature is active on the Generic 2 or System 85 R2V4 switch, trunk groups are not assigned directly to splits. (See the *3B CMS Vectoring Administration* [585-215-502] document.)

Maintaining trunks from the CO to the split and hiring agents to answer calls at the assigned split extensions costs money. On the other hand, if customers who call to purchase goods or services have difficulty reaching agents and, therefore, stop trying to get through, the call center will lose revenue. Call center management needs, therefore, to determine what numbers of trunks and agents will minimize costs for a split, yet maximize the ability of customers to get through. Management can then set up and maintain the ACD accordingly.

The procedures for setting up and maintaining the ACD (that is, creating splits, assigning trunk groups to splits, assigning agents and extensions to splits, etc.) are performed using switch-specific administration tools. Those tools and the documents that describe the appropriate ACD procedures are listed in the following table.

Table C-1   Model-Specific Data on ACD Features

SWITCH MODEL	ACD DOCUMENT	ADMINISTRATION TOOL
System 85 R2 V3 and System 85 R2 V4	**DEFINITY Communications System Generic 2 and System 85 Feature Descriptions** (5-55-104-3-01)	Maintenance and Administration Panel (MAAP), System Management Terminal (SMT), Translations Recovery, Additions, Conversion System (TRACS) Visual Maintenance and Administration Panel (VMAAP), Centralized System Management (CSM), DEFINITY Manager II and IV
Generic 2	**DEFINITY Communications System Generic 2 and System 85 Feature Descriptions** (5-55-104-3-01)	DEFINITY Manager II, III, and IV; and TRACS
System 75 R1 V3 and System 75 XE R1 V3	**AT&T System 75 Reference Manual, Release 1 Version 3 Capabilities** (5-55-200-499)	System Access Terminal, Centralized System Management (CSM), and DEFINITY Manager IV
Generic 1	**DEFINITY Communications System Generic 1 and Generic 3i Feature Description** (5-55-230-201)	DEFINITY Manager I and IV
Generic 3i	**DEFINITY Communications System Generic 1 and Generic 3i Feature Description** (5-55-230-201)	DEFINITY Manager I and IV
DIMENSION PBX FP 8.3	**Enhanced Uniform Call Distribution Feature Document, DIMENSION PBX** (5-44-191-121 IS)	Maintenance and Administration Panel (MAAP), Customer Administration Panel (CAP), Centralized System Management (CSM), DEFINITY Manager II and IV

NOTE	Some ACD maintenance can be performed using the 3B CMS instead of the particular switch administration tool.

Call Processing to a Split

Splits are created by entering a number (from 1 to 30 for System 85 R2V3, 1 to 60 for Generic 2 or System 85 R2V4, 1 to 32 for Generic 1/ System 75, or 1 to 30 for DIMENSION PBX) for each split into the ACD software according to the appropriate switch procedure. After a split is created, all other ACD elements associated with that split can be created and/ or assigned.

A **split supervisor extension** is normally assigned to each split so that a voice terminal connected to that extension may be used to administer the split. For Generic 2, System 85, and DIMENSION PBX, the split supervisor must also be identified in the ACD software as an agent of the split, with agent number 0. In addition to normal agent capabilities, a Generic 2/ System 85/ DIMENSION PBX split supervisor can use the voice terminal on this extension to monitor agent performance, add and remove agents from the split, and to do other split set-up activities. Most of these capabilities become automatically available when the split supervisor extension is created. For Generic 3i/ Generic 1/ System 75, these capabilities, as well as agent capabilities, must be assigned with separate switch administration procedures.

Automatic-In Processing of Calls to a Split

For automatic-in processing of a split's calls, one or more trunk groups connected to the CO must be assigned to a split through switch administration. This assignment will route calls arriving over those trunk groups to the particular split. The ACD then distributes the calls to the agent extensions assigned to the split.

For Generic 2, System 85, and DIMENSION PBX, once trunk groups have been initially assigned to splits, 3B CMS can be used to reassign trunk groups to different splits. (See Chapter 6, "Configuration".)

DID Processing of Calls to a Split

For Generic 2, System 85, and DIMENSION PBX, other extensions can be assigned as DID extensions to a split after a supervisor's extension is assigned to the split. These extensions are called **associated extensions**. An associated extension is not an agent extension; it is, instead, a dummy extension in the switch software that sends internal calls and incoming DID calls (if the switch has DID trunk groups) to a split. The ACD distributes these calls to the agent extensions assigned to the split.

For Generic 3i/ Generic 1/ System 75, one extension can be assigned to a split as a DID extension. Also, a split supervisor extension is not required prior to assigning the split's DID extension.

NOTE	For DID processing, trunk groups are not assigned to the split. The creation of associated extensions is sufficient to send calls arriving over DID trunk groups to the appropriate split.

Each split can receive incoming calls through DID processing, automatic-in processing, or both. Automatic-in trunk groups carry calls only to the split, whereas DID trunk groups carry calls to any extension identified in the switch software, not just a split. The mixture of ACD and non-ACD call traffic on a DID trunk group makes precise measurement of ACD call traffic extremely difficult. Call traffic on automatic-in trunk groups is much easier to monitor and control because all call traffic goes only to a split. For these reasons, high-volume numbers (that is, published numbers and numbers advertised to customers) are usually automatic-in trunk group numbers. Associated extension numbers are usually used for internal calls and by off-site employees who know the extension number(s) and simply add the company DID prefix. Figure C-2 illustrates an example of call-processing on a switch with an ACD.

SWITCH

Attendant

5-38-1000

or

Ext. 1001

Auto-in Trunk Group
5-38-1000

Calls connected
through attendant

Calls dialed to
attendant extension

DID Trunk Group

Prefix 538-

Calls dialed to
employee extensions

Ext. 2000

Ext. 2001

Calls dialed to
split DID extension

Ext. 2002

ACD

Split 1

1-800-555-7777
or
Ext. 1002

Auto-in Trunk Group
1-800-555-7777

Calls distributed
to split agent
extensions

- - - - - - - - -   = Switch software connections

Figure C-2   Call-Processing on a Switch With an ACD

Split Queues

When calls arrive at a split, the ACD will connect the call to an available extension in the split. If no extension is available (that is, all agents are busy), the call will enter the split's queue. A **split queue** is a holding area for calls waiting to be answered in the order in which they were received. When a call is put in queue, the caller may hear one or two delay announcements, music, and/or silence, depending on the treatment assigned for the split. (Treatment of calls in queue is assigned through switch administration.) After a call reaches the head of the queue, it connects to the next available extension.

| NOTE | The ACD on Generic 2, System 85, and DIMENSION PBX actually routes every call through a split's queue before connecting the calls to agents in the split. However, if agents are available, the calls do not wait in queue. |

| NOTE | If the Call Vectoring feature is active on the Generic 2 or System 85 R2V4 switch, split queuing functions somewhat differently from the split queuing described in this section. (See the *3B CMS Vectoring Administration* [585-215-502] document.) |

Priority and Nonpriority Split Queues

Each split can have two queues: a **nonpriority queue** and a **priority queue**. A split always has a nonpriority queue, which collects the bulk of calls to a split. But a split can also have a priority queue, which collects high-priority calls. The ACD distributes all calls in the priority queue before it distributes any calls in the nonpriority queue. Therefore, the priority queue, if one exists, must be empty before the ACD will resume distributing calls in the nonpriority queue.

For Generic 2, System 85, and DIMENSION PBX, automatic-in trunk groups and/or DID extensions are assigned to the appropriate queue (nonpriority or priority) at the same time they are assigned to the split. Also for Generic 2, System 85, and DIMENSION PBX, multiple DID extensions and automatic-in trunk groups can be assigned to the nonpriority queue, and multiple automatic-in trunk groups may be assigned to the priority queue. However, only one DID extension can be assigned to the priority queue.

Any calls made to a split using the priority DID extension number or the priority trunk group phone numbers will be placed in the priority queue if no agents are available. Calls using numbers of nonpriority DID extensions or trunk groups will be placed in the nonpriority queue if no agents are available.

For Generic 3i/ Generic 1/ System 75, only internal extensions may be assigned priority queuing. Calls on a split's automatic-in trunk groups or DID extension enter the split's queue on a nonpriority basis only. For Generic 3i/ Generic 1/ System 75, a split may also be assigned **Priority Queuing on Intraflow**, which means that calls to that split, if rerouted to another split, will enter the destination split's priority queue.

As an example of priority/ nonpriority queuing to a split in Generic 2/ System 85, say that an airlines reservations center has a Split 1 for the Western Region. Call processing to the split may be set up as follows:

Automatic-In Trunk Groups

— Trunk group 24, with the number 1-800-538-1000, carries Split 1 calls that regular customers throughout the region make. Trunk group 24 is given nonpriority status.

— Trunk group 25, with the number 538-1001, carries Split 1 calls that customers within the local area code make. Trunk group 25 is given nonpriority status.

— Trunk group 26, with the number 538-1002, is a local number that travel agents use. Trunk group 26 is given priority status.

DID Extensions

— DID extension number 1003 is used by airline employees who want to make reservations. They may use this number internally or they can add the prefix 538- when they dial externally. Extension 1003 is given nonpriority status.

— DID extension number 1004 is used only by airline executives to make reservations. Extension 1004 is assigned priority status.

| NOTE | The first DID (associated) extension that is assigned to a nonpriority queue is sometimes called a Queue Directory Number (QDN). The DID extension that is assigned to a priority queue is sometimes called the Priority Queue Directory Number (PQDN). |

Size of Split Queues

For the Generic 3i/ Generic 1/ System 75, a maximum of 100 calls can be waiting in a split queue at a given time. This number, which can also be less than 100, is established through switch administration. If the queue size is smaller than the number of trunks assigned to the split, some calls may not be able to queue to the split and will get a busy signal. Therefore, call redirection (see "Intraflow and Interflow") can be established through switch administration for calls arriving when the queue is full.

For Generic 2, System 85, and DIMENSION PBX, the number of calls that can queue to a split is primarily limited by the number of trunks assigned to the split. However, since DID calls and internal calls can also connect to a split, calls that can queue to a split are theoretically limited only by the switch's total number of physical trunks and software connections. Generic 2, System 85, and DIMENSION PBX do not offer any switch administration procedures for reducing split queue size.

> **NOTE** For Generic 2, System 85, and DIMENSION PBX only, 3B CMS offers the capability to reduce split queue size using the Split Parameters screen (see Chapter 6, "Configuration"), but to do so requires that an alternate destination be set up for calls that cannot enter the queue. Also, on a Generic 2 or System 85 R2V4 with the Call Vectoring feature, split queue size can be reduced through either switch administration or 3B CMS.

Announcements and Other Treatment for Calls in a Split Queue

As mentioned earlier, a call that queues to a split may receive one or two announcements, music, and/ or silence, depending on the treatment set up in the ACD software for that split. When a call queues to a split, the call receives ringing until the call connects to an agent or the call receives an announcement. An **announcement** is a recorded message that normally tells the caller what destination the call has reached. The announcement also often tries to persuade the caller to stay on the line.

Announcements are recorded on an announcement device connected to the switch. The announcements are then assigned to splits through switch administration. Also, when announcements are assigned to splits, the **delay time**, or the time a call must wait in a split queue before receiving the announcement, is assigned to each announcement. If a call connects to an agent before the delay time passes, the caller does not hear the announcement. If a call receives an announcement, an available agent may still pick up the call before the announcement is complete. If a call receives a complete announcement, the caller will hear music or silence afterwards until a second announcement is played or the call connects to an agent. The treatment of music or silence for split queues must also be set up through switch administration.

For Generic 2, System 85, and DIMENSION PBX, the announcement delay time can be from 2 to 30 seconds. For Generic 3i/ Generic 1/ System 75, the announcement delay time can be from 0 to 99 seconds. 0 seconds delay time in Generic 3i/ Generic 1/ System 75 causes a **forced announcement**, which means calls to a split will automatically receive the announcement, regardless of whether an agent is available.

For Generic 3i/ Generic 1/ System 75, each split may have its own unique first and second announcements. Therefore, 32 first announcements and 32 second announcements may be created. Second announcements on Generic 3i/ Generic 1/ System 75 can also be set to recur each time the announcement delay time expires. For Generic 2, System 85, and DIMENSION PBX, each split may have its own unique first announcement; however, the second announcement must be a generic announcement established for all splits. Therefore, for a System 85 R2V3, a total of 30 first announcements can be created. For a Generic 2 or System 85 R2V4, a total of 60 first announcements can be created. For a DIMENSION PBX, a total of 3-0 can be created.

NOTE	Announcement capabilities on a Generic 2 or System 85 R2V4 with the Call Vectoring feature differ significantly from the capabilities discussed in this section.

Generic 2/System 85/DIMENSION PBX Announcement Queuing

For Generic 2, System 85, and DIMENSION PBX, the announcement set, which can be analog or digital, sends split announcements to calls in queue. The announcement set will play announcements over and over if calls continually exceed delay times in split queues. However, a call can get an announcement only when the announcement begins; a call cannot connect to an announcement when the announcement is partially completed. When a call waits beyond the delay time, the call may enter an announcement queue. Then, when the announcement starts over, that caller will hear the announcement. In practice, the total time a caller could wait before hearing an announcement could be the delay time plus the total time for an announcement to play before starting over.

A Generic 2/ System 85/ DIMENSION PBX announcement queue can contain up to 255 calls at one time. All calls in an announcement queue receive the announcement simultaneously, so 2-55 calls can receive the same announcement at the same time.

Generic 3i/Generic 1/System 75 Announcement Queuing

For Generic 3i/ Generic 1/ System 75, split announcements can be either analog or digital. Queuing for analog announcements works like Generic 2/ System 85 announcement queuing, except that each Generic 3i/ System 75/ Generic 1 analog announcement can have a maximum of 150 calls in queue, and only 5 calls in the queue can simultaneously receive an announcement.

Queuing for Generic 3i/ Generic 1/ System 75 digital announcements is quite different. Digital announcements are delivered to a 16-port announcement board, and a call receives an announcement only when it connects to one of the 16 announcement ports. Therefore, all calls, regardless of the split announcement they are waiting to receive, wait in a single queue to access a port on the announcement board. The maximum length of this queue is 50 calls, and up to 5 calls waiting for the same announcement can connect to a port simultaneously. This same announcement can be delivered over multiple ports. Meaning if all 50 calls in queue are waiting for the same announcement, that announcement could be played simultaneously to all 5-0 calls over 10 ports. Digital announcements are delivered on demand, so a call that connects to a port receives an announcement immediately and does not have to wait for the announcement to finish and start again.

As an example of digital announcement queuing, say the calls identified by asterisks (*) in the following list are waiting for the first Split 1 announcement, and Port 3 becomes available:

Queued Calls	Announcement Ports
1. A*	Busy— Port 1
2. B	Busy— Port 2
3. C*	Busy— Port 3
4. D	Busy— Port 4
5. E	Busy— Port 5
6. F*	Busy— Port 6
7. G	Busy— Port 7
8. H	Busy— Port 8
9. I*	Busy— Port 9
10. J*	Busy— Port 10
11. K	Busy— Port 11
	Busy— Port 12
	Busy— Port 13
	Busy— Port 14
	Busy— Port 15
	Busy— Port 16

With Port 3 available, Call A (the first call in queue) and up to four other calls waiting in queue for the Split 1 announcement immediately connect to Port 3, as shown in the following queue:

Queued Calls	Announcement Ports
1. B	Busy — Port 1
2. D	Busy — Port 2
3. E	**ACFIJ**— Port 3: Split 1 announcement
4. G	Busy — Port 4
5. H	Busy — Port 5
6. K	Busy — Port 6
	Busy — Port 7
	Busy — Port 8
	Busy — Port 9
	Busy — Port 10
	Busy — Port 11
	Busy — Port 12
	Busy — Port 13
	Busy — Port 14
	Busy — Port 15
	Busy — Port 16

All calls remaining in queue then move to higher positions in the queue. Notice that the second call in the queue (Call B) moves up to the first position. When this call connects to the next available port, up to four other calls waiting for the same announcement will also connect to that port.

If a Generic 3i/ Generic 1/ System 75 announcement queue is full, the system will continue to try every 10 seconds to connect a call to the proper announcement until the call connects to an agent, connects to an announcement, or enters the announcement queue.

| NOTE | If a call is to receive a forced announcement, the system will not connect the call to an agent until the call has received the announcement or it finds that the announcement is not available (that is, out of service or has not been recorded). |

Answer Supervision on Calls to a Split

Answer supervision is a signal sent by the switch to the serving CO. This signal tells the CO that an incoming call has been answered and that the CO should begin tracking toll charges for the call (if they apply). For System 75, Generic 1, Generic 3i, Generic 2 or System 85 R2V4, answer supervision is always sent immediately before a call connects to an agent or an announcement. Additionally, with vectoring, answer supervision is sent to the CO when music is provided prior to an announcement or connecting to an agent. For System 85 R2V3 and DIMENSION PBX, the switch can be set to send answer supervision at either of the following two times:

> At the time an incoming call first enters a split queue
>
> Immediately before a call connects to an agent or announcement.

Whichever time is set for answer supervision, that time becomes effective for all splits.

In most cases, sending answer supervision immediately before the call connects to an agent or announcement will be the most economical option. Sending answer supervision when a call queues to a split usually means that the call needlessly accumulates toll charges while it waits in queue.

Abandoned Calls

At any time while a call is waiting in queue or is receiving an announcement, the caller can hang up. This type of disconnect is called an **abandoned call**. An abandoned call is a call that queues to a split, but does not connect to an agent because the caller hangs up. Abandons can cause billing for calls to occur if answer supervision is sent before abandonment. They also temporarily occupy trunks that could have otherwise gone to more persistent callers. Finally, abandons often represent lost sales or lost good will. For these reasons, effective announcement administration should persuade queued callers to stay on the line until someone answers their calls. Also, staffing should be sufficient to prevent callers from having to wait in queue for an unreasonable amount of time.

Abandoned Call Search

If answer supervision has been sent and a call abandons, **ghost calls** can occur. A ghost call is a call that is sent to an agent after the caller has actually hung up. Thus, the agent answers an ACD call, and no one is on the line. Ghost calls occur because the CO delays sending a disconnect signal to the ACD 2 to 25 seconds (depending on the CO) after a caller hangs up. Ghost calls are a problem because they waste agents' time, and they can delay or prevent actual calls from connecting to an agent. Agents will also be inappropriately credited with ACD calls when the 3B CMS gathers data.

To minimize this problem, Abandoned Call Search can be assigned as a switch-wide feature on Generic 2/ System 85 and assigned to specific trunk groups on Generic 3i/ Generic 1/ System 75. With Abandoned Call Search, the switch checks a call's incoming trunk just before ringing an agent. If the trunk has been disconnected, the switch releases the trunk. If the trunk still has a caller waiting, the switch distributes the call to the agent.

Intraflow and Interflow

If, during peak calling periods, a split's queue is heavily loaded, or if calls arrive outside of normal working hours, calls may be redirected to another destination. Redirecting calls to another destination within the local switch is called **intraflow**. Redirecting calls to a destination outside of the local switch is called **interflow**. Intraflow and interflow are set up differently in Generic 2, System 85, DIMENSION PBX, System 75, Generic 1, and Generic 3i.

> **NOTE** If Call Vectoring is active on a Generic 2, System 85 R2V4, or Generic 3i, redirection of calls differs significantly from the Generic 2/ System 85/ Generic 3i intraflow/ interflow described in this section. See the *3B Call Management System Vectoring Administration* (5-85-215-502) for a description of split call redirection with call vectoring.

Intraflow and Interflow for Generic 2/System 85/DIMENSION PBX

For Generic 2/ System 85/ DIMENSION PBX, up to three intraflow destinations and one interflow destination can be established for a split through switch administration and procedures on the split supervisor's voice terminal. For intraflow, the destinations can be:

> Other splits
>
> Extensions
>
> The attendant queue
>
> The Centralized Attendant Service queue
>
> Audio Information Exchange (AUDIX) or a Message Service Center.

For interflow, the destinations can be the same as those listed for intraflow, except that the destinations will be on a remote switch. As a result, an interflow destination is usually a 7-digit, 10-digit, or international phone number.

When a split has more than one intraflow/ interflow destination, the ACD sends a call to the first destination specified. If that destination cannot accept the call, the ACD will try the second destination, then the third, and finally the fourth. If the last destination cannot accept the call, the ACD will not remove the call from the original split's queue. Therefore, the last destination should be a split or extension that accepts all calls into its queue. If an interflow destination is specified, it must be the last destination the ACD tries.

Unconditional and Threshold Intraflow/Interflow for Generic 2/System 85/Dimension PBX

Intraflow and interflow can be set to occur unconditionally. This means that all calls to a split are redirected to the intraflow/ interflow destination(s). Unconditional intraflow/ interflow is normally used to redirect calls during after-work hours.

NOTE	When unconditional intraflow/ interflow goes into effect, calls already waiting in queue will also be redirected. This may cause calls to wait for an excessively long time before connecting.

Intraflow/ interflow can also be set to occur only when an **outflow threshold** has been reached. An outflow threshold is the number of calls in a split queue that will trigger intraflow/ interflow. Threshold intraflow/ interflow is normally used to redirect calls during peak calling periods, when a lot of calls start to enter the split queue. The outflow threshold is set through switch administration.

If a split's outflow threshold is reached, the call at the head of the queue is redirected. This is usually the **oldest call waiting in that split's queue.** If and when that call queues to a destination, it could become the last call in the destination's queue. As a result, a redirected call can receive an excessively long wait time. To prevent excessive wait time, calls should be redirected to priority queues whenever possible. For example, if the destination is another split, and that split can be accessed by a nonpriority associated extension or a priority associated extension, the priority associated extension should be used for intraflow.

When an intraflow destination has a queue, that destination may also have an **inflow threshold**. An inflow threshold is the number of calls in a queue that will prevent intraflowed calls from entering that queue. When a destination's inflow threshold is reached, the ACD sends intraflowed calls to the original split's next destination or the calls remain in the original split's queue. An inflow threshold is set up through switch administration.

NOTE	An interflowed call will automatically queue to the destination, regardless of whether the destination has an inflow threshold.

NOTE	Unconditional and threshold intraflow/ interflow cannot be used simultaneously for the same split.

Setting Up Generic 2/System 85 Intraflow/Interflow

To set up intraflow/interflow, the appropriate **dial access codes** must be set up using switch procedures. Dial access codes are numbers that can be dialed from a voice terminal to activate particular switch features. They may, in turn, be assigned to buttons on voice terminals for quick dialing of the codes. Split supervisors activate intraflow/interflow on their voice terminals by dialing the access codes or pressing the assigned voice terminal buttons. Supervisors then enter the extension or phone number of the destination.

A split supervisor must repeat the entire intraflow/interflow activation procedure for each destination. The order in which the ACD checks destinations for intraflow/interflow is the same order in which the split supervisor activates the destinations. To activate two destinations, the supervisor performs the procedure twice, and the first destination activated becomes the first destination for intraflow/interflow.

The following types of intraflow/interflow can be used for a split:

1   Threshold intraflow (using the Call Forwarding — Busy and Don't Answer feature)

2   Unconditional intraflow (using the Call Forwarding — Follow Me feature)

3   Threshold interflow (using Overload Balancing)

4   Unconditional interflow (using Overload Balancing)

5   Unconditional interflow (using the Call Forwarding — Follow Me feature in a multiple switch network). This type of interflow should be used for an AUDIX or Message Service Center destination.

Because unconditional and threshold intraflow/interflow cannot be used together for the same split, the following combinations of intraflow/interflow may be used together:

Types 1 and 3

Types 2 and 4

Types 2 and 5.

If the Call Forwarding — Follow Me feature is used to set up an interflow destination, the maximum number of destinations for the split is only three — the interflow destination and two intraflow destinations. If Overload Balancing is used for interflow, the destination phone number must be assigned an Automatic Alternate Routing (AAR) or Automatic Route Selection (ARS) pattern through switch administration.

NOTE	AAR and ARS are switch features which store alternate trunk routes for outgoing (external) calls or, in this case, interflow.

Using 3B CMS to Set Up Generic 2/System 85/DIMENSION PBX Intraflow

On Generic 2/ System 85/ DIMENSION PBX, a split supervisor or the CMS administrator can set up and activate intraflow for a split using the 3B CMS instead of a split supervisor's voice terminal. 3B CMS cannot be used for interflow. In 3B CMS, the supervisor or administrator specifies the following parameters:

> Whether the intraflow will be unconditional (all calls intraflowed) or conditional (calls intraflowed according to the outflow threshold)

> Whether each destination (up to three intraflow destinations are possible) is an extension, split, priority split, attendant, or CAS

> The split number, extension, or phone number of each destination

> The outflow threshold of the original split and the inflow threshold(s) of the receiving split(s).

The main advantage of using 3B CMS to set up intraflow is that intraflow can be scheduled to take effect automatically. Thus, intraflow can be scheduled to become active only during peak calling periods or on the weekends and/ or at night. CMS will activate intraflow automatically according to schedule, without any further intervention by the split supervisor. However, the supervisor will still have to manually activate interflow when needed.

Intraflow and Interflow for Generic 3i/Generic 1/System 75

For Generic 3i/ Generic 1/ System 75, up to three intraflow destinations **OR** one interflow destination can be established for a split through switch administration. For intraflow, the destinations can be:

Extensions

Other splits or Hunt Groups*

The attendant queue

AUDIX

Announcements followed by a forced disconnect.

For interflow, the destinations can be those previously listed, plus the CAS, all of which will be on a remote switch. In addition, an interflow destination can be a 7-digit, 10-digit, or international phone number.

Like intraflow for a Generic 2/ System 85/ DIMENSION PBX, if a split in a Generic 3i/ Generic 1/ System 75 has more than one destination, the ACD will try each destination in succession until it finds a destination that will accept a call. If no destination will accept the call, the ACD will leave the call in the original split's queue. If an interflow destination is specified and activated, the ACD will try that destination only, even if intraflow is active. If the interflow destination does not accept the call, the call receives a busy signal.

---

* "Hunt Group" is a term in Generic 3i/ Generic 1/ System 75 administration that refers to groups of extensions that receive distributed calls. For Generic 3i/ Generic 1/ System 75 administration, however, the term "split" refers to a hunt group that is measured by CMS.

Types of Intraflow/Interflow on Generic 3i/Generic 1/System 75

Like Generic 2/ System 85/ DIMENSION PBX, Generic 3i/ Generic 1/ System 75 intraflow and interflow can be set to occur unconditionally. That is, all calls can be intraflowed/ interflowed, regardless of the split's queue status. In addition, intraflow can be set to occur based on one of two criteria:

Don't Answer Time Interval

The Don't Answer Time Interval is the time permitted for a call to wait in a split queue before the ACD intraflows the call. The Don't Answer Interval is set for each split through switch administration. The time interval is actually entered as the number of ringing cycles that occur before intraflow. Since a ringing cycle lasts 6 seconds, entering 3 for the time interval means that a call will intraflow after waiting in queue for 18 seconds. The maximum length of a time interval can be 99 ringing cycles, or 594 seconds.

Busy

The Busy criteria specifies that intraflow from a split occurs when the split's queue is full. If the Busy criteria is used, the established queue size should not be so large that no calls are intraflowed, nor should the queue size be so small that calls are unnecessarily intraflowed.

| NOTE | When unconditional intraflow/ interflow goes into effect, calls already waiting in queue will also be redirected. This may cause calls to wait for an excessively long time before connecting. |

As with Generic 2/ System 85/ DIMENSION PBX, when an intraflow destination has a queue, that queue may be assigned an inflow threshold. For Generic 3i, Generic 1, and System 75, the inflow threshold is the length of time the oldest call in queue has been waiting, **not** the number of calls in queue as with the Generic 2/ System 85. Through switch administration, the length of time is specified as a number of seconds between 0 and 999. If the oldest call in queue has been waiting longer than the specified length of time, that queue does not accept intraflowed calls and the ACD tries the next specified destination.

The Generic 3i, Generic 1, and System 75 ACD can send intraflowed calls to destinations as priority calls, which then enter a destination queue ahead of calls already in queue. For intraflowed calls to have priority, the original split is assigned Priority Queuing on Intraflow through switch administration.

The following types of intraflow/interflow can be used for a split:

1   Don't Answer Time Interval intraflow (using the Call Coverage feature)

2   Busy intraflow (using the Call Coverage feature)

3   Unconditional intraflow (using the Call Forwarding — All feature)

4   Unconditional interflow (using the Call Forwarding — All feature).

NOTE When calls are intraflowed using the Call Coverage feature, CMS only reports inflowed and outflowed calls if the call queues to the original split. For example, a call that covers using the busy criterion will not be recorded as in/outflowed; calls that queue before covering using the don't answer criterion are recorded as in/outflowed calls.

Setting Up Generic 3i, Generic 1, and System 75 Intraflow/Interflow

At any one time, a split can have either intraflow or interflow active, but not both. However, both conditional (Call Coverage) and unconditional (Call Forwarding) intraflow can be simultaneously active for a split. In this case, unconditional intraflow is first invoked for the split's incoming calls. Then, after the switch forwards a call to the unconditional destination, the switch uses the conditional intraflow criteria to determine whether to redirect the call to the next destination. Thus, when unconditional and conditional intraflow are used together, the conditional intraflow criteria are applied to the forwarded-to destination, not to the original split.

This combination of unconditional and conditional intraflow allows Dialed Number Identification Service (DNIS) numbers to appear on agent display voice terminals.   In this case, the DNIS number is actually a dummy split extension (that is, the split extension has no assigned agent extensions). The intraflow destinations are the real splits (with staffed agents). With such a configuration, CMS will peg incoming calls for the DNIS number (that redirected via conditional intraflow to real splits) as outflows. CMS will also peg the calls to the destination splits as ACD calls and inflowed calls. And regardless of the split where calls actually connect to agents, the agents will see the DNIS (dummy split) number on their display terminals.

The intraflow criteria and destinations are assigned through switch administration. The intraflow criteria then remain active, and intraflow occurs either unconditionally or whenever the criteria is met. Also through switch administration, console permissions and the interflow dial access code are assigned. Unconditional interflow can be activated by entering the interflow dial access code, the split's extension, and the interflow destination number.

> **NOTE** With Generic 3i/ Generic 1/ System 75, the split supervisor cannot establish intraflow from a voice terminal. In addition, 3B CMS cannot be used to set up or activate intraflow/ interflow.

Night Service on Generic 3i/Generic 1/System 75

Generic 3i, Generic 1, and System 75 offer an alternative form of call routing called Night Service. Night Service is the redirection of all calls to a Night Service destination, which can be as follows:

Another split

An extension

The attendant group

An announcement with forced disconnect.

Night Service can take three forms:

Hunt Group (Split) Night Service

Hunt Group Night Service redirects all calls arriving at a split to a destination connected to the local switch. The Night Service destination for the split must be assigned through switch administration. Also, the Night Service feature and the specific split number must also be assigned to a button on the split supervisor's voice terminal, a split agent's voice terminal, or both. The split supervisor or the agent can then activate Night Service for the split simply by pressing the Night Service button.

Trunk Group Night Service

Trunk Group Night Service redirects all calls arriving over a split's assigned trunk groups to a local destination. This Night Service destination for the trunk group(s) must be assigned through switch administration. Also, the Night Service feature and the specific trunk group number must also be assigned to a button on a split supervisor's voice terminal, an agent's voice terminal, or both. The supervisor or agent can then activate Trunk Group Night Service for the split simply by pressing a button.

Trunk Group Night Service by itself does not guarantee that all calls to a split will be redirected. DID and internal extension calls may still connect to the split.

NOTE Trunk Group Night Service and Hunt Group Night Service can both be active for a split at the same time. However, if the Trunk Group Night Service destination differs from the Hunt Group Night Service destination, calls will go to the Trunk Group Night Service destination.

System Night Service

System Night Service redirects all calls arriving over **all trunk groups** to the Night Service destination. System Night Service overrides any Hunt Group Night Service set up for an individual split. If Trunk Group Night Service is active for a particular trunk group, System Night Service does not affect that trunk group.

NOTE When any type of Night Service becomes effective, calls already in a split's queue will not be redirected. To avoid dissatisfied callers, agents should continue to staff the split until the queue is empty.

How Calls Are Distributed to an Agent in a Split

So that calls arriving at a split will actually connect to a phone, agent extensions must be assigned to the split through switch administration. On Generic 2/ System 85/ DIMENSION PBX, agent numbers, starting with agent number 0, are then assigned to each extension in the split. On Generic 3i, Generic 1, and System 75, the System Access Terminal automatically lists agent number slots (1 through 100) for each split. Each agent extension must be entered into one of these slots in order to assign the extension to the split. The number of the slot then becomes that extension's agent number. Agent numbers for a split create a sequence that the ACD can use to search for available agent extensions.

On Generic 3i/ Generic 1/ System 75 a split with 30 agent extensions will have agent numbers from 1 to 30. On Generic 2/ System 85, a split with 215 agent extensions will have agent numbers from 0 to 215. The total number of agents assigned in all splits, however, cannot exceed the following maximums:

Generic 3i/ Generic 1/ System 75 Switches 448 agents

Generic 2/ System 85 Switches 1,024 agents

DIMENSION PBX Switch 5-12 agents.

> **NOTE** These numbers apply to the ACD. The number of agents that 3B CMS can measure may be different. (See Chapter 1, "Introduction," for the measurable agent numbers for your 3B CMS.)

Once extensions have been initially assigned to splits and have been identified as measured by 3B CMS, extensions can be reassigned to different splits, or removed from active splits, using 3B CMS. (See Chapter 6, "Configuration.")

> **NOTE** On a Generic 2/ System 85 switch, each split is assigned a split size, represented by the maximum number of extensions the split can have. Once the maximum number of extensions is assigned to a split, attempts to reassign an additional extension to that split will be rejected.

Multiple Split Assignments for Agents on Generic 3i/Generic 1/System 75

On Generic 3i/ Generic 1/ System 75, an agent extension may be assigned to up to 32 splits, and an agent can be simultaneously logged into three splits. If an agent is logged into three splits, that agent will be counted as three agents by both the switch and CMS. Therefore, the 448 agent limit (200 agent limit on 3B CMS) may be used up rapidly if many agents log into more than one split.

Call Distribution Methods

The ACD can distribute calls to agents in a split in one of three ways (although all three are not available with every switch model):

Direct Hunting — The ACD software checks the split's agent numbers in numerical sequence until it finds an agent with an available extension. The ACD then sends the call to that agent's extension. This method is most useful when management wants to maximize the number of calls to the most effective agents. With this method, the most effective agents will be assigned the lowest agent numbers, starting with agent number 1 for the top agent. (For Generic 3i/ Generic 1/ System 75, the term ''Direct Department Calling [DDC] is often used to refer to Direct Hunting.)

Circular Hunting — The ACD software checks the split's agent numbers in numerical sequence starting with the number of the last agent connected to a call. This method is useful in maintaining a balanced workload among all agents. (This distribution method is not available in Generic 3i/ Generic 1/ System 75.)

Most Idle Agent (MIA) — The ACD finds the agent extension that has been idle (or not engaged in ACD-related work) the longest and sends the call to that extension. This method ensures a high degree of equity in agents' workloads even when the calls are not similar in length. This method is sometimes called ''true ACD.'' (For Generic 3i/ Generic 1/ System 75, the term Uniform Call Distribution [UCD] is often used to refer to MIA distribution. MIA is not available on DIMENSION PBX.)

In a Generic 2/ System 85, the MIA distribution method can be set so that the ACD will count an outgoing call from an agent extension as ACD-related and, thus, the agent will not be moved forward in the most-idle-agent queue. (The outbound call will be considered an ACD call for purposes of agent availability.)

How Agents Handle Calls

An agent can receive split calls from the ACD and, in most cases, personal calls that are not related to a split. Calls dialed to a split and then distributed to an agent's extension are called **ACD calls**. Calls dialed directly to an individual agent using the agent's extension number (such as internal calls and DID extension calls) are called **extension-in (EXT-IN) calls**. Outgoing calls the agent makes are called **extension-out (EXT-OUT) calls**. EXT-IN and EXT-OUT calls are considered **non-ACD calls**.

| NOTE | The capability of a voice terminal to receive EXT-IN calls or to make EXT-OUT calls can be either facilitated or limited through switch administration. |

Agents receive calls on their voice terminals. They can normally use the buttons on their voice terminals to handle calls in many ways including using the Call Pickup button. See "How the Call Pickup Feature Affects Data" later in this appendix for more information.

Figure C-3 shows a sample button layout for an agent's voice terminal, the CALLMASTER*
voice terminal in this case.
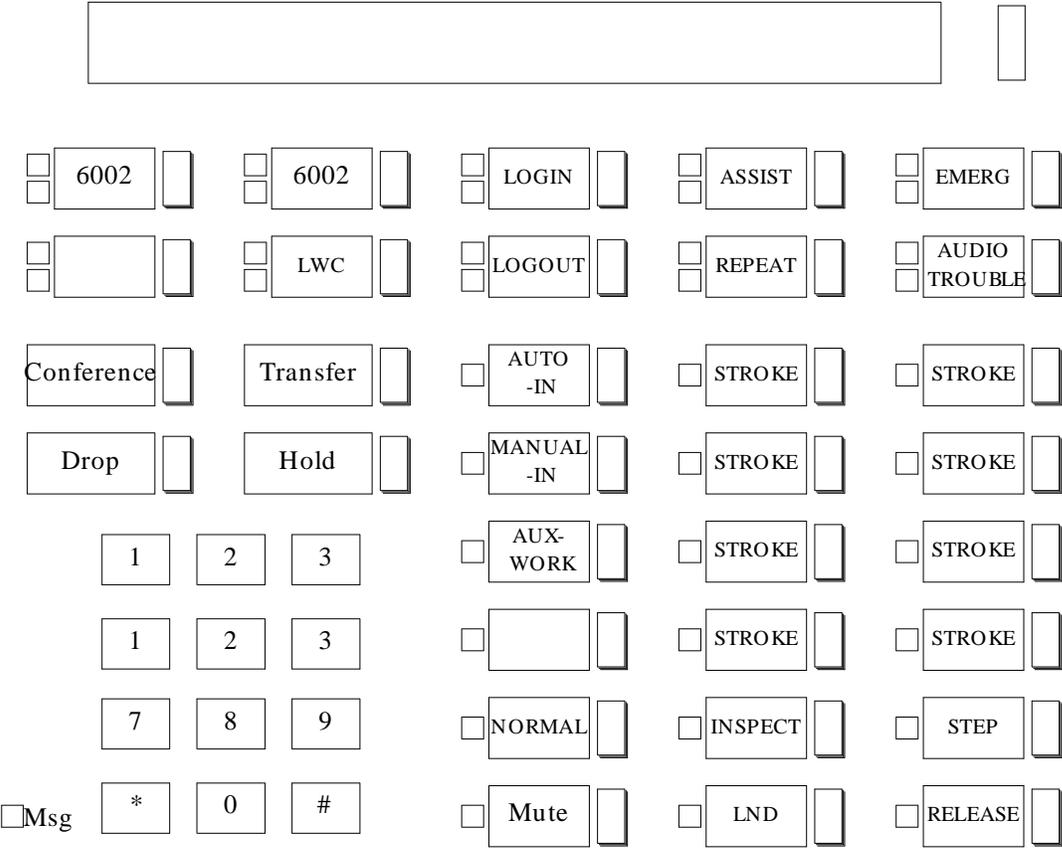
Figure C-3   **Sample Button Layout (With Display) for Agent Terminal (CALLMASTER
Voice Terminal)†**

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*   Trademark of AT&T.

†   The stroke count buttons shown are not available on Generic 1/ System 75.

Staffing an Agent Extension

The ACD distributes calls only to "available" agent extensions. To be considered available, an agent must first staff an agent extension and then select a call answering mode.

Staffing an Agent Extension on Generic 3i/Generic 1/System 75

To staff an agent extension on Generic 3i/ Generic 1/ System 75, an agent must enter a login dial access code or press an assigned $\boxed{\text{LOGIN}}$ button on the agent's voice terminal. The agent must then enter a split number and login ID of one to nine digits for 3B CMS to gather call-handling data on that agent. The required login ID length, the login dial access code, and, if desired, the $\boxed{\text{LOGIN}}$ buttons on agent voice terminals must be set up through switch administration. The split number may also be assigned to the $\boxed{\text{LOGIN}}$ button or another button for faster agent login.

If CMS data on agent call handling is not required, the login ID length can be set to 0 through switch administration. Then, when any agent enters the dial access code and the split number, that agent's extension is immediately considered to be staffed, and the agent can begin requesting ACD calls. Thus, with a login ID length of 0, no login ID is required for staffing an extension, and no ACD call handling data is gathered on agents.

Staffing an Agent Extension on Generic 2/System 85/DIMENSION PBX

To staff a split extension on Generic 2/ System 85/ DIMENSION PBX, an agent must press one of two buttons on the voice terminal for that agent's extension:

$\boxed{\text{STAFFED}}$

The STAFFED button notifies the ACD that an agent is preparing to receive calls on the extension. However, to actually receive calls, the agent will still have to press another button, the AUTOMATIC-IN or MANUAL-IN button, both of which are described later in this Appendix. Also, 3B CMS will not gather any data on an agent that staffs an extension with the STAFFED button.

On most voice terminals, if the agent uses a voice terminal headset to answer calls, merely plugging in the headset to the voice terminal tells the ACD that the extension is staffed. Whether an agent's voice terminal has headset or handset capability is established through switch administration.

$\boxed{\text{LOGIN}}$

The LOGIN button tells the ACD that the agent is going to begin logging in. Then, after the agent logs in, the extension becomes staffed and 3B CMS begins to gather data on that agent's activity. Logging in is required for CMS data collection, even if

the agent is using a headset. For Generic 2, System 85, and DIMENSION PBX, the login ID, a four-digit number, must be entered twice before login is complete.

Dial access codes for ACD staffing and/ or login must be assigned through switch administration. Also using switch procedures, the STAFFED button or LOGIN button can be assigned on each agent voice terminal. An agent can then press a button or enter the appropriate dial access code to staff or log into an agent extension.

> **NOTE**   An agent cannot get ACD calls on an extension for which CMS gathers data unless the agent presses the [LOGIN] button. Therefore, when an extension is assigned to CMS data collection, the agent's voice terminal normally has only the [LOGIN] button. Conversely, a voice terminal on an extension **not** assigned to CMS data collection normally has only the [STAFFED] button.

Staffing Multiple Splits

An agent can login to any extension assigned to a split. On Generic 3i/ Generic 1/ System 75, an agent can log into up to three splits. On Generic 2/ System 85/ DIMENSION PBX, an agent can log into only one split.

> **NOTE**   On Generic 3i, Generic 1, and System 75, agents should use different login IDs for each split if they simultaneously log into multiple splits; otherwise, 3B CMS data will be corrupted for those agents.

Call Answering Modes

Immediately after an extension becomes staffed, the agent is considered to be in the **"auxiliary work (AUX-WORK)"** state, which is considered to be non-ACD work. The agent is not yet considered to be available. To become available for ACD calls, the agent must press one of two buttons to select a call answering mode:

[MANUAL-IN]

The MANUAL-IN button tells the ACD that the agent extension is available for an ACD call. The ACD then sends a call to that agent's extension according to the established call distribution method. After the agent finishes the call, the agent is considered to be in an **"After-Call-Work (ACW)"** state and is not considered available for another split call. If the agent presses MANUAL-IN again, the agent becomes available for another split call. The manual-in mode is most effective when an agent must perform call-related tasks immediately after finishing each call.

AUTOMATIC-IN

Like the MANUAL-IN button, the AUTOMATIC-IN button tells the ACD that the agent is available for split calls. However, after an agent finishes a call, the ACD automatically considers the agent to be available again and sends the agent another call according to the established call distribution method. The agent does not have to press any buttons to receive another call. This type of call-answering increases the number of calls that agents can answer in a given time frame, especially if agents have to do little call-related work when calls have been completed.

> **NOTE** When an agent finishes a call, the system may take up to 6 seconds to completely disconnect the call. Therefore, it is strongly recommended that an agent use the RELEASE button to immediately disconnect calls after they are complete.

The MANUAL-IN and AUTOMATIC-IN dial access codes and the associated buttons on each agent's voice terminal must be assigned through switch administration.

Ringing Versus Zip Tone on Incoming Calls

When a call arrives at a voice terminal, the agent may hear ringing or **zip tone** (beeping), depending on how the voice terminal is administered. Ringing is recommended when an agent answers calls using the handset. Thus, when a call connects to the agent's voice terminal, the voice terminal rings, and the agent picks up the handset to answer the call.

Zip tone is recommended when the agent answers calls on a headset. (Zip tone can also occur on a handset, but the agent must hold the handset and listen for incoming zip tone.) When a call connects to an agent's voice terminal, the agent will hear one of the three types of zip tone on the headset:

> One burst of zip tone — For calls dialed directly to the split (or agent extension on Generic 3i/ Generic 1/ System 75)

> **On Generic 2/ System 85/ DIMENSION PBX only.** Two bursts of zip tone — For calls intraflowed from another split.

> **On Generic 2/ System 85/ DIMENSION PBX only.** Three bursts of zip tone — For calls interflowed from another split.

Then, without pushing any buttons, the agent immediately greets the caller because zip tone automatically answers the call for the agent.

Ringing (called "manual answer" in switch administration) or zip tone (called "automatic answer" in switch administration) can be established on a per-voice terminal basis through switch administration.

Auxiliary Work and After-Call-Work

To temporarily prevent calls from arriving at an agent's voice terminal, an agent can press one of two buttons:

AUX-WORK

The Auxiliary Work (AUX-WORK) button temporarily stops ACD calls from arriving at the agent's voice terminal. The agent normally presses this button before doing non-ACD-related work, taking breaks, or doing personal business. Instead of unstaffing the extension or logging off, an agent can press this button, which places the agent in the auxiliary-work state.

To begin receiving calls again, the agent presses the MANUAL-IN or AUTOMATIC-IN button. The AUX-WORK button (or the dial access code, if no button is available) must be assigned through switch administration.

On Generic 3i/ Generic 1/ System 75, if an agent is normally logged into more than one split, an AUX-WORK button for each split may be assigned. Then, when the agent presses the AUX-WORK button for a particular split, the agent will not receive calls from that split. However, the agent will still be available for calls from the other splits the agent is logged into.

Also, if an agent is logged into three splits and the agent receives an ACD call for one split, the ACD will automatically place the agent in AUX-WORK for the other two splits.

ACW

The After-Call-Work (ACW) button is only available for voice terminals connected to the Generic 3i/ Generic 1/ System 75. This button also temporarily stops calls from arriving at the agent's voice terminal. An agent who is in automatic-in mode normally presses this button during a call so that when the call is finished, the agent will not receive another ACD call and can, instead, do ACD call-related work, such as filling out a form, completing data entry, or making an outgoing call to get information. When the agent is in after-call-work, the lamp indicator next to the ACW button lights

In the manual-in mode, the ACW button is unnecessary because an agent automatically enters ACW when the agent completes a call. However, if the agent needs to get out of automatic-in mode or auxiliary work state to do additional call-related work, the agent can press this button (or enter a dial access code, if no button is available).

If an agent is logged into more than one split, pressing the ACW button makes the agent unavailable for calls in all splits. CMS considers the agent to be in AUX-WORK for all splits other than the split in which the agent is currently in ACW.

Other Voice Terminal Buttons Used by Agents

In addition to the buttons previously described, an agent's voice terminal can have many other buttons for call processing. The feature dial access codes and the buttons on each agent voice terminal can be assigned through switch administration. Agents can then press the button or dial the associated access code to perform each function. The following list describes the function of each button:

CALL APPEARANCE Buttons

Agents use these buttons to place and answer calls. Two status lamps (red and green) are adjacent to each call appearance button. The red lamp lights when an agent presses an appearance button to make or answer a call. The green lamp flashes to alert an agent to an incoming call.

Except with multiple call-handling, incoming ACD calls always arrive at the first appearance. However, voice terminals may have additional appearances to provide expanded functionality for agents. For example, on a second appearance, an agent can more readily transfer and place calls since the line will be free of ACD calls. On a two-appearance voice terminal on Generic 3i/ Generic 1/ System 75, the second appearance is automatically assigned to be only a call originating appearance: that is, calls will not arrive on the second appearance.

For Generic 2/ System 85/ DIMENSION PBX, the second appearance on a two-appearance voice terminal should also be call-originating only, though this is not mandatory. This setup prevents extension-in calls or transferred calls from arriving at the agent's voice terminal when the agent is already on an ACD call. On a three-appearance terminal, the first two appearances can be set to receive and make calls, and the third appearance can be set only for making calls. This setup allows an agent to receive two calls at the same time (for example, when the agent has multiple call-handling capability on Generic 2 or System 85 R2V4), yet keeps one line always available for placing and transferring calls.

ASSIST

Agents press this button to request help from the split supervisor. The ASSIST button automatically dials the split supervisor's extension and connects the agent to the supervisor. On Generic 2/ System 85/ DIMENSION PBX, the agent can press this button after placing an ACD call on hold, then return to the call after talking with the supervisor. On Generic 3i/ Generic 1/ System 75, pressing the ASSIST button automatically places the current call on hold.

AUDIO TROUBLE (on Generic 2/ System 85/ DIMENSION PBX)

Agents press this button to notify the 3B CMS that a call has poor transmission. When the agent presses the AUDIO TROUBLE button, the switch tells 3B CMS what the agent's extension is, what trunk is being used, and the time of day the trouble occurred. This information is reported in 3B CMS exception reports and is useful for trouble-shooting trunk and extension problems (see Chapter 9, "Exceptions").

CONFERENCE

Agents press this button to connect additional people into a 2-person call. For Generic 3i/ Generic 1/ System 75, an agent with a multi-appearance voice terminal can add up to 4 additional people to a 2-person call. For Generic 2/ System 85/ DIMENSION PBX and single appearance voice terminals on Generic 3i/ Generic 1/ System 75, only one person may be added.

NOTE	Single appearance voice terminals do not actually have this button. Agents must instead use the RECALL button to conference a call.

If an agent adds another agent into a conference call, the resulting conference is not considered an ACD call for the added agent. The ACD considers the added agent to be on an extension-in call.

EMERGNCY (on System 85 R2V4, Generic 2, and DIMENSION PBX)

Agents press this button to notify the attendant when malicious calls are in progress. The attendant can then perform a call trace.

HOLD

Agents press this button to place a call on hold. The ACD will not send any more ACD calls to the agent as long as a call is on hold. However, for the Generic 2 or System 85 R2V4 switches, which allow multiple call handling, the ACD will send calls to the agent even if the agent has pressed the HOLD button, provided the agent presses AUTO-IN or MANUAL-IN while the other call is still on hold.

NOTE | Single appearance voice terminals do not actually have this button. Agents must instead use the RECALL button or the terminal's switch-hook to put a call on hold.

LOGOUT

Agents press this button to unstaff their extensions and end 3B CMS gathering of agent data.

If an agent pressed STAFFED to staff a voice terminal, the agent simply presses STAFFED again to unstaff the voice terminal.

RECALL

Agents with single-appearance voice terminals press the RECALL button to put calls on hold, transfer calls, and create conference calls.

RELEASE

As mentioned earlier, agents press the RELEASE button to quickly disconnect completed calls. If the RELEASE button is not pressed, the automatic disconnect normally takes about 6 seconds. The RELEASE button, on the other hand, takes only 1/10 of 1 second to disconnect a call.

REPEAT (on Generic 2/ System 85)

For System 85 (R2V3 and R2V4) and Generic 2, agents press this button to repeat city-of-origin announcements, which they may hear when they receive interflowed calls from a split in another city. For Generic 2 or System 85 R2V4, agents can also use the REPEAT button to repeat queue-of-origin announcements, which they may hear when they receive intraflowed calls from a split connected to their ACD.

STROKE COUNT Buttons (on Generic 2/ System 85/ DIMENSION PBX)

Up to nine buttons are available for use. Agents press these buttons to tabulate certain call events of interest. Call center management decides what each of the buttons will represent. Whenever the agent encounters an assigned type of event, the agent presses the associated stroke count button to record that event occurrence.

TRANSFER

Agents normally press the TRANSFER button to transfer calls to other agents or the split supervisor. This button is only available on multi-appearance voice terminals. Single-appearance terminals must instead use the RECALL button or the terminal's switch-hook.

For Generic 2/ System 85/ DIMENSION PBX, agents can also use the TRANSFER button to transfer calls to external destinations over trunks. External transfer must be assigned to a voice terminal as a feature over and above the normal transfer feature.

If an agent transfers a call to another agent, the call is not considered an ACD call for the agent receiving the call. The ACD considers the agent receiving the transfer to be on an extension-in call. For the agent transferring a call, the call is not counted as an EXT-OUT call.

Numerous other buttons are available on agent voice terminals, but most are not ACD-related. A few additional buttons are described in the following sections.

| NOTE | On DIMENSION PBX, whenever an agent dials a dial access code instead of pressing a button, the agent is considered to have made an extension-out call. |

Generic 2/System 85/DIMENSION PBX Incoming Call Announcements for Agents

On Generic 2/ System 85/ DIMENSION PBX, an agent can receive an announcement immediately before answering a call. This announcement tells the agent the location from which the call is coming. If a call is intraflowed from a local split, the agent may hear a **queue-of-origin announcement** that tells the agent what split the call came from. If the call is interflowed from a split in a remote switch, the agent may hear a **city-of-origin** announcement that tells the agent what city the call came from. An agent can press the REPEAT voice terminal button to repeat the announcement if the agent misses it the first time.

Announcements are assigned to the originally-called internal splits and trunk groups through switch administration. Announcements can also be assigned specifically to incoming trunk groups. In this case, an agent may also hear city-of-origin announcements for ACD calls dialed directly to the split.

Generic 2/System 85 Incoming Call Displays for Agents

On a Generic 2/ System 85, an agent can receive queue-of-origin and city-of-origin **displays** instead of or in addition to announcements if the agent has a display voice terminal (for example, the 7406D, 7407D, or CALLMASTER voice terminal). Displays are simply the visual equivalent of announcements.

The actual word(s) contained in a display must be assigned to the originally called split or the incoming trunk group.

A queue-of-origin display might look like this:

```
a= Region    2
```

A city-of-origin display might look like this:

```
a= Detroit
```

Generic 2 or System 85 R2V4 Queue Status Displays for Agents

On Generic 2/ System 85, an agent with a display voice terminal can receive queue status displays simultaneously with incoming call displays. This information is only available while the agent is active on an ACD call. A queue status display can give the agent two types of information:

> The current number of queued calls (from 0 to 999*).

> The current number of seconds (from 001 to 999†) the oldest queued call has been waiting.

A queue status display might look like this:

```
a= Region   2                                          5   0-09
```

Three additional buttons may be available on a display terminal to give an agent control of the displays:

> [DISPLAY] (On the 7407D Integrated Display Terminal only)

> The agent presses this button to activate the display feature on the voice terminal.

> [INSPECT]

> The agent presses this button to display new incoming call (either an extension-in call or an intraflowed/ interflowed call) information when the agent is already on an ACD call.

> [NORMAL]

> The agent presses this button to update the queue status display. This button is useful if the agent wants to check the queue's current status while still on an ACD call.

The queue status display feature and the associated buttons are assigned to each voice terminal through switch administration.

---

* If the number of queued calls exceeds 999, this portion of the display will show "***".

† If the oldest call has waited more than 999 seconds, this portion of the display will show "***".

Generic 3i/Generic 1/System 75 Queue Status Indications

On Generic 3i, Generic 1, and System 75, agents with display voice terminals may receive queue status displays that are basically the same as those on the Generic 2/ System 85, except that the maximum displayed calls in queue is only 100 (which matches System 75's maximum queue size).

Generic 3i/Generic 1/System 75 Queue Status Lamps on Agent Voice Terminals

Button lamps on agent voice terminals may be assigned to provide one or both of the following queue status indications:

> NQC
>
> A button on each agent's voice terminal may be assigned to show the Number of Queued Calls (NQC). The lamp associated with this button tells the agent when the number of calls in queue has met or exceeded the assigned queue size (1 to 100 calls) for the split. If no calls are in the split's queue, the status lamp associated with the button is dark. When one or more calls are in queue, the lamp lights steadily. When the number of calls in queue reaches the assigned queue threshold, the lamp flashes on and off. In this way, agents can see when calls have backed up in queue. Agents then know they need to be especially fast in dispensing with incoming calls.
>
> OQT
>
> A button on each agent's voice terminal may be assigned to show the Oldest Queued Time (OQT). The lamp associated with this button tells the agent when the oldest call in queue has been waiting longer than the assigned wait time threshold (0 to 999 seconds) for the split. If no calls are in the split's queue, the status lamp is dark. When calls are in queue, the lamp lights steadily. When the assigned wait time threshold has been met or exceeded by the oldest call in queue, the lamp flashes.

The thresholds that cause the lamps to flash and the individual buttons on each agent voice terminal must be assigned through switch administration.

Generic 3i/Generic 1/System 75 Auxiliary Queue Status Lamps

An auxiliary queue status lamp can also notify agents when either the Number of Queued Calls threshold or the Oldest Queued Time threshold has been reached. An auxiliary queue status lamp is a lamp connected to the ACD that is installed on a wall, on the ceiling, or at another call center location in view of the split agents and the split supervisor. Depending on which threshold (either the number of calls in queue or the time of the oldest call waiting) is assigned to the auxiliary lamp, the lamp lights steadily when the threshold is met or exceeded. At all other times, the lamp remains dark. Unlike the button lamps on voice terminals, neither type of auxiliary lamp indicates when calls have merely queued to the split.

Split Supervisor Voice Terminal Buttons

A split supervisor's voice terminal may have a number of buttons with special functions reserved only for the split supervisor. If the split supervisor's extension is also assigned to the split as an agent extension, the voice terminal will also have all buttons available to an agent.

Figure C-4 shows an example of a button layout for a split supervisor's voice terminal.

6010	ADD AGENT
6010	DELETE AGENT
6010	INTRAFLO ALL
LND	INTRAFLO THRESHLD
VERIFY ANNCT.	SERVICE OBSERVE

| Conference | Transfer |
| Drop | Hold |

1	2	3
4	5	6
7	8	9
*	0	#

Message   Recall   Disconnect or Speaker
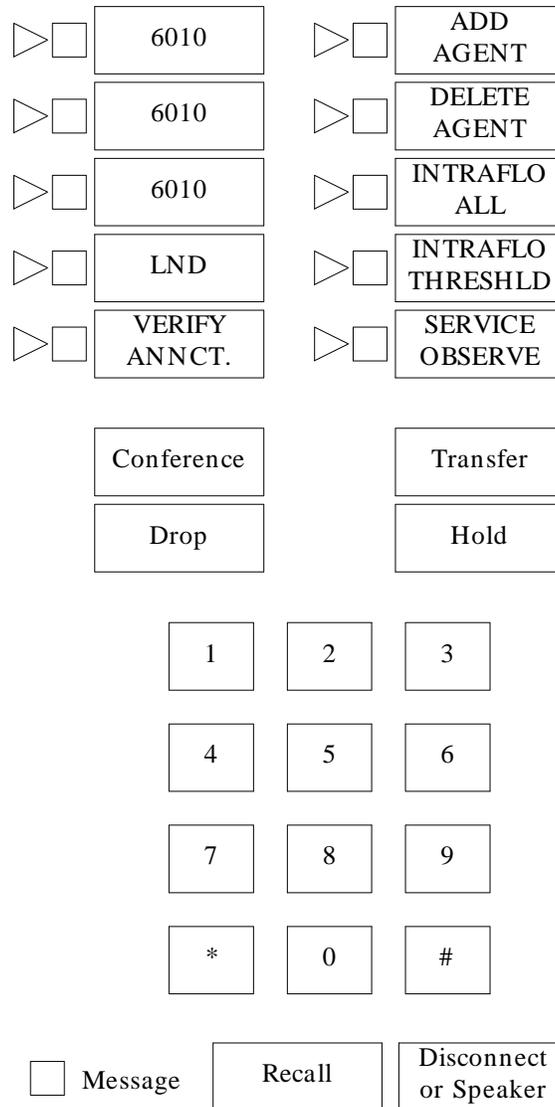
Figure C-4 **Split Supervisor Terminal — Without Agent Responsibilities (16-Button Set)**

The voice terminal buttons that are available only to the split supervisor's extension are described in the following list:

ADD AGENT (on Generic 2/ System 85/ DIMENSION PBX)

The split supervisor presses this button and dials an agent extension number to add the agent to the supervisor's split. For the add to be successful, the extension must be unstaffed at the moment the extension is dialed.

DELETE AGENT (on Generic 2/ System 85/ DIMENSION PBX)

The split supervisor presses this button and dials an agent extension number to delete the agent from the supervisor's split. For the delete to be successful, the extension must be unstaffed at the moment the extension is dialed.

INTRAFLO ALL (on Generic 2/ System 85/ DIMENSION PBX)

The split supervisor presses this button to send all calls to the intraflow destination(s). The destinations may also include an interflow destination.

INTRAFLOW THRESHLD (on Generic 2/ System 85/ DIMENSION PBX)

The split supervisor presses this button to send calls to the intraflow destination(s) if the split queue threshold has been reached. The destinations may also include an interflow destination.

NIGHT SERVICE (on Generic 3i/ Generic 1/ System 75)

The split supervisor presses this button to send all calls to night service. The Night Service may be Trunk Group Night Service or Split Night Service. Also, a separate button for each type may be available.

VERIFY ANNCT (on Generic 2/ System 85/ DIMENSION PBX)

The split supervisor presses this button to listen to the split's first announcement. The supervisor then listens to the announcement to verify that it plays correctly and serves its purpose.

SERVICE OBSERVE

The supervisor presses this button and dials an agent extension number to listen in to conversations on the voice terminal. The Service Observe feature permits the supervisor to check an agent's call-answering techniques. An agent's voice terminal may also be assigned the SERVICE OBSERVE button so that the agent can listen to another agent's conversations. The ability for an agent to service observe other agents is particularly useful in training. Service observing can be set up for listening only or for both listening and talking.

RECORD ANNCT (on Generic 3i/ Generic 1/ System 75)

The supervisor presses this button to either listen to or to record an announcement for the split.

Assigning 3B CMS Measurement of the ACD

3B CMS collects data on splits, agents, extensions, trunks, and trunk groups in an ACD. However, for CMS to collect data, the appropriate items (splits, extensions, and so on) must be identified as **measured**. Measured means that, for any split, extension, agent, trunk, or trunk group, CMS will produce data on that item. The CMS Session Status screen (see Chapter 11, "Maintenance") lists the total number of measured splits, extensions (Agent Positions), trunks, and trunk groups established in an ACD.

CMS Measurement of the Generic 2/System 85/DIMENSION PBX ACD

On Generic 2/ System 85/ DIMENSION PBX, each individual extension and trunk group must be assigned to CMS measurement using switch procedures. Trunks are then automatically measured by virtue of their assignment to a measured trunk group. Split measurement is assigned in CMS by entering a number of measured splits on the Session Status screen. The number of splits CMS can measure can be smaller than the number of splits created in the ACD, but not greater. Since splits are created in sequence starting from Split 1, CMS measures splits in sequence starting from Split 1. Thus, if 50 splits have been created at the switch, and 4-0 have been specified as measured on the Session Status screen, Splits 1 to 40 will be measured, and Splits 41 to 50 will be unmeasured.

CMS Measurement of the Generic 3i/Generic 1/System 75 ACD

For Generic 3i/ Generic 1/ System 75, individual splits and trunk groups are assigned to CMS measurement through switch administration. Extensions are then measured by virtue of their assignment to the splits, and trunks are then measured by virtue of their assignment to the trunk groups. For Generic 3i/ Generic 1/ System 75, the number of measured splits cannot be changed using the CMS Session Status screen. Rather, the number of measured splits entered on the Session Status screen must simply match the number of measured splits already assigned in the ACD. The number of splits CMS can measure can be smaller than the number of splits created in the ACD, but not greater. Since splits are created in sequence starting from Split 1, CMS measures splits in sequence starting from Split 1. Thus, if 50 splits have been created at the switch, and 40 have been specified as measured on the Session Status screen, Splits 1 to 40 will be measured, and Splits 41 to 50 will be unmeasured.

Switch-to-3B CMS Communication

To collect call data on the ACD, the 3B CMS must communicate with the ACD. Switch-to-3B CMS communication consists of electronic messages that are passed back and forth between the switch and 3B CMS. Messages from the switch to 3B CMS are one of two types:

Translations Translations tell CMS what the configuration of the ACD is. This information includes:

> The number of measured splits, extensions, trunks, and trunk groups
>
> The assignments of extensions and trunk groups to splits, and the assignments of trunks to trunk groups.

Status Changes Status changes tell CMS when the states of agent extensions or trunks change to other states due to call activity. These changes of state signal CMS to count event occurrences and to track the duration of events. CMS can then figure a wide range of data, including event totals and average time of events. For example, when an agent receives an ACD call, when an agent completes an ACD call, when a trunk connects to an agent's extension, or when an agent enters the after-call-work state, the switch sends a message indicating a change of state, and CMS then calculates the appropriate agent or trunk data.

> CMS also sends agent and trunk data to the appropriate splits and trunk groups (as defined by the configuration translations), and then compiles and calculates the split and trunk group data.

CMS can be used to change configurations in the ACD. Therefore, CMS sometimes sends translations back to the switch. CMS also sends messages to the switch requesting translations. These requests for translations occur whenever CMS begins operating.

How Switch/CMS Communication Occurs

The Generic 2/ System 85/ DIMENSION PBX sends and receives messages using a connected piece of hardware called the **Data Communications Interface Unit (DCIU)**. The Generic 3i/ Generic 1/ System 75 sends and receives messages using a piece of hardware called the **Processor Interface Board (PIB)**. The 3B computer sends and receives messages using an **Intelligent Serial Controller** (ISC) board.

These pieces of hardware use synchronous 2-way transmission based on the **X.25** packet switching protocol. The X.25 protocol ensures reliable transmission of data between the two pieces of hardware. The communication provided by the X.25 protocol is referred to on the Session Status screen (see Chapter 11, "Maintenance") as the **link**. Its operation can be monitored and turned on or off using the Session Status screen.

The communication between CMS and the switch is established and maintained by an additional level of protocol called the **session**. The session protocol is provided by the **Switch Interface Process (SIP)**, which is actually part of the CMS software.

| NOTE | The X.25 and SIP protocols together are referred to as the BX.25 protocol. |

The highest level of transmission is the application software itself, **CMS** in this case. Again, SIP processes messages from the switch as data or configuration translations and sends the information to the proper CMS database(s).

Like the link, the session and CMS levels of transmission can also be monitored on the CMS Session Status screen. If a problem exists at the link, neither the session, nor the CMS will operate. If a problem exists at the session, the CMS will not operate.

What CMS Measures

Status changes sent from the switch are the source of all ACD data (for splits and trunk groups, as well as agents and trunks). As a result, the states of agent extensions and trunks form the basis of all other data. The following lists explain what the agent (extension) and trunk states are. These states appear on CMS standard real-time reports as CMS records the current status of the ACD.

Agent States

The agent extension states on which CMS bases its data are as follows:

ACD	The extension is engaged in an ACD call (with the agent either talking to the caller or the call waiting on hold).
Available (AVAIL)	The extension is able to accept an ACD call. An extension is AVAIL in AUTO-IN any time it is not on a call. An extension is also AVAIL in MANUAL-IN immediately after the MANUAL-IN button is pressed.
After Call Work (ACW)	The agent is engaged in bookkeeping, data entry, or other work related to the previous call, and is not available to receive another call. The extension enters after-call work after an ACD call on MANUAL-IN. On a Generic 3i/ Generic 1/ System 75, the agent can select the state with the AFTER CALL WORK button, even when the agent has been in AUTO-IN mode.

Substates of ACW are:

ACW-IN	The extension received an extension-in call while in ACW. For DIMENSION PBX, if an extension in AVAIL receives an extension-in call, the state changes to ACW-IN.
ACW-OUT	The agent placed an outgoing call while in ACW. For DIMENSION PBX, if an agent places an extension-out call while in AVAIL, the state changes to ACW-OUT.

An agent's time in ACW includes time in ACW-IN and ACW-OUT, as well as time in ACW when the agent is not connected to any calls.

Auxiliary Work (AUX)	The agent is engaged in non-ACD work, is on break, in a meeting, or at lunch. The agent presses the AUX WORK button when the agent wants CMS to recognize the extension as staffed, but does not want the ACD to distribute calls there for a lengthy period.

On Generic 3i/ Generic 1/ System 75, when an agent logs into more than one split, the agent will generate excessive AUX-WORK time since CMS shows the agent to be in AUX-WORK in one split while the agent is handling an ACD call in another split. Therefore, to get an accurate account of AUX-WORK time for an agent in a split, the agent's ACD time for the other splits should be subtracted from the agent's AUX-WORK in the split in question.

Substates of AUX WORK are:

AUX-IN   The extension received an extension-in call while in AUX WORK. For Generic 2/ System 85 and Generic 3i/ Generic 1/ System 75, if an extension in AVAIL receives an extension-in call, the state changes to AUX-IN.

AUX-OUT   The agent placed an outgoing call while in AUX WORK. For Generic 2/ System 85 and Generic 3i/ Generic 1/ System 75, if an agent places an extension-out call while in AVAIL, the state changes to AUX-OUT.

An agent's time in AUX includes time in AUX-IN and AUX-OUT, as well as time in AUX when the agent is not connected to any calls.

Unstaffed (UNSTAF)   No agent is logged into this extension.

Initialize (INIT)   The link is down or an error has been detected. INIT remains until the condition is cleared (link comes up) and/ or the agent completes the current ACD call and CMS receives an agent state message indicating the agent is in the AVAIL or AUX state.

Ring   The agent's voice terminal is ringing with a call that has left the split queue. *This state is available only with Generic 2 with the ring-state enabled.* With this state, you can determine how long a call rings before an agent answers and thereby determine the actual time a caller waits in queue and waits while the call is ringing to better analyze your call center's performance.

NOTE	On CMS standard reports, CMS combines AUX-IN and ACW-IN data into total extension-in data. Likewise, CMS combines AUX-OUT and ACW-OUT data into total extension-out data. You can create custom reports to distinguish ACW-IN and AUX-IN calls, as well as ACW-OUT and AUX-OUT calls.

As an example of how a change in agent state is converted into CMS agent and split data, if an agent receives an ACD call, CMS receives a status change from the switch saying that the agent has entered the ACD state. CMS pegs one ACD call for the agent (and the agent's split) and begins tracking the time the agent remains in the ACD state. If the call lasts 1-80 seconds and the agent then presses the After-Call-Work button, the switch sends another status change saying the agent has entered the ACW state. CMS then records the duration of the ACD call for the agent and split (180 seconds) and begins tracking the time the agent stays in ACW.

Trunk States

The trunk states on which CMS bases its data are as follows:

IDLE   Waiting for call.

SEIZED   The trunk is seized (incoming or outgoing). ACD calls go to QUEUED, then CONN, ABAN, or FWRD. Non-ACD calls remain SEIZED.

QUEUED   An ACD caller has the trunk and is waiting for an agent to answer.

CONN   Agent and caller are connected in an ACD call.

ABANDONED A queued caller just abandoned the call.

FWRD   A queued call has been intraflowed outside the ACD or interflowed.

MBUSY   Maintenance Busy, out of service for maintenance purposes.

HOLD   The agent has put a call on hold (available with System 85 R2V4 or Generic 2 only).

INIT   The link is down or an error has been detected. INIT remains until the condition is cleared (link comes up) and/ or the current ACD call and associated ACW are complete.

As an example of how a change in trunk state is converted into CMS trunk and trunk group data, if the switch tells CMS that a trunk has entered the CONN (connected) state, CMS pegs an answered call not only for the trunk, but also for the trunk group to which the trunk is assigned and the split to which the trunk was queued. CMS also begins tracking the time the call lasts. When the call ends (say, after 180 seconds), the switch tells CMS that the trunk has entered the IDLE state. CMS then records the duration of the call (180 seconds) for the trunk, the trunk group, and the split.

How the HOLD, TRANSFER, CONFERENCE, and RECALL Buttons Affect Agent/Trunk Data

When an agent presses the HOLD or CONFERENCE button, no changes in that the agent's state occur. The agent pressing the button is considered to still be in the same ACD state with the call (either an EXT-IN or ACD). This is also true for the trunk carrying the call. If the agent added to the CONFERENCE call was in AUX or AVAIL, the state *will* change to AUXIN. Also, if the added agent is in ACW, the state changes to ACWIN. In both cases, the added agent is credited with an extension-in call. Also, when an agent presses RECALL on a single-appearance voice terminal to hold or conference a call, no status change is recorded for the agent(s) or for the carrying trunk.

On Generic 2 or System 85 R2V4, an agent can place a call on hold, then press the MANUAL-IN or AUTO-IN button to become available for another ACD call. Thus, an agent can have multiple-call handling ability. When multiple-call handling is set up, the switch does send data on holds to CMS. This data is not available on standard CMS reports, but custom reports can be created to include hold data.

Transferred Calls Using the TRANSFER Button

When calls are transferred using the TRANSFER button (on multiappearance voice terminals), the switch notifies CMS. If a transferred call is an ACD call, the originating agent extension and split are pegged with an ACD call and are only charged for the time on the original connection. If the call is transferred to another measured ACD extension, the receiving extension is pegged with an EXT-IN call (regardless of the nature of the original call), and the time on the call is then charged to that extension.

NOTE	The originating extension for a transferred call is **not** charged with an EXT-OUT call **unless** the Multiple Call Handling feature (available only on a Generic 2/ System 85 R2V4 switch) is active.

When calls are transferred using the RECALL button on single appearance terminals, no message is sent to CMS. All time on the call is recorded for the original extension, even though part of the call is handled by another extension.

A trunk's ACD time is continuous for the duration of a transferred call, at all of its points of answer. The trunk is pegged only for one answer in the 3B CMS. If a call abandons after the original answer (but before being picked up by the agent and split to whom it is transferred), the abandon is not pegged for the trunk. Nor is the second answer recorded for the trunk, if there is one.

How Intraflow/Interflow Affect ACD Data

When a call is intraflowed or interflowed from a split, CMS counts that call as a FLOW-OUT call for the split. If a call is intraflowed into a split, CMS counts that call as a FLOW-IN call for the split. (Interflowed calls are recognized only as ordinary incoming calls by CMS.) However, since calls can be intraflowed/interflowed to destinations that are not in the ACD or are non-measured parts of the ACD, each FLOW-OUT call from a split will not always show a corresponding FLOW-IN call for another split. Conversely, since calls can be intraflowed/interflowed into a split from originating locations that are not ACD-measured, each FLOW-IN call to a split will not always show a corresponding FLOW-OUT for another split.

If an intraflowed/interflowed call connects to an agent in the destination split, that call is counted as an ACD call for the split.

On Generic 3i/Generic 1/System 75, a dummy split may be established which intraflows calls to another split. A dummy split, which does not actually handle calls and is hence not staffed with agents, is typically set up as a gateway split for calls arriving with a particular DNIS (Dialed Number Identification Service) number. The dummy split always intraflows calls to a real split (which has agents staffed). In this way, the real split can handle calls with multiple DNIS numbers and, because CMS can measure FLOW-OUT calls for each DNIS dummy split, CMS reports can be used to distinguish the types of calls that the real split handled.

For CMS to peg FLOW-OUT calls for dummy splits, intraflow should be established using the Call Forwarding feature. If Call Coverage is used, at least one agent must log into the dummy split and go into ACW and the call must queue to the dummy split for at least one ring cycle in order for a flow-out call to be pegged.

> **NOTE** If the Call Vectoring feature is active on the Generic 2, System 85 R2V4, or Generic 3i switch, intraflow and interflow work quite differently. Therefore, CMS data related to intraflow and interflow is recorded differently. (See the *3B CMS Vectoring Administration* [585-215-502] document.)

How the Call Pickup Feature Affects Data

When an agent uses the Call Pickup feature to pick up an ACD call that rings at another agent's extension, the call will be pegged as an `AUX-IN` call for the agent picking up the call (and for that agent's split). The split of the agent whose terminal originally rang will be pegged with an `OUTFLOW` call, even if the agent picking up the call is in the same split as the agent whose terminal originally rang.

Thus, when Call Pickup is used, CMS does **not** peg the call as an ACD call, even though the call queued to a split and was answered. Various other types of data associated with ACD calls (for example, "Percent Answered Within Service Level" and "Average Speed of Answer") will also not include data on calls answered via the Call Pickup feature.

NOTE | If you have a Generic 2 switch with ring-state enabled, CMS will also peg the agent whose terminal originally rang (and that agent's split) with a `RINGCALLS` and `NUMRING` call.

How CMS Stores and Reports ACD Data

The Switch Interface Process (SIP) interprets status changes from the ACD and sends data over the course of a half-hour interval to one of four files in the **current real-time database**. The four major files of the current real-time database, as well as the other reporting databases, are **agents, splits, trunks,** and **trunk groups**. At each half-hour interval, the current half-hour data is copied to the **previous half hour real-time database** in the same four files.

Using the display writer, both the current and previous real-time databases are accessed to generate **real-time reports** on a user's terminal display. The real-time reports give information on the current ACD activity of agents, splits, trunks, and trunk groups.

ACD data is also stored in two historical databases — the half-hour and daily historical databases. Each database contains the same four files contained in the real-time databases — agent, trunk, split, and trunk group files. When data from the current real-time database is copied to the previous real-time database, the current half-hour data is also stored (archived) in the half-hour historical database. The half-hour historical database keeps the data as it is — in half-hour totals, with a possible total of 48 (2 multiplied by 24 hours) intervals of data for each day. Then, each night, if the Daily-Data-Archive has been scheduled to run (see Chapter 11, "Maintenance"), the data of the 48 half-hour intervals is consolidated into a single daily record, and archived in the daily historical database. The half-hour data is not discarded, but is retained for up to 31 days. The daily historical data is retained for up to 387 days.

The half-hour historical database is accessed to generate reports that display 1 day's data in half-hour intervals. Most daily reports display data in half-hour intervals. The daily historical database is accessed to generate reports that display data in daily summaries. Weekly/ monthly reports and daily summary reports display data as daily summaries.

Using the CMS Custom Reports Creation subsystem, you can also format the data in ways different from those of a standard CMS report.

> **NOTE** Do not confuse **daily data** with the **daily reports**. Daily data is data that has been converted to a 1-day summary. A daily report displays half-hour intervals of data for 1 day.

Figure C-5 shows the path of a single call's data as it flows through the communication link from the switch into the databases and finally into real-time and historical reports.

> **NOTE** Messages also flow from CMS to the switch, providing some control over ACD configuration.

ACD
SOFTWARE

SWITCH

LINK INTERFACE (DCIU)

① AGENT
ANSWERS
CALL

② THE INFORMATION IS PASSED IN MESSAGE FORM
FROM THE SWITCH TO THE 3B.

⑤ EACH HALF HOUR, THE CURRENT HALF-HOUR DATA IS
COPIED TO A "PREVIOUS HALF-HOUR" SECTION OF
THE REAL-TIME DATA BASE AND AT THE SAME TIME
TO HALF-HOUR DISK FILES. DAILY, THE HALF-HOUR
DISK FILES ARE TOTALLED AND ARCHIVED IN DAILY
FILES ON DISK.

BX.25

3B

SIP

DISK

③ SIP,
THE SWITCH
INTERFACE
PROCESS, RECEIVES
THE MESSAGE AND
INTERPRETS IT.

④ THE CALL IS RECORDED IN THE REAL-TIME DATA BASE.

⑥ IF A CMS USER, LOGGED INTO
CMS, IS VIEWING THE PROPER
REAL-TIME REPORT, HE OR SHE
WILL SEE THE AGENT GO INTO
THE "ACD" STATE, LEAVING
THE "AVAILABLE" STATE.

⑦ THAT NIGHT, AFTER THE DAY'S
DATA HAVE BEEN TOTALLED AND
ARCHIVED, PRINTED REPORTS ARE
RUN. THE CALL IS INCLUDED
IN THE TOTAL FOR THE AGENT
AND SPLIT FOR THE DAY.

Figure C-5   Call Data Moving Through CMS

NOTES

General OCM Information With Generic 1

The AT&T Outbound Call Management (OCM) feature (that works with the AT&T DEFINITY Communications Systems Generic 1) is a telemarketing tool used for sale or collection applications that automatically dials specific business or home telephone numbers. The agent simultaneously views account, product, or promotional information which has been transferred to the agent's screen from a host database. The system allows an agent to update the database.

OCM uses a separate adjunct processor (3B2 computer). The adjunct can use either of the following two dialing methods to initiate OCM calls.

> *AutoPace* — Calls are automatically dialed from a call list. When the called party answers, the called party and an agent are connected or the called party receives a recorded message, music, etc. until an agent is available to answer the call. If the call is busy or not answered, the switch notifies the adjunct. The adjunct will try the call later.

> *ViewFirst* — Calls are placed after a request from an agent's data terminal. ViewFirst allows an agent to preview customer data before the call is connected. Also, the agent can drop the call if the called party does not answer or a busy signal is detected. The adjunct will not automatically place this call again.

The goals of OCM are to increase agent efficiency and improve agent satisfaction. OCM increases customer agent productivity by eliminating the manual dialing function and time wasted on unsuccessful calls (e.g., busy, no answer, answering machines).

For more information on OCM, see the *DEFINITY Communications Systems Generic 1 Applications Notes, Outbound Call Management* (5-55-209-014) and the documentation shipped with your OCM software package.

OCM and the CMS

Release 2, Issue 1.2, 1.3, and 1.4 of the CMS software supports the OCM feature. OCM also requires a 3B OCM processor which also contains MIS reports.

To the 3B CMS, an OCM call looks like an outbound ACD call. A few new states have been added to distinguish an outbound call from an inbound call. The 3B CMS can provide OCM reports equivalent to incoming ACD reports.

A split can be used for either OCM calls or inbound ACD calls — but not both. Agents logged in from the OCM adjunct cannot be logged into multiple splits. In the multiple splits feature, the *adjunct controlled agents* function restricts the agent. However, an agent may work on an inbound split for 2 hours and then switch to an outbound split for 2 hours (but not at the same time).

OCM uses the ACD feature to distribute calls to agents. These calls are also considered to be ACD calls. Therefore, all existing reports that list the number of ACD calls and talk time include both inbound and outbound calls. All of the existing CMS functionality is usable with OCM (e.g., OCM agents and splits will be named in the data dictionary in the same manner as incoming ACD agents and splits).

One real-time report, **Trunk Group Summary**, has been modified for OCM.

The following five new historical trunk reports have been added to the global custom reports:

Report Name	**Menu Name**
Custom Trunk Group Summary	C TGSUM
Custom Daily Trunk Report	C DTRUNK
Custom Daily Trunk Group Report	C DTGROUP
Custom Weekly Trunk Group Report	C WTGROUP
Custom Monthly Trunk Group Report	C MTGROUP

No changes have been made to the standard historical reports or to forecasting.

Real-Time Reports

Trunk Group Summary Report

The Trunk Group Summary report displays the current status of each trunk in a selected trunk group and lists each trunk's physical location within the ACD and OCM. This information can be used to identify overused or underused trunk facilities.

This real-time report has been modified for OCM, and "OCM" has been add to the `DIRECTION` field to indicate an OCM call.

NOTE | "OCM" will only appear when the OCM feature is active (and only for OCM calls). Non-OCM customers will see "IN" or "OUT" only. Also, when the trunk is *IDLE*, the direction is blank since there is no call in progress.

```
                          INTERVAL:   25        PAGE  1  of  1              QUAD: 1
                          TRUNK  GROUP  SUMMARY


TRUNK GROUP:   18   ()                             NO.  OF  TRUNKS:    20

TRUNK      TRUNK
NUMBER     LOCATION              STATE     TIME      DIRECTION     EXT/SPLIT


1-01.0.B.15.00             SEIZED    15:52        IN       NONE
2-00.0.B.17.00             IDLE      15:45        --       NONE
3-00.0.B.17.01             CONN      15:40        OCM      2001
4-01.0.B.17.00             CONN      15:54        OUT      2010
5-01.0.B.16.00             QUEUED    15.51        IN       4
6          01.0.B.16.01    IDLE      15:20        --       NONE
7          01.0.B.18.00    CONN      15:01        OCM      2022
8          01.0.B.18.01    CONN      15.52        OCM      2002
```

Figure D-1   Trunk Group Summary Real-Time Report

The trunk states have the following meanings:

IDLE   Waiting for a call.

SEIZED   The trunk is seized (incoming or outgoing). ACD calls go to QUEUED, then CONN, ABANDONED, or FWRD. Non-ACD calls remain SEIZED.

QUEUED   An ACD caller has the trunk and is waiting for an agent to answer.

CONN   Agent and caller are connected in an ACD call.

ABANDONED   A queued caller just abandoned the call.

FWRD   A queued call has been intraflowed outside the ACD or interflowed.

MBUSY   Maintenance Busy, out of service for maintenance purposes.

INIT   The link is down or an error has been deleted. INIT remains until the condition is cleared (link comes up), *and* the current ACD call and associated ACW are complete.

Table D-1 Item Reference for the Trunk Group Summary Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
TRUNK GROUP	Number or synonym of the trunk group selected.	Trunk group number or synonym.	SYN(TRKGRP)
NO. OF TRUNKS	Number of trunks assigned to this group.	Trunks	GROUPSIZE
TRUNK NUMBER	Internal trunk number from the switch.	Internal trunk number	TRK NDX
TRUNK LOCATION	Physical location of trunk in the switch. The digits/ letter represent module, cabinet, carrier (letter designation), slot, and circuit. This digit/ letter is used in switch administration.	The digits/ letter sequence that identifies the trunk's equipment location in the switch.	EQLOCATION
STATE	One of seven conditions that are possible for a trunk (IDLE, SEIZED, QUEUED, CONN, ABANDONED, FWRD, MBUSY, and INIT).	State name	TSTATE
TIME	Time when the trunk entered the current state.	Military notation time	TIMEMARK
DIRECTION	The direction of the current call — incoming or outgoing.	IN, OUT, OCM, or — if idle	DIRECTION
EXT/ SPLIT	Extension number if CONN; Split number if QUEUED; ''NONE'' if anything else. See state list.	Extension or split number	ASSOCIATION

Ordering the Trunk Group Summary Report

1 In the Reports menu, select the St andar d [   ] Re a l - Ti me option, and press RETURN.

   [The REAL- TI ME REPORTS menu appears.]

2 Select the desired report and press RETURN.

   [The Report Parameters screen appears.]

3 In the   TRUNK GROUP field, enter the number or synonym for the specific trunk group you want the report to cover.

4 In the UPDATE I NTERVAL (10 - 300) = 30 field, enter the number of seconds you want between each data update, or leave the default value in the field.

5 Press RETURN.

   [The report will be displayed on your terminal.]

Custom Historical Reports

The OCM historical reports are presented as global custom reports. You can display and compile these reports but you cannot change or delete them.

These reports can also be copied and modified using the Custom Reports Creation subsystem. To create a custom report, see the *3B CMS Custom Reports* (5-85-215-503) document.

Custom Daily Trunk Report

The Daily Trunk Report displays, in half-hour intervals, a day's call traffic data for a single trunk. You specify the day, trunk number, and half-hour intervals you want the report to cover on the Report Parameters screen. With this report, you can review trunks in any measured trunk group.

This report verifies that call traffic levels for a trunk are appropriate throughout the day and monitors outgoing calls made throughout the day. If your split or system reports show questionable results, this report can be especially effective in helping you track down potential trunk problems in your switch.

This report has been modified for OCM from the standard report to include the following two new report items:

```
NUMBER OF CALL ATTEMPTS

NUMBER OF CALLS COMPLETED.
```

(The `NUMBER OF OUT CALLS` report item on the standard report has been renamed to `NUMBER OF CALL ATTEMPTS` for OCM.)

```
                        CUSTOM DAILY TRUNK REPORT                    (MENU:  DTRUNK)
3/01/88                                                              DAY:  02/29/88


TRUNK NUMBER:  1
TRUNK LOCATION:   00.0.B.00.01
TRUNK GROUP:  18  ()
```

	---INCOMING---					---OUTGOING---					TIME
	NUMBER	NUMBER	NUMBER	AVG		NUMBER	NUMBER	AVG			TIME	MAINT
	OF CALLS	OF CALLS	OF CALLS	HOLD	TOTAL	OF CALL	OF CALLS	HOLD	TOTAL	TIME	
TIME	CARRIED	ABANDONED	ANSWERED	TIME	CSS	ATTEMPTS	COMPLETED	TIME	CSS	BUSY	BUSY
0-4:30-05:00PM	0	0	0	0.00	0.00	51	51	29.92	15.26	1526	0
0-5:00-05:30PM	0	0	0	0.00	0.00	29	29	30.97	8.98	898	0
SUMMARY	0	0	0	0.00	0.00	80	80	30.30	24.24	2424	0

Figure D-2   Example of the Daily Trunk Report

Table D-2   Item Reference for the Custom Daily Trunk Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
3/ 01/ 88	Date the report was generated.	MM/ DD/ YY format date	DATE(D)
DTRUNK	UNIX system file name of report.		Label
DAY	Day selected in the Report Parameters screen for the report to cover.	MM/ DD/ YY format date	DATE(J)
TRUNK GROUP	Internal trunk number.	Trunk number in Trunk Group Summary report.	TRK NDX
TRUNK LOCATION	Physical location of the trunk in the switch. The digits/ letter represent module, cabinet, carrier (letter designation), slot, and circuit. This digit/ letter is used in switch administration.	The digits/ letter sequence that identifies the trunk's equipment location in the switch.	MODULE, CABINET, CARRIER, SLOT, CIRCUIT
TRUNK GROUP	The synonym or number of the trunk group of which the trunk is a member.	Trunk group number or synonym	SYN(TRKGRP)
TIME	The half-hour intervals selected in the Report Parameters screen for the report to cover.	a.m./ p.m. format	INTERVAL

Table D-2   Item Reference for the Custom Daily Trunk Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
	INCOMING		
NUMBER OF CALLS CARRIED	Incoming calls that seized this trunk during the period covered.	Calls	INCALLS
NUMBER OF CALLS ABANDONED	Number of abandoned calls in which the caller hangs up before connecting to an agent. This statistic implies that the call, and the trunk, are associated with an ACD split. Non-ACD calls will never be counted in this category.	Calls	ABANDONS
NUMBER OF CALLS ANSWERED	Calls connected to an agent in this period. This number implies an ACD call. Non-ACD calls may get an answer from whomever gets the call but are not pegged as answered in this statistical category. Calls that go to Coverage M for night service, for example — are pegged in the Number of Calls Answered.	Seconds	ANSWERED
AVG HOLD TIME	The average length of time the trunk is held for incoming calls.	Seconds	AVG HOLD TIME IN <INTIME/INCALLS>
TOTAL CCS	Total trunk occupancy by incoming calls during the current half hour.	Hundred call seconds	NCOMING CCS <INTIME/100>

Table D-2   Item Reference for the Custom Daily Trunk Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
	OUTGOING		
NUMBER OF CALL ATTEMPTS*	Extension-out calls that seized this trunk during the period covered.	Call	OUTCALLS
NUMBER OF CALLS COMPLETED*	Number of calls that an answer was detected on during this period. This includes calls that answer supervision was received from the network or that the switch determines has been answered.	Calls	COMPLETED*
AVG HOLD TIME*	Average holding time of all outgoing calls on this trunk during this half-hour.	Seconds	AVG HOLD TIME OUT <OUTTIME/OUTCALLS>
TOTAL CCS	Total trunk occupancy by outgoing calls during the current half hour.	Hundred call seconds	OUTGOING_CCS <OUTTIME/100>
TIME BUSY	The total holding time of all incoming and outgoing calls.	Seconds	TRKBUSY <INTIME+OUTTIME>
TIME MAINT BUSY	The time the trunk has been busied out for maintenance.	Seconds	MBUSYTIME

*Indicates a change from the standard report.

Custom Trunk Group Summary

The Trunk Group Summary report summarizes the daily incoming and outgoing traffic of every trunk in a trunk group. This report verifies that the number of trunks available to your splits is appropriate and monitors the number of outgoing calls. In addition, you can get a report on any other measured trunk group not assigned to a split.

Also, because this report lists trunks by physical location on the switch and totals trunk failures, the Trunk Group Summary report can be very useful for troubleshooting problems with trunks.

This report has been modified for OCM from the standard report to include the following report items:

        NUMBER OF CALL ATTEMPTS

        NUMBER OF CALLS COMPLETED

        DIRECT OUT CALLS.

(The NUMBER OF OUT CALLS report item on the standard report has been renamed to NUMBER OF CALL ATTEMPTS for OCM.)

```
                                        CUSTOM TRUNK GROUP SUMMARY                           (MENU: C TGSUM)
3/01/88                                                                                      DAY: 02/29/88

TRUNK GROUP: 18 ()

                          ----------------INCOMING----------------      ----------------OUTGOING----------------
                          NUMBER      NUMBER      AVG           DIRECT   NUMBER     NUMBER      AVG           DIRECT    NUMBER
  PHYSICAL TRUNK    TRUNK  OF CALLS   OF CALLS   HOLD   TOTAL    IN      OF CALL   OF CALLS    HOLD   TOTAL    OUT         OF
EQUIPMENT LOCATION  NUMBER CARRIED    ABANDONED  TIME    CSS    CALLS   ATTEMPTS  COMPLETED   TIME    CSS    CALLS     FAILURES
```

PHYSICAL TRUNK EQUIPMENT LOCATION	TRUNK NUMBER	NUMBER OF CALLS CARRIED	NUMBER OF CALLS ABANDONED	AVG HOLD TIME	TOTAL CSS	DIRECT IN CALLS	NUMBER OF CALL ATTEMPTS	NUMBER OF CALLS COMPLETED	AVG HOLD TIME	TOTAL CSS	DIRECT OUT CALLS	NUMBER OF FAILURES
0-0.0.B.00.01	1	0	0	0.00	0.00	0	80	80	30.30	24.24	0	0
0-0.0.B.00.02	2	0	0	0.00	0.00	0	76	76	30.38	23.09	0	0
0-0.0.B.00.03	3	0	0	0.00	0.00	0	74	74	30.42	22.51	0	0
0-0.0.B.00.04	4	0	0	0.00	0.00	0	74	74	30.31	22.43	0	0
0-0.0.B.00.05	5	0	0	0.00	0.00	0	74	74	30.27	22.40	0	0
0-0.0.B.00.06	6	0	0	0.00	0.00	0	74	74	30.41	22.50	0	0
0-0.0.B.00.07	7	0	0	0.00	0.00	0	72	72	30.38	21.87	0	0
0-0.0.B.01.00	8	0	0	0.00	0.00	0	72	72	30.24	21.77	0	0
0-0.0.B.01.01	9	0	0	0.00	0.00	0	70	70	30.41	21.29	0	0
0-0.0.B.01.02	10	0	0	0.00	0.00	0	69	69	30.26	20.88	0	0
0-0.0.B.01.03	11	0	0	0.00	0.00	0	67	67	30.24	20.26	0	0
0-0.0.B.01.04	12	0	0	0.00	0.00	0	64	64	30.39	19.45	0	0
0-0.0.B.01.05	13	0	0	0.00	0.00	0	62	62	30.35	18.82	0	0
0-0.0.B.01.06	14	0	0	0.00	0.00	0	57	57	30.32	17.28	0	0
0-0.0.B.01.07	15	0	0	0.00	0.00	0	47	47	30.21	14.20	0	0
0-0.0.B.02.00	16	0	0	0.00	0.00	0	29	29	30.07	8.72	0	0

Table D-3   Item Reference for the Custom Trunk Group Summary Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
3/ 01/ 88	Date the report was generated.	MM/ DD/ YY format date	DATE(D)
C TGSUM	UNIX system file name of report.		Label
DAY	Day selected in the Report Parameters screen for the report to cover.	MM/ DD/ YY format date	DATE(J)
TRUNK GROUP	The number or synonym of the trunk group covered in the report.	Trunk group number or synonym	SYN(TRKGRP)
PHYSICAL TRUNK EQUIPMENT LOCATION	The cabinet, module, carrier, slot, and circuit location of the trunk equipment. The digits represent module, cabinet, carrier (letter designation), slot, and circuit. This digit/ letter is used in switch administration.	The digits/ letter sequence that identifies the trunk's equipment location in the switch.	MODULE, CABINET, CARRIER, SLOT, CIRCUIT
TRUNK NUMBER	Internal trunk number.	Trunk number	TRK NDX
INCOMING			
NUMBER OF CALLS CARRIED	Incoming calls that seized this trunk during the period covered.	Calls	INCALLS
NUMBER OF CALLS ABANDONED	Number of abandoned calls in which the caller hangs up before connecting to an agent.	Calls	ABANDONS
AVG HOLD TIME	The average length of time the trunk is held for incoming calls	Seconds	AVG HOLD TIME IN <INTIME/ INCALLS>
TOTAL CCS	Total trunk occupancy by incoming calls during the current half hour.	Hundred call seconds	INCOMING CCS INTIME/ 100
DIRECT IN CALLS	The number of non-ACD calls on this trunk during the period covered.	Calls	NONACD

Table D-3   Item Reference for the Custom Trunk Group Summary Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
	OUTGOING		
NUMBER OF CALL ATTEMPTS*	Extension-out calls that seized this trunk during the period covered. This includes all outgoing trunk seizures, independent of call type.	Calls	OUTCALLS
NUMBER OF CALLS COMPLETED*	Number of calls that an answer was detected on during this period. This includes calls that answer supervision was received from the network or that the switch determines has been answered.	Calls	COMPLETED*
AVG HOLD TIME	Average holding time of all outgoing calls on this trunk during this half-hour.	Seconds	AVG HOLD TIME OUT `<OUTTIME/OUTCALLS>`
TOTAL CCS	Total trunk occupancy by outgoing calls during the current half hour.	Hundred call seconds	OUTGOING CCS `<OUTTIME/100>`
DIRECT OUT CALLS*	Calls placed directly from an extension (not distributed from an OCM) during this period. This is equivalent to NUMBER OF CALL ATTEMPTS - OCM SEIZED.	Calls	DIRECT OUT* `<OUTCALLS- OCMCALLS>*`
NUMBER OF FAILURES	Number of trunk hardware failures.	Failures	FAILURES

*Indicates a change from the standard report.

Custom Trunk Group Report

The Trunk Group (Daily, Weekly, and Monthly) report shows the level of incoming and outgoing call traffic for an individual trunk group. This report verifies that the number of trunks available to your splits is appropriate and monitors the number of outgoing calls. However, you can get a report on any measured trunk group, regardless of whether or not it is used for ACD calls. (OCM calls will look like ACD calls.)

The report item Centum Call Seconds (CCS) measures, in hundred call seconds, the time a trunk is seized by a caller. A trunk is "seized" while a call is both in queue and connected to an agent. Therefore, wait time for abandoned calls is included with the CCS figures.

Because a half-hour interval has 1800 seconds, the maximum CCS for each trunk in a trunk group is 1800 seconds. Multiplying 1800 by the number of trunks in a trunk group will give you the maximum occupancy for the trunk group, which you can then compare with your actual CCS.

The report item % All Trunks Busy indicates of how many calls are being blocked (busy signal, no answer, etc.).

NOTE	The Weekly and Monthly Trunk Group Reports base the `% ALL TRUNKS BUSY` and the `% TIME MAINT BUSY` on a 24-hour day with 48 intervals; as a result, the summary values for these items shown in your Daily reports may not match the values shown in your Weekly/Monthly reports. Depending on your needs, you may want to create a custom report and change the denominator for these fields to reflect your actual hours of activity in a day. For example, for 8 hours of activity, use 1-6 intervals; for 12 hours of activity, use 24 intervals, etc.

The Trunk Group reports have been modified for OCM to including the following two new report items:

        NUMBER OF CALL ATTEMPTS

        NUMBER OF CALLS COMPLETED.

        (The NUMBER OF OUT CALLS report item on the standard report has been
        renamed to NUMBER OF CALL ATTEMPTS for OCM.)

CUSTOM DAILY TRUNK GROUP REPORT   (MENU: C DTGROUP)

3/01/88   DAY: 02/29/88

TRUNK GROUP: 18 ()
NUMBER OF TRUNKS: 20

| | ----------------------INCOMING------------ | | | | | ----------------OUTGOING--------- | | | | | |
| | NUMBER OF CALLS CARRIED | NUMBER OF CALLS ABANDONED | NUMBER OF CALLS ANSWERED | AVG HOLD TIME | TOTAL CSS | NUMBER OF CALL ATTEMPTS | NUMBER OF CALLS COMPLETED | AVG HOLD TIME | TOTAL CSS | % ALL TRUNKS BUSY | % TIME MAINT BUSY |
TIME											
0-4:30-05:00PM	0	0	0	0.00	0.00	747	747	29.90	223.33	0.00	0.00
0-5:00-05:30PM	0	0	0	0.00	0.00	314	314	31.33	98.38	0.00	0.00
SUMMARY	0	0	0	0.00	0.00	1061	1061	30.32	321.71	0.00	0.00

CUSTOM WEEKLY TRUNK GROUP REPORT   (MENU: C WTGROUP)

3/01/88

TRUNK GROUP: 18 ()
NUMBER OF TRUNKS: 20

| | --------------------INCOMING------------- | | | | | -------------OUTGOING------------ | | | | | |
	NUMBER OF CALLS CARRIED	NUMBER OF CALLS ABANDONED	NUMBER OF CALLS ANSWERED	AVG HOLD TIME	TOTAL CSS	NUMBER OF CALL ATTEMPTS	NUMBER OF CALLS COMPLETED	AVG HOLD TIME	TOTAL CSS	% ALL TRUNKS BUSY	% TIME MAINT BUSY
0-2/23/88	0	0	0	0.00	0.00	31046	31046	30.02	9318.46	0.00	0.00
0-2/26/88	0	0	0	0.00	0.00	1033	1033	30.21	312.02	0.00	0.00
0-2/29/88	0	0	0	0.00	0.00	1061	1061	30.32	321.71	0.00	0.00
SUMMARY	0	0	0	0.00	0.00	33140	33140	30.03	9952.19	0.00	0.00

CUSTOM MONTHLY TRUNK GROUP REPORT   (MENU: C MTGROUP)

3/01/88

TRUNK GROUP: 18 ()
NUMBER OF TRUNKS: 20

| | ----------------------INCOMING--------------- | | | | | -------------OUTGOING------------ | | | | | |
| | NUMBER OF CALLS CARRIED | NUMBER OF CALLS ABANDONED | NUMBER OF CALLS ANSWERED | AVG HOLD TIME | TOTAL CSS | NUMBER OF CALL ATTEMPTS | NUMBER OF CALLS COMPLETED | AVG HOLD TIME | TOTAL CSS | % ALL TRUNKS BUSY | % TIME MAINT BUSY |
DAY											
0-2/18/88	8999	0	8999	30.34	2729.95	3000	0	30.00	900.00	0.00	0.00
0-2/19/88	35721	5018	30695	25.86	9239.05	1200	0	30.00	360.00	0.89	0.00
0-2/20/88	12443	0	12443	20.00	2489.00	9095	0	29.99	2727.46	0.00	0.00
0-2/21/88	0	0	0	0.00	0.00	21600	0	30.00	6480.00	0.00	0.00
0-2/22/88	0	0	0	0.00	0.00	28819	0	30.00	8645.80	0.00	0.00
0-2/23/88	0	0	0	0.00	0.00	31046	31046	30.02	9318.46	0.00	0.00
0-2/26/88	0	0	0	0.00	0.00	1033	1033	30.21	312.02	0.00	0.00
0-2/29/88	0	0	0	0.00	0.00	1066	1066	30.32	321.71	0.00	0.00
SUMMARY	57163	5018	52137	25.29	14458.00	96854	33140	30.01	29065.45	0.11	0.00

Figure D-3   Examples of OCM Daily, Weekly, and Monthly Trunk Group Reports

Table D-4   Item Reference for the Trunk Group Report

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
3/ 01/ 88	Date the report was generated.	MM/ DD/ YY format date	DATE(D)
C DTGROUP, C WTGROUP, or C MTGROUP	UNIX system file name of report.		Label
TRUNK GROUP	The number or synonym of the trunk group covered in the report.	Trunk group number	SYN(TRKGRP)
NUMBER OF TRUNKS	Number of trunks in group.	Trunks	GROUPSIZE
TIME/ DAY	The half-hour intervals or days selected in the Report Parameters screen for the report to cover.	a.m./ p.m. format time	INTERVAL (Daily) DATE(DAY) (Weekly, Monthly)

INCOMING

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
NUMBER OF CALLS CARRIED	Incoming calls that seized this trunk during the period covered.	Calls	INCALLS
NUMBER OF CALLS ABANDONED	Calls in which the caller hangs up before being connected to an agent during the period covered.	Calls	ABANDONS
NUMBER OF CALLS ANSWERED	Calls that connected to an agent in this period.	Calls	ANSWERED
AVG HOLD TIME	Average length of time incoming calls lasts.	Seconds	AVG HOLD TIME IN INTIME/ INCALLS
TOTAL CCS	The trunk occupancy by incoming calls that seize the trunk (includes all "carried" calls) in hundreds of call seconds.	CCS	INCOMING CCS INTIME/ 100

Table D-4   Item Reference for the Daily Trunk Group Report (Contd)

REPORT ITEM	WHAT IT MEASURES	UNITS	DATA ITEM OR CALCULATION FORMULA
OUTGOING			
NUMBER OF CALL ATTEMPTS*	Extension-out calls that seized this trunk during the period covered.	Calls	OUTCALLS
NUMBER OF CALLS COMPLETED*	Number of calls that an answer was detected on during this period. This includes calls that received answer supervision from the network or that the switch determined had been answered.	Calls	COMPLETED*
AVG HOLD TIME*	Average holding time of all outgoing calls on this trunk.	Seconds	AVG HOLD TIME OUT OUTTIME/ OUTCALLS
TOTAL CCS	Total outgoing-call trunk occupancy in hundreds of call seconds.	CCS	OUTGOING CCS OUTTIME/ 100
% ALL TRUNKS BUSY	The percentage of time all trunks are simultaneously busy.	Percent	PERCENT BUSY ALL ALLINUSE/ 18
% TIME MAINT BUSY	The percentage of time the trunk group has been busied out for maintenance	Percent	PERCENT MAINT TIM MBUSYTIME/ (18*GRPSIZE)

*Indicates a change from the standard historical report.

Ordering an OCM Historical Report

1   Select REPORTS from the CMS main menu. [The Reports menu appears.]

2   Select Custom Historical. [The Custom Historical Reports menu appears.]

3   Select Global Custom. [The following menu appears.]

```
Call Management  System                        Switch_Name:Up            Time


                          CUSTOM HISTORICAL REPORTS


   GLOBAL
   [ ] C_DTGROUP              [ ] C_DTRUNK                   [ ] C_MTGROUP
   [ ] C_TGSUM               [ ] C_WTGROUP


   PRIVATE



                                                      [ Page 1 of 1 ]

                                        EXIT   PRINT    HELP
                                               SCREEN   KEYS
```

Figure D-4   Custom Historical Reports Menu

4   Select the report you want.

5   Press RETURN. [The Report Parameters screen appears.]

6   Enter your choices in the appropriate field(s). [The Report Destination screen appears.]

7   Enter your report destination (a printer, terminal, or file).

NOTE	If you are scheduling a report to print at a later time, the Report Destination screen will not give you the option of sending a report to a terminal.

For more information on the Report Parameters and Report Destination screens, see Chapter 4 in the *3B CMS Administration* (5-85-215-504) document.

Database Items

Table D-5 lists the new database items for OCM, the databases and files each item appears in, whether the item is classified as call- or interval-based, and a description of each item. (See Chapter 5 in the *3B CMS Custom Reports* [585-215-503] document for an explanation of call-based and interval-based items.) The real-time database identification in this table indicates that the item appears in both the current and previous real-time databases.

Table D-5   New Database Items for OCM

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
COMPLETED	DAILY	TRKGRP	CALL	Total number of completed outgoing calls
COMPLETED	HALF HOUR	TRKGRP	CALL	Total number of completed outgoing calls
COMPLETED	REALTIME	TRKGRP	CALL	Total number of completed outgoing calls
COMPLETED	DAILY	TRUNK	CALL	Total number of completed outgoing calls
COMPLETED	HALF HOUR	TRUNK	CALL	Total number of completed outgoing calls
COMPLETED	REALTIME	TRUNK	CALL	Total number of completed outgoing calls
OCMCALLS	DAILY	TRKGRP	CALL	Total number of calls distributed by OCM
OCMCALLS	HALF HOUR	TRKGRP	CALL	Total number of calls distributed by OCM
OCMCALLS	REALTIME	TRKGRP	CALL	Total number of calls distributed by OCM
OCMCALLS	DAILY	TRUNK	CALL	Total number of calls distributed by OCM
OCMCALLS	HALF HOUR	TRUNK	CALL	Total number of calls distributed by OCM
OCMCALLS	REALTIME	TRUNK	CALL	Total number of calls distributed by OCM
OCMCOUNT	REALTIME	TRKGRP	CALL	Number of trunks currently on OCM calls
OCMTIME	DAILY	TRKGRP	CALL	Total time on calls distributed by OCM
OCMTIME	HALF HOUR	TRKGRP	CALL	Total time on calls distributed by OCM
OCMTIME	REALTIME	TRKGRP	CALL	Total time on calls distributed by OCM
OCMTIME	DAILY	TRUNK	CALL	Total time on calls distributed by OCM
OCMTIME	HALF HOUR	TRUNK	CALL	Total time on calls distributed by OCM
OCMTIME	REALTIME	TRUNK	CALL	Total time on calls distributed by OCM

NOTES

CMS Database Items

Table A-1 presents the CMS database items, the databases and files each item appears in, the items' classification as call- or interval-based items, and their definitions. (See Chapter 5 in *3B CMS Custom Reports* (5-85-215-503) for an explanation of call-based and interval-based items.) The real-time database identification in the table indicates that the item appears in both Current and Previous real-time databases.

<p style="text-align:center">Table E-1   3B CMS Database Items</p>

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
ABANDON1	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON1	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON1	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON2	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON2	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON2	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON3	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON3	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON3	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON4	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON4	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON4	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON5	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON5	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON5	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON6	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON6	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON6	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON7	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON7	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON7	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON8	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON8	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON8	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON9	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON9	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON9	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
ABANDON10	DAILY	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON10	HALF HOUR	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDON10	REALTIME	SPLIT	CALL	Number of abandoned calls (by time in queue)
ABANDONS*	DAILY	DN	CALL	Total number of abandoned calls
ABANDONS*	HALF HOUR	DN	CALL	Total number of abandoned calls
ABANDONS*	REALTIME	DN	CALL	Total number of abandoned calls
ABANDONS	DAILY	SPLIT	CALL	Total number of abandoned calls
ABANDONS	HALF HOUR	SPLIT	CALL	Total number of abandoned calls
ABANDONS	REALTIME	SPLIT	CALL	Total number of abandoned calls
ABANDONS	DAILY	TRKGRP	CALL	Total number of abandoned calls
ABANDONS	HALF HOUR	TRKGRP	CALL	Total number of abandoned calls
ABANDONS	REALTIME	TRKGRP	CALL	Total number of abandoned calls
ABANDONS	DAILY	TRUNK	CALL	Total number of abandoned calls
ABANDONS	HALF HOUR	TRUNK	CALL	Total number of abandoned calls
ABANDONS	REALTIME	TRUNK	CALL	Total number of abandoned calls
ABANDONS*	DAILY	VECTOR	CALL	Total number of abandoned calls
ABANDONS*	HALF HOUR	VECTOR	CALL	Total number of abandoned calls
ABANDONS*	REALTIME	VECTOR	CALL	Total number of abandoned calls
ABANTIME*	DAILY	DN	CALL	Total time before calls abandoned
ABANTIME*	HALF HOUR	DN	CALL	Total time before calls abandoned
ABANTIME*	REALTIME	DN	CALL	Total time before calls abandoned
ABANTIME	DAILY	SPLIT	CALL	Total time before calls abandoned
ABANTIME	HALF HOUR	SPLIT	CALL	Total time before calls abandoned
ABANTIME	REALTIME	SPLIT	CALL	Total time before calls abandoned
ABANTIME*	DAILY	VECTOR	CALL	Total time before calls abandoned
ABANTIME*	HALF HOUR	VECTOR	CALL	Total time before calls abandoned
ABANTIME*	REALTIME	VECTOR	CALL	Total time before calls abandoned
ACDCALLS	DAILY	AGENT	INTERVAL	Total number of calls answered by an agent
ACDCALLS	HALF HOUR	AGENT	INTERVAL	Total number of calls answered by an agent
ACDCALLS	REALTIME	AGENT	INTERVAL	Total number of calls answered by an agent
ACDCALLS	DAILY	SPLIT	INTERVAL	Total number of calls answered by agents
ACDCALLS	HALF HOUR	SPLIT	INTERVAL	Total number of calls answered by agents
ACDCALLS	REALTIME	SPLIT	INTERVAL	Total number of calls answered by agents
ACDCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently on ACD calls
ACDTIME	DAILY	AGENT	INTERVAL	Total time on ACD calls
ACDTIME	HALF HOUR	AGENT	INTERVAL	Total time on ACD calls
ACDTIME	REALTIME	AGENT	INTERVAL	Total time on ACD calls

* Can be used only when 3B CMS Call Vectoring feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
ACDTIME	DAILY	SPLIT	INTERVAL	Total time on ACD calls
ACDTIME	HALF HOUR	SPLIT	INTERVAL	Total time on ACD calls
ACDTIME	REALTIME	SPLIT	INTERVAL	Total time on ACD calls
ACWCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently in ACW mode
ACWINCALLS	DAILY	AGENT	INTERVAL	Total number of ACW incoming calls
ACWINCALLS	HALF HOUR	AGENT	INTERVAL	Total number of ACW incoming calls
ACWINCALLS	REALTIME	AGENT	INTERVAL	Total number of ACW incoming calls
ACWINCALLS	DAILY	SPLIT	INTERVAL	Total number of ACW incoming calls
ACWINCALLS	HALF HOUR	SPLIT	INTERVAL	Total number of ACW incoming calls
ACWINCALLS	REALTIME	SPLIT	INTERVAL	Total number of ACW incoming calls
ACWINCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently on ACW incoming calls
ACWINTIME	DAILY	AGENT	INTERVAL	Total time on ACW incoming calls
ACWINTIME	HALF HOUR	AGENT	INTERVAL	Total time on ACW incoming calls
ACWINTIME	REALTIME	AGENT	INTERVAL	Total time on ACW incoming calls
ACWINTIME	DAILY	SPLIT	INTERVAL	Total time on ACW incoming calls
ACWINTIME	HALF HOUR	SPLIT	INTERVAL	Total time on ACW incoming calls
ACWINTIME	REALTIME	SPLIT	INTERVAL	Total time on ACW incoming calls
ACWOUTCALLS	DAILY	AGENT	INTERVAL	Total number of ACW outgoing calls
ACWOUTCALLS	HALF HOUR	AGENT	INTERVAL	Total number of ACW outgoing calls
ACWOUTCALLS	REALTIME	AGENT	INTERVAL	Total number of ACW outgoing calls
ACWOUTCALLS	DAILY	SPLIT	INTERVAL	Total number of ACW outgoing calls
ACWOUTCALLS	HALF HOUR	SPLIT	INTERVAL	Total number of ACW outgoing calls
ACWOUTCALLS	REALTIME	SPLIT	INTERVAL	Total number of ACW outgoing calls
ACWOUTCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently on ACW outgoing calls
ACWOUTTIME	DAILY	AGENT	INTERVAL	Total time on ACW outgoing calls
ACWOUTTIME	HALF HOUR	AGENT	INTERVAL	Total time on ACW outgoing calls
ACWOUTTIME	REALTIME	AGENT	INTERVAL	Total time on ACW outgoing calls
ACWOUTTIME	DAILY	SPLIT	INTERVAL	Total time on ACW outgoing calls
ACWOUTTIME	HALF HOUR	SPLIT	INTERVAL	Total time on ACW outgoing calls
ACWOUTTIME	REALTIME	SPLIT	INTERVAL	Total time on ACW outgoing calls
ACWTIME	DAILY	AGENT	INTERVAL	Total time in ACW (including time on incoming and outgoing calls)
ACWTIME	HALF HOUR	AGENT	INTERVAL	Total time in ACW (including time on incoming and outgoing calls)
ACWTIME	REALTIME	AGENT	INTERVAL	Total time in ACW (including time on incoming and outgoing calls)
ACWTIME	DAILY	SPLIT	INTERVAL	Total time in ACW (including time on incoming and outgoing calls)
ACWTIME	HALF HOUR	SPLIT	INTERVAL	Total time in ACW (including time on incoming and outgoing calls)
ACWTIME	REALTIME	SPLIT	INTERVAL	Total time in ACW (including time on incoming and outgoing calls)

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
AGENTS	REALTIME	SPLIT	INTERVAL	Number of agents assigned to a split
AGHOUR	HALF HOUR	AGENT	INTERVAL	The hour an agent last logged in or out (military time)
AGMINUTE	HALF HOUR	AGENT	INTERVAL	The minute an agent last logged in or out
AGTIME*	DAILY	DN	INTERVAL	Total time VDN calls were at agent position
AGTIME*	HALF HOUR	DN	INTERVAL	Total time VDN calls were at agent position
AGTIME*	REALTIME	DN	INTERVAL	Total time VDN calls were at agent position
ALLINUSE	DAILY	TRKGRP	INTERVAL	Total time all trunks in the group were on calls
ALLINUSE	HALF HOUR	TRKGRP	INTERVAL	Total time all trunks in the group were on calls
ALLINUSE	REALTIME	TRKGRP	INTERVAL	Total time all trunks in the group were on calls
ALLTRKSBUSY	REALTIME	TRKGRP	INTERVAL	Flag indicating all trunks are busy (* or blank)
ANSBACK*	DAILY	VECTOR	CALL	Total calls answered in backup split
ANSBACK*	HALF HOUR	VECTOR	CALL	Total calls answered in backup split
ANSBACK*	REALTIME	VECTOR	CALL	Total calls answered in backup split
ANSDELAY*	DAILY	DN	CALL	Total time before calls were answered
ANSDELAY*	HALF HOUR	DN	CALL	Total time before calls were answered
ANSDELAY*	REALTIME	DN	CALL	Total time before calls were answered
ANSDELAY	DAILY	SPLIT	CALL	Total time before calls were answered
ANSDELAY	HALF HOUR	SPLIT	CALL	Total time before calls were answered
ANSDELAY	REALTIME	SPLIT	CALL	Total time before calls were answered
ANSDELAY*	DAILY	VECTOR	CALL	Total time before calls were answered
ANSDELAY*	HALF HOUR	VECTOR	CALL	Total time before calls were answered
ANSDELAY*	REALTIME	VECTOR	CALL	Total time before calls were answered
ANSMAIN*	DAILY	VECTOR	CALL	Total calls answered in main split
ANSMAIN*	HALF HOUR	VECTOR	CALL	Total calls answered in main split
ANSMAIN*	REALTIME	VECTOR	CALL	Total calls answered in main split
ANSWERED*	DAILY	DN	CALL	Total ACD calls answered (based on trunk status).
ANSWERED*	HALF HOUR	DN	CALL	Total ACD calls answered (based on trunk status).
ANSWERED*	REALTIME	DN	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	DAILY	SPLIT	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	HALF HOUR	SPLIT	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	REALTIME	SPLIT	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	DAILY	TRKGRP	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	HALF HOUR	TRKGRP	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	REALTIME	TRKGRP	CALL	Total ACD calls answered (based on trunk status).

* Can be used only when 3B CMS Call Vectoring feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
ANSWERED	DAILY	TRUNK	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	HALF HOUR	TRUNK	CALL	Total ACD calls answered (based on trunk status).
ANSWERED	REALTIME	TRUNK	CALL	Total ACD calls answered (based on trunk status).
ASSISTS	DAILY	AGENT	INTERVAL	Total number of supervisor assisted calls
ASSISTS	HALF HOUR	AGENT	INTERVAL	Total number of supervisor assisted calls
ASSISTS	REALTIME	AGENT	INTERVAL	Total number of supervisor assisted calls
ASSISTS	DAILY	SPLIT	INTERVAL	Total number of supervisor assisted calls
ASSISTS	HALF HOUR	SPLIT	INTERVAL	Total number of supervisor assisted calls
ASSISTS	REALTIME	SPLIT	INTERVAL	Total number of supervisor assisted calls
ASSOCIATION	REALTIME	TRUNK	INTERVAL	Agent or split association with a trunk (agent login id, split number, or ''NONE'')
ASTATE	REALTIME	AGENT	INTERVAL	The current agent state (UNSTAF, AVAIL, RING*, ACD, ACW, AUX, ACWOUT, ACWIN, AUXOUT, AUXIN, INIT). To enter ASTATE values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.
ATAGENT**	REALTIME	DN	INTERVAL	Number of calls currently at an agent position
AUXCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently in AUX work mode
AUXINCALLS	DAILY	AGENT	INTERVAL	Total number of AUX work incoming calls
AUXINCALLS	HALF HOUR	AGENT	INTERVAL	Total number of AUX work incoming calls
AUXINCALLS	REALTIME	AGENT	INTERVAL	Total number of AUX work incoming calls
AUXINCALLS	DAILY	SPLIT	INTERVAL	Total number of AUX work incoming calls
AUXINCALLS	HALF HOUR	SPLIT	INTERVAL	Total number of AUX work incoming calls
AUXINCALLS	REALTIME	SPLIT	INTERVAL	Total number of AUX work incoming calls
AUXINCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently on AUX work incoming calls
AUXINTIME	DAILY	AGENT	INTERVAL	Total time on AUX work incoming calls
AUXINTIME	HALF HOUR	AGENT	INTERVAL	Total time on AUX work incoming calls
AUXINTIME	REALTIME	AGENT	INTERVAL	Total time on AUX work incoming calls
AUXINTIME	DAILY	SPLIT	INTERVAL	Total time on AUX work incoming calls
AUXINTIME	HALF HOUR	SPLIT	INTERVAL	Total time on AUX work incoming calls
AUXINTIME	REALTIME	SPLIT	INTERVAL	Total time on AUX work incoming calls
AUXOUTCALLS	DAILY	AGENT	INTERVAL	Total number of AUX work outgoing calls
AUXOUTCALLS	HALF HOUR	AGENT	INTERVAL	Total number of AUX work outgoing calls
AUXOUTCALLS	REALTIME	AGENT	INTERVAL	Total number of AUX work outgoing calls
AUXOUTCALLS	DAILY	SPLIT	INTERVAL	Total number of AUX work outgoing calls
AUXOUTCALLS	HALF HOUR	SPLIT	INTERVAL	Total number of AUX work outgoing calls
AUXOUTCALLS	REALTIME	SPLIT	INTERVAL	Total number of AUX work outgoing calls

* Appears only on a Generic 2 switch with ring-state enabled.
** Can be used only when 3B CMS Call Vectoring feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
AUXOUTCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently on AUX work outgoing calls
AUXOUTTIME	DAILY	AGENT	INTERVAL	Total time on AUX work outgoing calls
AUXOUTTIME	HALF HOUR	AGENT	INTERVAL	Total time on AUX work outgoing calls
AUXOUTTIME	REALTIME	AGENT	INTERVAL	Total time on AUX work outgoing calls
AUXOUTTIME	DAILY	SPLIT	INTERVAL	Total time on AUX work outgoing calls
AUXOUTTIME	HALF HOUR	SPLIT	INTERVAL	Total time on AUX work outgoing calls
AUXOUTTIME	REALTIME	SPLIT	INTERVAL	Total time on AUX work outgoing calls
AUXTIME	DAILY	AGENT	INTERVAL	Total time in AUX work (including time on incoming and outgoing calls)
AUXTIME	HALF HOUR	AGENT	INTERVAL	Total time in AUX work (including time on incoming and outgoing calls)
AUXTIME	REALTIME	AGENT	INTERVAL	Total time in AUX work (including time on incoming and outgoing calls)
AUXTIME	DAILY	SPLIT	INTERVAL	Total time in AUX work (including time on incoming and outgoing calls)
AUXTIME	HALF HOUR	SPLIT	INTERVAL	Total time in AUX work (including time on incoming and outgoing calls)
AUXTIME	REALTIME	SPLIT	INTERVAL	Total time in AUX work (including time on incoming and outgoing calls)
BABANDONS	DAILY	TRKGRP	INTERVAL	Number of abandoned calls during busy hour
BALLINUSE	DAILY	TRKGRP	INTERVAL	Time all trunks were on calls during busy hour
BFAILURES	DAILY	TRKGRP	INTERVAL	Number of trunk hardware failures during busy hour
BHANDLEDIN	DAILY	TRKGRP	INTERVAL	Number of ACD calls handled during busy hour
BINCALLS	DAILY	TRKGRP	INTERVAL	Number of incoming calls during busy hour
BINTIME	DAILY	TRKGRP	INTERVAL	Total time on incoming calls during busy hour
BMBUSYTIME	DAILY	TRKGRP	INTERVAL	Time trunks were maintenance busy during busy hour
BNONACD	DAILY	TRKGRP	INTERVAL	Number of non-ACD calls during busy hour
BOUTCALLS	DAILY	TRKGRP	INTERVAL	Number of outgoing calls during busy hour
BOUTTIME	DAILY	TRKGRP	INTERVAL	Total time on outgoing calls during busy hour
BSOFTFAILS	DAILY	TRKGRP	INTERVAL	Number of software failures during busy hour (incorrect trunk state transitions or link interruptions)

Table E-1 3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
BUSYHOUR	DAILY	TRKGRP	INTERVAL	Busy hour interval (e.g. " 09:00-10:00AM")
CABINET	DAILY	TRUNK	INTERVAL	The physical trunk cabinet location
CABINET	HALF HOUR	TRUNK	INTERVAL	The physical trunk cabinet location
CABINET	REALTIME	TRUNK	INTERVAL	The physical trunk cabinet location
CALLATAGENT	REALTIME	TRUNK	INTERVAL	Flag indicating call is at an agent (YES, NO)
CALLPROFCHG	DAILY	SPLIT	INTERVAL	Flag indicating a call profile parameter changed (YES,NO)
CALLPROFCHG	HALF HOUR	SPLIT	INTERVAL	Flag indicating a call profile parameter changed (YES,NO)
CALLPROFCHG	REALTIME	SPLIT	INTERVAL	Flag indicating a call profile parameter changed (YES,NO)
CALLS1	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS1	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS1	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS10	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS10	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS10	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS2	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS2	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS2	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS3	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS3	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS3	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS4	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS4	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS4	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS5	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
CALLS5	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS5	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS6	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS6	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS6	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS7	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS7	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS7	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS8	DAILY	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS8	HALF HOUR	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS8	REALTIME	SPLIT	CALL	Number of ACD calls answered (by time in queue)
CALLS9	DAILY	SPLIT	INTERVAL	Number of ACD calls answered (by time in queue)
CALLS9	HALF HOUR	SPLIT	INTERVAL	Number of ACD calls answered (by time in queue)
CALLS9	REALTIME	SPLIT	INTERVAL	Number of ACD calls answered (by time in queue)
CARRIED*	DAILY	DN	INTERVAL	Total number of calls carried
CARRIED*	HALF HOUR	DN	INTERVAL	Total number of calls carried
CARRIED*	REALTIME	DN	INTERVAL	Total number of calls carried
CARRIED*	DAILY	VECTOR	INTERVAL	Total number of calls carried
CARRIED*	HALF HOUR	VECTOR	INTERVAL	Total number of calls carried
CARRIED*	REALTIME	VECTOR	INTERVAL	Total number of calls carried
CARRIER	DAILY	TRUNK	INTERVAL	The physical trunk carrier location
CARRIER	HALF HOUR	TRUNK	INTERVAL	The physical trunk carrier location
CARRIER	REALTIME	TRUNK	INTERVAL	The physical trunk carrier location
CIRCUIT	DAILY	TRUNK	INTERVAL	The physical trunk circuit location
CIRCUIT	HALF HOUR	TRUNK	INTERVAL	The physical trunk circuit location
CIRCUIT	REALTIME	TRUNK	INTERVAL	The physical trunk circuit location

* Can be used only when 3B CMS Call Vectoring feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
CMODE	HALF HOUR	AGENT	INTERVAL	Flag indicating agent logged in or out (YES, NO)
CUMACW	HALF HOUR	SPLIT	CALL	Total time in completed ACW sessions
CUMACW	REALTIME	SPLIT	CALL	Total time in completed ACW sessions
CUMRING**	REALTIME	AGENT	CALL	Cumulative time the agent spent in the ring-state.
CUMRING**	REALTIME	SPLIT	CALL	Cumulative time the split's agents spent in the ring-state.
CUMTALK	HALF HOUR	SPLIT	CALL	Total time on completed ACD calls
CUMTALK	REALTIME	SPLIT	CALL	Total time on completed ACD calls
DIRECTION	REALTIME	TRUNK	INTERVAL	The direction of the current call (IN, OUT). To enter DIRECTION values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.
DNCALL*	REALTIME	TRUNK	INTERVAL	Flag indicating a call is a VDN call (YES, NO)
DNEXT*	DAILY	DN	INTERVAL	VDN extension number
DNEXT*	HALF HOUR	DN	INTERVAL	VDN extension number
DNEXT*	REALTIME	DN	INTERVAL	VDN extension number
DNEXT*	REALTIME	TRKGRP	INTERVAL	VDN extension number
DNEXT*	REALTIME	TRUNK	INTERVAL	VDN extension number
DNS*	REALTIME	VECTOR	INTERVAL	Number of VDNs assigned to vector
DNSTARTDATE*	REALTIME	TRUNK	INTERVAL	The date the VDN call started (MM/ DD/ YY)
DNSTARTTIME*	REALTIME	TRUNK	INTERVAL	Time the VDN call started in military time format (HR:MN)
DNWAITTIME*	DAILY	DN	INTERVAL	VDN call time excluding time at agent position
DNWAITTIME*	HALF HOUR	DN	INTERVAL	VDN call time excluding time at agent position
DNWAITTIME*	REALTIME	DN	INTERVAL	VDN call time excluding time at agent position
EQLOCATION	REALTIME	TRUNK	INTERVAL	The physical trunk equipment location
EVENT	REALTIME	AGENT	INTERVAL	The type of event for the call (MCT, ASSIST). To enter EVENT values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.
EXTCALL	REALTIME	AGENT	INTERVAL	The type of extension call (ACWOUT, ACWIN, AUXOUT, AUXIN). To enter EXTCALL values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.

* Can be used only when 3B CMS Call Vectoring feature is active.
** Data appears only on a Generic 2 switch with the ring-state enabled.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
EXTCALLDATE	REALTIME	AGENT	INTERVAL	The date the extension call started (MM/ DD/ YY)
EXTCALLTIME	REALTIME	AGENT	INTERVAL	Time the extension call started in military time format (HR:MN)
EXTENSION	DAILY	AGENT	INTERVAL	Agent position extension number
EXTENSION	HALF HOUR	AGENT	INTERVAL	Agent position extension number
EXTENSION	REALTIME	AGENT	INTERVAL	Agent position extension number
FAILURES	DAILY	TRKGRP	INTERVAL	Total number of trunk hardware failures
FAILURES	HALF HOUR	TRKGRP	INTERVAL	Total number of trunk hardware failures
FAILURES	REALTIME	TRKGRP	INTERVAL	Total number of trunk hardware failures
FAILURES	DAILY	TRUNK	INTERVAL	Total number of trunk hardware failures
FAILURES	HALF HOUR	TRUNK	INTERVAL	Total number of trunk hardware failures
FAILURES	REALTIME	TRUNK	INTERVAL	Total number of trunk hardware failures
FBUSYCALLS*	DAILY	DN	INTERVAL	Total number of calls forced busy
FBUSYCALLS*	HALF HOUR	DN	INTERVAL	Total number of calls forced busy
FBUSYCALLS*	REALTIME	DN	INTERVAL	Total number of calls forced busy
FBUSYCALLS*	DAILY	VECTOR	INTERVAL	Total number of calls forced busy
FBUSYCALLS*	HALF HOUR	VECTOR	INTERVAL	Total number of calls forced busy
FBUSYCALLS*	REALTIME	VECTOR	INTERVAL	Total number of calls forced busy
FBUSYTIME*	DAILY	DN	INTERVAL	Total time before calls were forced busy
FBUSYTIME*	HALF HOUR	DN	INTERVAL	Total time before calls were forced busy
FBUSYTIME*	REALTIME	DN	INTERVAL	Total time before calls were forced busy
FBUSYTIME*	DAILY	VECTOR	INTERVAL	Total time before calls were forced busy
FBUSYTIME*	HALF HOUR	VECTOR	INTERVAL	Total time before calls were forced busy
FBUSYTIME*	REALTIME	VECTOR	INTERVAL	Total time before calls were forced busy
FDISCCALLS*	DAILY	DN	INTERVAL	Total number of calls force disconnected
FDISCCALLS*	HALF HOUR	DN	INTERVAL	Total number of calls force disconnected
FDISCCALLS*	REALTIME	DN	INTERVAL	Total number of calls force disconnected
FDISCCALLS*	DAILY	VECTOR	INTERVAL	Total number of calls force disconnected
FDISCCALLS*	HALF HOUR	VECTOR	INTERVAL	Total number of calls force disconnected
FDISCCALLS*	REALTIME	VECTOR	INTERVAL	Total number of calls force disconnected
FDISCTIME*	DAILY	DN	INTERVAL	Total time before calls were force disconnected
FDISCTIME*	HALF HOUR	DN	INTERVAL	Total time before calls were force disconnected
FDISCTIME*	REALTIME	DN	INTERVAL	Total time before calls were force disconnected
FDISCTIME*	DAILY	VECTOR	INTERVAL	Total time before calls were force disconnected
FDISCTIME*	HALF HOUR	VECTOR	INTERVAL	Total time before calls were force disconnected
FDISCTIME*	REALTIME	VECTOR	INTERVAL	Total time before calls were force disconnected

* Can be used only when 3B CMS Call Vectoring feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
FLOWTIME*	DAILY	DN	INTERVAL	Total time before calls outflowed
FLOWTIME*	HALF HOUR	DN	INTERVAL	Total time before calls outflowed
FLOWTIME*	REALTIME	DN	INTERVAL	Total time before calls outflowed
FLOWTIME*	DAILY	VECTOR	INTERVAL	Total time before calls outflowed
FLOWTIME*	HALF HOUR	VECTOR	INTERVAL	Total time before calls outflowed
FLOWTIME*	REALTIME	VECTOR	INTERVAL	Total time before calls outflowed
GROUP	DAILY	AGENT	INTERVAL	List of extensions or login ids
GROUP	HALF HOUR	AGENT	INTERVAL	List of extensions or login ids
GROUP	REALTIME	AGENT	INTERVAL	List of extensions or login ids
GROUPSIZE	DAILY	TRKGRP	INTERVAL	Number of trunks assigned to the trunk group
GROUPSIZE	HALF HOUR	TRKGRP	INTERVAL	Number of trunks assigned to the trunk group
GROUPSIZE	REALTIME	TRKGRP	INTERVAL	Number of trunks assigned to the trunk group
HOLDABANS†	DAILY	SPLIT	INTERVAL	Total number of calls abandoned while on hold
HOLDABANS†	HALF HOUR	SPLIT	INTERVAL	Total number of calls abandoned while on hold
HOLDABANS†	REALTIME	SPLIT	INTERVAL	Total number of calls abandoned while on hold
HOLDABANTIME†	DAILY	SPLIT	INTERVAL	Total time abandonded calls were on hold
HOLDABANTIME†	HALF HOUR	SPLIT	INTERVAL	Total time abandonded calls were on hold
HOLDABANTIME†	REALTIME	SPLIT	INTERVAL	Total time abandonded calls were on hold
HOLDS†	DAILY	SPLIT	INTERVAL	Total number of calls that were placed on hold
HOLDS†	HALF HOUR	SPLIT	INTERVAL	Total number of calls that were placed on hold
HOLDS†	REALTIME	SPLIT	INTERVAL	Total number of calls that were placed on hold
HOLDTIME†	DAILY	SPLIT	INTERVAL	Total time calls were on hold
HOLDTIME†	HALF HOUR	SPLIT	INTERVAL	Total time calls were on hold
HOLDTIME†	REALTIME	SPLIT	INTERVAL	Total time calls were on hold
IDLETIME	DAILY	AGENT	INTERVAL	Total time agent(s) were available. Includes time the agent's voice terminal was ringing.
IDLETIME	HALF HOUR	AGENT	INTERVAL	Total time agent(s) were available. Includes time agent's voice terminal was ringing.
IDLETIME	REALTIME	AGENT	INTERVAL	Total time agent(s) were available. On Generic 2 with ring-state enabled, **does not** include time calls were ringing at the agent's voice terminal.
IDLETIME	DAILY	SPLIT	INTERVAL	Total time agent(s) were available. Includes time agent voice terminals were ringing.
IDLETIME	HALF HOUR	SPLIT	INTERVAL	Total time agent(s) were available. Includes time agent voice terminals were ringing.
IDLETIME	REALTIME	SPLIT	INTERVAL	Total time agent(s) were available. On Generic 2 with ring-state enabled, **does not** include time calls were ringing at agent voice terminals.
INCALLS	DAILY	TRKGRP	INTERVAL	Total number of incoming calls
INCALLS	HALF HOUR	TRKGRP	INTERVAL	Total number of incoming calls
INCALLS	REALTIME	TRKGRP	INTERVAL	Total number of incoming calls

* Can be used only when 3B CMS Call Vectoring feature is active.
† Can be used only when the ''multiple call handling'' feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
INCALLS	DAILY	TRUNK	INTERVAL	Total number of incoming calls
INCALLS	HALF HOUR	TRUNK	INTERVAL	Total number of incoming calls
INCALLS	REALTIME	TRUNK	INTERVAL	Total number of incoming calls
INCOUNT	REALTIME	TRKGRP	INTERVAL	Number of trunks currently on incoming calls
INFLOW*	DAILY	DN	INTERVAL	Total number of intraflowed incoming calls
INFLOW*	HALF HOUR	DN	INTERVAL	Total number of intraflowed incoming calls
INFLOW*	REALTIME	DN	INTERVAL	Total number of intraflowed incoming calls
INFLOW	DAILY	SPLIT	INTERVAL	Total number of intraflowed incoming calls
INFLOW	HALF HOUR	SPLIT	INTERVAL	Total number of intraflowed incoming calls
INFLOW	REALTIME	SPLIT	INTERVAL	Total number of intraflowed incoming calls
INFLOW*	DAILY	VECTOR	INTERVAL	Total number of intraflowed incoming calls
INFLOW*	HALF HOUR	VECTOR	INTERVAL	Total number of intraflowed incoming calls
INFLOW*	REALTIME	VECTOR	INTERVAL	Total number of intraflowed incoming calls
INPOOL	REALTIME	SPLIT	INTERVAL	Number of available agents. On Generic 2 with ring-state enabled, **does not** include agents whose voice terminals are ringing.
INPROGRESS*	REALTIME	DN	INTERVAL	Number of calls currently in progress
INPROGRESS*	REALTIME	VECTOR	INTERVAL	Number of calls currently in progress
INTERVAL	HALF HOUR	AGENT	INTERVAL	The 30 minute time period data was collected (e.g. " 09:00-09:30AM")
INTERVAL*	HALF HOUR	DN	INTERVAL	The 30 minute time period data was collected (e.g. " 09:00-09:30AM")
INTERVAL	HALF HOUR	SPLIT	INTERVAL	The 30 minute time period data was collected (e.g. " 09:00-09:30AM")
INTERVAL	HALF HOUR	TRKGRP	INTERVAL	The 30 minute time period data was collected (e.g. " 09:00-09:30AM")
INTERVAL	HALF HOUR	TRUNK	INTERVAL	The 30 minute time period data was collected (e.g. " 09:00-09:30AM")
INTERVAL*	HALF HOUR	VECTOR	INTERVAL	The 30 minute time period data was collected (e.g. " 09:00-09:30AM")
INTIME	DAILY	TRKGRP	INTERVAL	Total time on incoming calls
INTIME	HALF HOUR	TRKGRP	INTERVAL	Total time on incoming calls
INTIME	REALTIME	TRKGRP	INTERVAL	Total time on incoming calls
INTIME	DAILY	TRUNK	INTERVAL	Total time on incoming calls
INTIME	HALF HOUR	TRUNK	INTERVAL	Total time on incoming calls
INTIME	REALTIME	TRUNK	INTERVAL	Total time on incoming calls
INVECTOR*	REALTIME	DN	INTERVAL	Number of calls currently in vector processing
JDATE	DAILY	AGENT	INTERVAL	Date (MM/ DD/ YY)
JDATE	HALF HOUR	AGENT	INTERVAL	Date (MM/ DD/ YY)

* Can be used only when 3B CMS Call Vectoring feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
JDATE*	DAILY	DN	INTERVAL	Date (MM/DD/YY)
JDATE*	HALF HOUR	DN	INTERVAL	Date (MM/DD/YY)
JDATE	DAILY	SPLIT	INTERVAL	Date (MM/DD/YY)
JDATE	HALF HOUR	SPLIT	INTERVAL	Date (MM/DD/YY)
JDATE	DAILY	TRKGRP	INTERVAL	Date (MM/DD/YY)
JDATE	HALF HOUR	TRKGRP	INTERVAL	Date (MM/DD/YY)
JDATE	DAILY	TRUNK	INTERVAL	Date (MM/DD/YY)
JDATE	HALF HOUR	TRUNK	INTERVAL	Date (MM/DD/YY)
JDATE*	DAILY	VECTOR	INTERVAL	Date (MM/DD/YY)
JDATE*	HALF HOUR	VECTOR	INTERVAL	Date (MM/DD/YY)
LOGDATE	REALTIME	AGENT	INTERVAL	The date an agent logged in/out (MM/DD/YY)
LOGID	DAILY	AGENT	INTERVAL	Login id associated with an agent
LOGID	HALF HOUR	AGENT	INTERVAL	Login id associated with an agent
LOGID	REALTIME	AGENT	INTERVAL	Login id associated with an agent
LOGMODE	HALF HOUR	AGENT	INTERVAL	Agent position status flag (LOG OUT, LOG IN). To enter LOGMODE values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.
LOGMODE	REALTIME	AGENT	INTERVAL	Agent position status flag (LOG OUT, LOG IN). To enter LOGMODE values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.
LOGTIME	REALTIME	AGENT	INTERVAL	The time an agent logged in or out
MAXAGENTS	DAILY	SPLIT	INTERVAL	Largest number of agents staffed
MAXAGENTS	HALF HOUR	SPLIT	INTERVAL	Largest number of agents staffed
MAXAGENTS	REALTIME	SPLIT	INTERVAL	Largest number of agents staffed
MAXCALLSWAIT	DAILY	SPLIT	INTERVAL	Largest number of calls that waited in queue
MAXCALLSWAIT	HALF HOUR	SPLIT	INTERVAL	Largest number of calls that waited in queue
MAXCALLSWAIT	REALTIME	SPLIT	INTERVAL	Largest number of calls that waited in queue
MAXOLDCW	DAILY	SPLIT	CALL	Longest time a call waited in queue
MAXOLDCW	HALF HOUR	SPLIT	CALL	Longest time a call waited in queue
MAXOLDCW	REALTIME	SPLIT	CALL	Longest time a call waited in queue
MBUSYCOUNT	REALTIME	TRKGRP	INTERVAL	Number of trunks currently maintenance busy
MBUSYTIME	DAILY	TRKGRP	INTERVAL	Total time trunks were maintenance busy
MBUSYTIME	HALF HOUR	TRKGRP	INTERVAL	Total time trunks were maintenance busy
MBUSYTIME	REALTIME	TRKGRP	INTERVAL	Total time trunks were maintenance busy
MBUSYTIME	DAILY	TRUNK	INTERVAL	Total time trunks were maintenance busy
MBUSYTIME	HALF HOUR	TRUNK	INTERVAL	Total time trunks were maintenance busy
MBUSYTIME	REALTIME	TRUNK	INTERVAL	Total time trunks were maintenance busy

* Can be used only when 3B CMS Call Vectoring feature is active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
MODULE	DAILY	TRUNK	INTERVAL	The physical trunk module location
MODULE	HALF HOUR	TRUNK	INTERVAL	The physical trunk module location
MODULE	REALTIME	TRUNK	INTERVAL	The physical trunk module location
NONACD*	DAILY	DN	INTERVAL	Total number of non-ACD calls
NONACD*	HALF HOUR	DN	INTERVAL	Total number of non-ACD calls
NONACD*	REALTIME	DN	INTERVAL	Total number of non-ACD calls
NONACD	DAILY	TRKGRP	INTERVAL	Total number of non-ACD calls
NONACD	HALF HOUR	TRKGRP	INTERVAL	Total number of non-ACD calls
NONACD	REALTIME	TRKGRP	INTERVAL	Total number of non-ACD calls
NONACD	DAILY	TRUNK	INTERVAL	Total number of non-ACD calls
NONACD	HALF HOUR	TRUNK	INTERVAL	Total number of non-ACD calls
NONACD	REALTIME	TRUNK	INTERVAL	Total number of non-ACD calls
NONACD*	DAILY	VECTOR	INTERVAL	Total number of non-ACD calls
NONACD*	HALF HOUR	VECTOR	INTERVAL	Total number of non-ACD calls
NONACD*	REALTIME	VECTOR	INTERVAL	Total number of non-ACD calls
NUMACW	HALF HOUR	SPLIT	CALL	Total number of completed ACW sessions
NUMACW	REALTIME	SPLIT	CALL	Total number of completed ACW sessions
NUMRING**	REALTIME	AGENT	CALL	Number of split calls that rang at the agent's voice terminal.
NUMRING**	REALTIME	SPLIT	CALL	Number of split calls that rang at agent voice terminals.
NUMTALK	HALF HOUR	SPLIT	CALL	Total number of completed ACD calls
NUMTALK	REALTIME	SPLIT	CALL	Total number of completed ACD calls
OCW	REALTIME	SPLIT	INTERVAL	Oldest call currently waiting in queue
ONHOLD†	REALTIME	SPLIT	INTERVAL	Number of calls currently on hold
OUTCALLS	DAILY	TRKGRP	INTERVAL	Total number of outgoing calls
OUTCALLS	HALF HOUR	TRKGRP	INTERVAL	Total number of outgoing calls
OUTCALLS	REALTIME	TRKGRP	INTERVAL	Total number of outgoing calls
OUTCALLS	DAILY	TRUNK	INTERVAL	Total number of outgoing calls
OUTCALLS	HALF HOUR	TRUNK	INTERVAL	Total number of outgoing calls
OUTCALLS	REALTIME	TRUNK	INTERVAL	Total number of outgoing calls
OUTCOUNT	REALTIME	TRKGRP	INTERVAL	Number of trunks currently on outgoing calls
OUTFLOW*	DAILY	DN	INTERVAL	Total number of intraflowed outgoing calls
OUTFLOW*	HALF HOUR	DN	INTERVAL	Total number of intraflowed outgoing calls
OUTFLOW*	REALTIME	DN	INTERVAL	Total number of intraflowed outgoing calls

* Can be used only when 3B CMS Call Vectoring feature is active.
† Can be used only when the ''multiple call handling'' feature is active.
** Data appears only on a Generic 2 switch with the ring-state enabled.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
OUTFLOW	DAILY	SPLIT	INTERVAL	Total number of intraflowed/ interflowed calls
OUTFLOW	HALF HOUR	SPLIT	INTERVAL	Total number of intraflowed/ interflowed calls
OUTFLOW	REALTIME	SPLIT	INTERVAL	Total number of intraflowed/ interflowed calls
OUTFLOW*	DAILY	VECTOR	INTERVAL	Total number of intraflowed outgoing calls
OUTFLOW*	HALF HOUR	VECTOR	INTERVAL	Total number of intraflowed outgoing calls
OUTFLOW*	REALTIME	VECTOR	INTERVAL	Total number of intraflowed outgoing calls
OUTFLOWTIME	REALTIME	SPLIT	CALL	Total time calls that were forwarded/ intraflowed from the split waited before they were forwarded/ intraflowed.
OUTTIME	DAILY	TRKGRP	INTERVAL	Total time on outgoing calls
OUTTIME	HALF HOUR	TRKGRP	INTERVAL	Total time on outgoing calls
OUTTIME	REALTIME	TRKGRP	INTERVAL	Total time on outgoing calls
OUTTIME	DAILY	TRUNK	INTERVAL	Total time on outgoing calls
OUTTIME	HALF HOUR	TRUNK	INTERVAL	Total time on outgoing calls
OUTTIME	REALTIME	TRUNK	INTERVAL	Total time on outgoing calls
OVERFLOWS	REALTIME	TRKGRP	INTERVAL	Total number of trunk group overflows
PRICALLS	DAILY	SPLIT	INTERVAL	Total number of priority calls
PRICALLS	HALF HOUR	SPLIT	INTERVAL	Total number of priority calls
PRICALLS	REALTIME	SPLIT	INTERVAL	Total number of priority calls
PRILEVEL*	REALTIME	TRUNK	INTERVAL	Priority level for vector calls (LOW, MED, HIGH, TOP). To enter PRILEVEL values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.
PRIORITY†	REALTIME	TRUNK	INTERVAL	Flag indicating call is a priority call (YES, NO)
QUALITY	DAILY	AGENT	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY	HALF HOUR	AGENT	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY*	DAILY	DN	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY*	HALF HOUR	DN	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY	DAILY	SPLIT	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY	HALF HOUR	SPLIT	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY	DAILY	TRKGRP	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY	HALF HOUR	TRKGRP	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY	DAILY	TRUNK	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY	HALF HOUR	TRUNK	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY*	DAILY	VECTOR	INTERVAL	Flag indicating data is complete (OK, ***)
QUALITY*	HALF HOUR	VECTOR	INTERVAL	Flag indicating data is complete (OK, ***)

* Can be used only when 3B CMS Call Vectoring feature is active.
 On Generic 3i, may also include calls that simultaneously queued to more than one split and were answered in another split.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
QUECALLS*	REALTIME	DN	INTERVAL	Number of calls currently in queue
QUECALLS	REALTIME	SPLIT	INTERVAL	Number of calls currently in queue
QUECALLS*	REALTIME	VECTOR	INTERVAL	Number of calls currently in queue
RINGABANDON**	REALTIME	AGENT	CALL	Number of ACD calls that abandoned while ringing at the agent's terminal.
RINGABANDON**	REALTIME	SPLIT	CALL	Number of calls to the split that abandoned while ringing at an agent's terminal.
RINGABNTIME**	REALTIME	AGENT	CALL	Total time abandoned calls spent ringing at the agent's terminal before abandoning.
RINGABNTIME**	REALTIME	SPLIT	CALL	Total time abandoned calls spent ringing at an agent's terminal before abandoning.
RINGANSWER**	REALTIME	AGENT	CALL	Number of ACD calls the agent answered.
RINGANSWER**	REALTIME	SPLIT	CALL	Number of ACD calls the split's agents answered.
RINGANSTIME**	REALTIME	AGENT	CALL	Total time ACD calls spent ringing before the agent answered.
RINGANSTIME**	REALTIME	SPLIT	CALL	Total time calls to the split spent ringing before an agent answered.
RINGASSOC**	REALTIME	TRUNK	INTERVAL	Extension at which call is ringing.
RINGCALLS**	REALTIME	AGENT	INTERVAL	Number of calls that rang at the agent's voice terminal.
RINGCALLS**	REALTIME	SPLIT	INTERVAL	Number of calls to the split that rang at an agent's voice terminal.
RINGCOUNT**	REALTIME	SPLIT	CALL	Number of agents currently in the ring-state.
RINGTIME**	REALTIME	AGENT	INTERVAL	Total time the agent spent in the ring-state.
RINGTIME**	REALTIME	SPLIT	INTERVAL	Total time the split's agents spent in the ring-state.
ROUTEDCALLS*	DAILY	VECTOR	INTERVAL	Total number of interflowed outgoing calls
ROUTEDCALLS*	HALF HOUR	VECTOR	INTERVAL	Total number of interflowed outgoing calls
ROUTEDCALLS*	REALTIME	VECTOR	INTERVAL	Total number of interflowed outgoing calls
ROUTETIME*	DAILY	VECTOR	INTERVAL	Total time before calls interflowed
ROUTETIME*	HALF HOUR	VECTOR	INTERVAL	Total time before calls interflowed
ROUTETIME*	REALTIME	VECTOR	INTERVAL	Total time before calls interflowed
SERIAL	DAILY	AGENT	INTERVAL	Unique serial number for a database record
SERIAL	HALF HOUR	AGENT	INTERVAL	Unique serial number for a database record

* Can be used only when 3B CMS Call Vectoring feature is active.
† Can be used only when 3BCMS Call Vectoring is not active.
** Data appears only on a Generic 2 switch with the ring-state enabled.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
SERIAL*	DAILY	DN	INTERVAL	Unique serial number for a database record
SERIAL*	HALF HOUR	DN	INTERVAL	Unique serial number for a database record
SERIAL	DAILY	SPLIT	INTERVAL	Unique serial number for a database record
SERIAL	HALF HOUR	SPLIT	INTERVAL	Unique serial number for a database record
SERIAL	DAILY	TRKGRP	INTERVAL	Unique serial number for a database record
SERIAL	HALF HOUR	TRKGRP	INTERVAL	Unique serial number for a database record
SERIAL	DAILY	TRUNK	INTERVAL	Unique serial number for a database record
SERIAL	HALF HOUR	TRUNK	INTERVAL	Unique serial number for a database record
SERIAL*	DAILY	VECTOR	INTERVAL	Unique serial number for a database record
SERIAL*	HALF HOUR	VECTOR	INTERVAL	Unique serial number for a database record
SLOT	DAILY	TRUNK	INTERVAL	The physical trunk slot location
SLOT	HALF HOUR	TRUNK	INTERVAL	The physical trunk slot location
SLOT	REALTIME	TRUNK	INTERVAL	The physical trunk slot location
SOFTFAIL	DAILY	TRKGRP	INTERVAL	Total number of software failures (incorrect trunk state transitions or link interruptions)
SOFTFAIL	HALF HOUR	TRKGRP	INTERVAL	Total number of software failures (incorrect trunk state transitions or link interruptions)
SOFTFAIL	REALTIME	TRKGRP	INTERVAL	Total number of software failures (incorrect trunk state transitions or link interruptions)
SOFTFAIL	DAILY	TRUNK	INTERVAL	Total number of software failures (incorrect trunk state transitions or link interruptions)
SOFTFAIL	HALF HOUR	TRUNK	INTERVAL	Total number of software failures (incorrect trunk state transitions or link interruptions)
SOFTFAIL	REALTIME	TRUNK	INTERVAL	Total number of software failures (incorrect trunk state transitions or link interruptions)
SPLIT	DAILY	AGENT	INTERVAL	Split number
SPLIT	HALF HOUR	AGENT	INTERVAL	Split number
SPLIT	REALTIME	AGENT	INTERVAL	Split number
SPLIT	DAILY	SPLIT	INTERVAL	Split number
SPLIT	HALF HOUR	SPLIT	INTERVAL	Split number
SPLIT	REALTIME	SPLIT	INTERVAL	Split number
SPLIT†	REALTIME	TRKGRP	INTERVAL	Split number
STAFCOUNT	REALTIME	SPLIT	INTERVAL	Number of agents currently staffed
STAFTIME	DAILY	AGENT	INTERVAL	Total time agent(s) were staffed
STAFTIME	HALF HOUR	AGENT	INTERVAL	Total time agent(s) were staffed
STAFTIME	REALTIME	AGENT	INTERVAL	Total time agent(s) were staffed
STAFTIME	DAILY	SPLIT	INTERVAL	Total time agent(s) were staffed

* Can be used only when 3B CMS Call Vectoring feature is active.
† Can be used only when 3B CMS Call Vectoring feature is not active.

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
STAFTIME	HALF HOUR	SPLIT	INTERVAL	Total time agent(s) were staffed
STAFTIME	REALTIME	SPLIT	INTERVAL	Total time agent(s) were staffed
STATE DATE	REALTIME	AGENT	INTERVAL	The date the current state was entered (MM/ DD/ YY)
STATE DATE	REALTIME	TRUNK	INTERVAL	The date the current state was entered (MM/ DD/ YY)
STROKE1	DAILY	AGENT	INTERVAL	Peg count of stroke 1 depressions
STROKE1	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 1 depressions
STROKE1	REALTIME	AGENT	INTERVAL	Peg count of stroke 1 depressions
STROKE1	DAILY	SPLIT	INTERVAL	Peg count of stroke 1 depressions
STROKE1	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 1 depressions
STROKE1	REALTIME	SPLIT	INTERVAL	Peg count of stroke 1 depressions
STROKE2	DAILY	AGENT	INTERVAL	Peg count of stroke 2 depressions
STROKE2	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 2 depressions
STROKE2	REALTIME	AGENT	INTERVAL	Peg count of stroke 2 depressions
STROKE2	DAILY	SPLIT	INTERVAL	Peg count of stroke 2 depressions
STROKE2	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 2 depressions
STROKE2	REALTIME	SPLIT	INTERVAL	Peg count of stroke 2 depressions
STROKE3	DAILY	AGENT	INTERVAL	Peg count of stroke 3 depressions
STROKE3	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 3 depressions
STROKE3	REALTIME	AGENT	INTERVAL	Peg count of stroke 3 depressions
STROKE3	DAILY	SPLIT	INTERVAL	Peg count of stroke 3 depressions
STROKE3	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 3 depressions
STROKE3	REALTIME	SPLIT	INTERVAL	Peg count of stroke 3 depressions
STROKE4	DAILY	AGENT	INTERVAL	Peg count of stroke 4 depressions
STROKE4	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 4 depressions
STROKE4	REALTIME	AGENT	INTERVAL	Peg count of stroke 4 depressions
STROKE4	DAILY	SPLIT	INTERVAL	Peg count of stroke 4 depressions
STROKE4	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 4 depressions
STROKE4	REALTIME	SPLIT	INTERVAL	Peg count of stroke 4 depressions
STROKE5	DAILY	AGENT	INTERVAL	Peg count of stroke 5 depressions
STROKE5	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 5 depressions
STROKE5	REALTIME	AGENT	INTERVAL	Peg count of stroke 5 depressions
STROKE5	DAILY	SPLIT	INTERVAL	Peg count of stroke 5 depressions
STROKE5	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 5 depressions
STROKE5	REALTIME	SPLIT	INTERVAL	Peg count of stroke 5 depressions
STROKE6	DAILY	AGENT	INTERVAL	Peg count of stroke 6 depressions
STROKE6	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 6 depressions
STROKE6	REALTIME	AGENT	INTERVAL	Peg count of stroke 6 depressions

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/ INTERVAL BASED	DESCRIPTION
STROKE6	DAILY	SPLIT	INTERVAL	Peg count of stroke 6 depressions
STROKE6	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 6 depressions
STROKE6	REALTIME	SPLIT	INTERVAL	Peg count of stroke 6 depressions
STROKE7	DAILY	AGENT	INTERVAL	Peg count of stroke 7 depressions
STROKE7	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 7 depressions
STROKE7	REALTIME	AGENT	INTERVAL	Peg count of stroke 7 depressions
STROKE7	DAILY	SPLIT	INTERVAL	Peg count of stroke 7 depressions
STROKE7	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 7 depressions
STROKE7	REALTIME	SPLIT	INTERVAL	Peg count of stroke 7 depressions
STROKE8	DAILY	AGENT	INTERVAL	Peg count of stroke 8 depressions
STROKE8	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 8 depressions
STROKE8	REALTIME	AGENT	INTERVAL	Peg count of stroke 8 depressions
STROKE8	DAILY	SPLIT	INTERVAL	Peg count of stroke 8 depressions
STROKE8	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 8 depressions
STROKE8	REALTIME	SPLIT	INTERVAL	Peg count of stroke 8 depressions
STROKE9	DAILY	AGENT	INTERVAL	Peg count of stroke 9 depressions
STROKE9	HALF HOUR	AGENT	INTERVAL	Peg count of stroke 9 depressions
STROKE9	REALTIME	AGENT	INTERVAL	Peg count of stroke 9 depressions
STROKE9	DAILY	SPLIT	INTERVAL	Peg count of stroke 9 depressions
STROKE9	HALF HOUR	SPLIT	INTERVAL	Peg count of stroke 9 depressions
STROKE9	REALTIME	SPLIT	INTERVAL	Peg count of stroke 9 depressions
SVCLVL	DAILY	SPLIT	INTERVAL	Call profile parameter - acceptable service level (seconds)
SVCLVL	HALF HOUR	SPLIT	INTERVAL	Call profile parameter - acceptable service level (seconds)
SVCLVL	REALTIME	SPLIT	INTERVAL	Call profile parameter - acceptable service level (seconds)
TIMEMARK	REALTIME	AGENT	INTERVAL	The time the current state was entered in military time format (HR:MN)
TIMEMARK	REALTIME	TRUNK	INTERVAL	The time the current state was entered in military time format (HR:MN)
TRAFFIC	DAILY	SPLIT	CALL	Number of calls answered within the service level
TRAFFIC	HALF HOUR	SPLIT	CALL	Number of calls answered within the service level
TRAFFIC	REALTIME	SPLIT	CALL	Number of calls answered within the service level
TRKGRP	DAILY	TRKGRP	INTERVAL	Trunk group number
TRKGRP	HALF HOUR	TRKGRP	INTERVAL	Trunk group number
TRKGRP	REALTIME	TRKGRP	INTERVAL	Trunk group number
TRKGRP	DAILY	TRUNK	INTERVAL	Trunk group number

Table E-1   3B CMS Database Items (Contd)

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
TRKGRP	HALF HOUR	TRUNK	INTERVAL	Trunk group number
TRKGRP	REALTIME	TRUNK	INTERVAL	Trunk group number
TRKSINUSE	REALTIME	TRKGRP	INTERVAL	Number of trunks currently on calls
TRK NDX	DAILY	TRUNK	INTERVAL	Internal trunk number from switch
TRK NDX	HALF HOUR	TRUNK	INTERVAL	Internal trunk number from switch
TRK NDX	REALTIME	TRUNK	INTERVAL	Internal trunk number from switch
TRUNKASSOC	REALTIME	AGENT	INTERVAL	Trunk association with an agent position
TSTATE	REALTIME	TRUNK	INTERVAL	The current trunk state (QUEUED, CONN, SIEZED, IDLE, FWRD, MBUSY, HOLD, INIT). To enter TSTATE values as criteria for record selection, numerical values must be used in lieu of names. See Table A-22.
VECCALL*	REALTIME	TRUNK	INTERVAL	Flag indicating call is a vector call (YES, NO)
VECSTARTDATE*	REALTIME	TRUNK	INTERVAL	The date the vector call started (MM/DD/YY)
VECSTARTTIME*	REALTIME	TRUNK	INTERVAL	Time the vector call started in military time format (HR:MN)
VECTIME*	DAILY	VECTOR	INTERVAL	Total time calls were in vector processing
VECTIME*	HALF HOUR	VECTOR	INTERVAL	Total time calls were in vector processing
VECTIME*	REALTIME	VECTOR	INTERVAL	Total time calls were in vector processing
VECTOR*	DAILY	DN	INTERVAL	Vector number
VECTOR*	HALF HOUR	DN	INTERVAL	Vector number
VECTOR*	REALTIME	DN	INTERVAL	Vector number
VECTOR*	REALTIME	TRUNK	INTERVAL	Vector number
VECTOR*	DAILY	VECTOR	INTERVAL	Vector number
VECTOR*	HALF HOUR	VECTOR	INTERVAL	Vector number
VECTOR*	REALTIME	VECTOR	INTERVAL	Vector number
WINDOW	DAILY	SPLIT	INTERVAL	Call profile parameter - interval size (seconds)
WINDOW	HALF HOUR	SPLIT	INTERVAL	Call profile parameter - interval size (seconds)
WINDOW	REALTIME	SPLIT	INTERVAL	Call profile parameter - interval size (seconds)

* Can be used only when 3B CMS Call Vectoring feature is active.

Database Items For Outbound Call Management

The database items listed in the following table are available only if your system uses the Outbound Call Management feature.

Table E-2   Database Items for OCM

ITEM	DATABASE	FILE	CALL/INTERVAL BASED	DESCRIPTION
COMPLETED	DAILY	TRKGRP	CALL	Total number of completed outgoing calls
COMPLETED	HALF HOUR	TRKGRP	CALL	Total number of completed outgoing calls
COMPLETED	REALTIME	TRKGRP	CALL	Total number of completed outgoing calls
COMPLETED	DAILY	TRUNK	CALL	Total number of completed outgoing calls
COMPLETED	HALF HOUR	TRUNK	CALL	Total number of completed outgoing calls
COMPLETED	REALTIME	TRUNK	CALL	Total number of completed outgoing calls
OCMCALLS	DAILY	TRKGRP	CALL	Total number of calls distributed by OCM
OCMCALLS	HALF HOUR	TRKGRP	CALL	Total number of calls distributed by OCM
OCMCALLS	REALTIME	TRKGRP	CALL	Total number of calls distributed by OCM
OCMCALLS	DAILY	TRUNK	CALL	Total number of calls distributed by OCM
OCMCALLS	HALF HOUR	TRUNK	CALL	Total number of calls distributed by OCM
OCMCALLS	REALTIME	TRUNK	CALL	Total number of calls distributed by OCM
OCMCOUNT	REALTIME	TRKGRP	CALL	Number of trunks currently on OCM calls
OCMTIME	DAILY	TRKGRP	CALL	Total time on calls distributed by OCM
OCMTIME	HALF HOUR	TRKGRP	CALL	Total time on calls distributed by OCM
OCMTIME	REALTIME	TRKGRP	CALL	Total time on calls distributed by OCM
OCMTIME	DAILY	TRUNK	CALL	Total time on calls distributed by OCM
OCMTIME	HALF HOUR	TRUNK	CALL	Total time on calls distributed by OCM
OCMTIME	REALTIME	TRUNK	CALL	Total time on calls distributed by OCM

Call Data Files and Database Items Cross-Reference

The tables in this section list database items by database and file. The tables also identify the type of data each database item contains and whether the database item is call-based or interval-based. (See Chapter 5 in *3B CMS Custom Report* (5-85/ 215/ 503) for an explanation of types of data base items.)

Real-Time Database

Table E-3   Database Items in the Current and Previous Agent Files

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ACDCALLS	EVENT	INTERVAL
ACDTIME	TIME	INTERVAL
ACWINCALLS	EVENT	INTERVAL
ACWINTIME	TIME	INTERVAL
ACWOUTCALLS	EVENT	INTERVAL
ACWOUTTIME	TIME	INTERVAL
ACWTIME	TIME	INTERVAL
ASSISTS	EVENT	INTERVAL
ASTATE	STATUS	INTERVAL
AUXINCALLS	EVENT	INTERVAL
AUXINTIME	TIME	INTERVAL
AUXOUTCALLS	EVENT	INTERVAL
AUXOUTTIME	TIME	INTERVAL
AUXTIME	TIME	INTERVAL
CMODE	STATUS	INTERVAL
CUMRING	TIME	CALL
EVENT	STATUS	INTERVAL
EXTCALL	STATUS	INTERVAL
EXTCALLDATE	STATUS	INTERVAL
EXTCALLTIME	STATUS	INTERVAL
EXTENSION	IDENTIFIER	INTERVAL
GROUP	IDENTIFIER	INTERVAL
IDLETIME	TIME	INTERVAL
LOGDATE	STATUS	INTERVAL
LOGID	IDENTIFIER	INTERVAL
LOGMODE	STATUS	INTERVAL
LOGTIME	STATUS	INTERVAL

Table E-3   Database Items in the Current and Previous Agent Files (Contd)

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
NUMRING	EVENT	CALL
RINGABANDON	EVENT	CALL
RINGABNTIME	TIME	CALL
RINGANSWER	EVENT	CALL
RINGANSTIME	TIME	CALL
RINGCALLS	EVENT	INTERVAL
RINGTIME	TIME	INTERVAL
SPLIT	IDENTIFIER	INTERVAL
STAFTIME	TIME	INTERVAL
STATE DATE	STATUS	INTERVAL
STROKE1	EVENT	INTERVAL
STROKE2	EVENT	INTERVAL
STROKE3	EVENT	INTERVAL
STROKE4	EVENT	INTERVAL
STROKE5	EVENT	INTERVAL
STROKE6	EVENT	INTERVAL
STROKE7	EVENT	INTERVAL
STROKE8	EVENT	INTERVAL
STROKE9	EVENT	INTERVAL
TIMEMARK	STATUS	INTERVAL
TRUNKASSOC	IDENTIFIER	INTERVAL

Table E-4   Database Items in the Current and Previous VDN Files

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
AGTIME	TIME	CALL
ANSDELAY	TIME	CALL
ANSWERED	EVENT	CALL
ATAGENT	STATUS	INTERVAL
CARRIED	EVENT	CALL
DNEXT	IDENTIFIER	INTERVAL
DNWAITTIME	TIME	CALL
FBUSYCALLS	EVENT	CALL
FBUSYTIME	TIME	CALL
FDISCCALLS	EVENT	CALL
FDISCTIME	TIME	CALL
FLOWTIME	TIME	CALL
INFLOW	EVENT	CALL
INPROGRESS	STATUS	INTERVAL
INVECTOR	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTFLOW	EVENT	CALL
QUECALLS	STATUS	INTERVAL
VECTOR	IDENTIFIER	INTERVAL

Table E-5   **Database Items in the Current and Previous Split Files**

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDON1	EVENT	CALL
ABANDON10	EVENT	CALL
ABANDON2	EVENT	CALL
ABANDON3	EVENT	CALL
ABANDON4	EVENT	CALL
ABANDON5	EVENT	CALL
ABANDON6	EVENT	CALL
ABANDON7	EVENT	CALL
ABANDON8	EVENT	CALL
ABANDON9	EVENT	CALL
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
ACDCALLS	EVENT	INTERVAL
ACDCOUNT	STATUS	INTERVAL
ACDTIME	TIME	INTERVAL
ACWCOUNT	STATUS	INTERVAL
ACWINCALLS	EVENT	INTERVAL
ACWINCOUNT	STATUS	INTERVAL
ACWINTIME	TIME	INTERVAL
ACWOUTCALLS	EVENT	INTERVAL
ACWOUTCOUNT	STATUS	INTERVAL
ACWOUTTIME	TIME	INTERVAL
ACWTIME	TIME	INTERVAL
AGENTS	STATUS	INTERVAL
ANSDELAY	TIME	CALL
ANSWERED	EVENT	CALL
ASSISTS	EVENT	INTERVAL
AUXCOUNT	STATUS	INTERVAL
AUXINCALLS	EVENT	INTERVAL
AUXINCOUNT	STATUS	INTERVAL
AUXINTIME	TIME	INTERVAL
AUXOUTCALLS	EVENT	INTERVAL
AUXOUTCOUNT	STATUS	INTERVAL
AUXOUTTIME	TIME	INTERVAL
AUXTIME	TIME	INTERVAL
CALLPROFCHG	STATUS	INTERVAL
CALLS1	EVENT	CALL
CALLS10	EVENT	CALL
CALLS2	EVENT	CALL
CALLS3	EVENT	CALL
CALLS4	EVENT	CALL
CALLS5	EVENT	CALL

Table E-5   **Database Items in the Current and Previous Split Files (Contd)**

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
CALLS6	EVENT	CALL
CALLS7	EVENT	CALL
CALLS8	EVENT	CALL
CALLS9	EVENT	CALL
CUMACW	TIME	CALL
CUMRING	TIME	CALL
CUMTALK	TIME	CALL
HOLDABANS	EVENT	CALL
HOLDABANTIME	TIME	CALL
HOLDS	EVENT	CALL
HOLDTIME	TIME	CALL
IDLETIME	TIME	INTERVAL
INFLOW	EVENT	INTERVAL
INPOOL	STATUS	INTERVAL
MAXAGENTS	EVENT	INTERVAL
MAXCALLSWAIT	EVENT	INTERVAL
MAXOLDCW	TIME	CALL
NUMACW	EVENT	CALL
NUMRING	EVENT	CALL
NUMTALK	EVENT	CALL
OCW	STATUS	INTERVAL
ONHOLD	STATUS	INTERVAL
OUTFLOW	EVENT	INTERVAL
PRICALLS	EVENT	INTERVAL
QUECALLS	STATUS	INTERVAL
RINGABANDON	EVENT	CALL
RINGABNTIME	TIME	CALL
RINGANSWER	EVENT	CALL
RINGANSTIME	TIME	CALL
RINGCALLS	EVENT	INTERVAL
RINGCOUNT	STATUS	INTERVAL
RINGTIME	TIME	INTERVAL
SPLIT	IDENTIFIER	INTERVAL
STAFCOUNT	STATUS	INTERVAL
STAFTIME	TIME	INTERVAL
STROKE1	EVENT	INTERVAL
STROKE2	EVENT	INTERVAL
STROKE3	EVENT	INTERVAL
STROKE4	EVENT	INTERVAL
STROKE5	EVENT	INTERVAL
STROKE6	EVENT	INTERVAL
STROKE7	EVENT	INTERVAL
STROKE8	EVENT	INTERVAL
STROKE9	EVENT	INTERVAL
SVCLVL	STATUS	INTERVAL
TRAFFIC	EVENT	CALL
WINDOW	STATUS	INTERVAL

Table E-6   **Database Items in the Current and Previous Trunk Group Files**

DATABASE ITEM	TYPE	CALL/INTERVAL BASED
ABANDONS	EVENT	CALL
ALLINUSE	TIME	INTERVAL
ALLTRKSBUSY	STATUS	INTERVAL
ANSWERED	EVENT	CALL
DNEXT	IDENTIFIER	INTERVAL
FAILURES	EVENT	CALL
GROUPSIZE	STATUS	INTERVAL
INCALLS	EVENT	INTERVAL
INCOUNT	STATUS	INTERVAL
INTIME	TIME	INTERVAL
MBUSYCOUNT	STATUS	INTERVAL
MBUSYTIME	TIME	INTERVAL
NONACD	EVENT	CALL
OUTCALLS	EVENT	INTERVAL
OUTCOUNT	STATUS	INTERVAL
OUTTIME	TIME	INTERVAL
OVERFLOWS	EVENT	INTERVAL
SOFTFAIL	EVENT	CALL
SPLIT	IDENTIFIER	INTERVAL
TRKGRP	IDENTIFIER	INTERVAL
TRKSINUSE	STATUS	INTERVAL

Table E-7   Database Items in the Current and Previous Trunk Files

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ANSWERED	EVENT	CALL
ASSOCIATION	STATUS	INTERVAL
CABINET	STATUS	INTERVAL
CALLATAGENT	STATUS	INTERVAL
CARRIER	STATUS	INTERVAL
CIRCUIT	STATUS	INTERVAL
DIRECTION	STATUS	INTERVAL
DNCALL	STATUS	INTERVAL
DNEXT	IDENTIFIER	INTERVAL
DNSTARTDATE	STATUS	INTERVAL
DNSTARTTIME	STATUS	INTERVAL
EQLOCATION	STATUS	INTERVAL
FAILURES	EVENT	CALL
INCALLS	EVENT	INTERVAL
INTIME	TIME	INTERVAL
MBUSYTIME	TIME	INTERVAL
MODULE	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTCALLS	EVENT	INTERVAL
OUTTIME	TIME	INTERVAL
PRILEVEL	STATUS	INTERVAL
PRIORITY	STATUS	INTERVAL
RINGASSOC	IDENTIFIER	INTERVAL
SLOT	STATUS	INTERVAL
SOFTFAIL	EVENT	CALL
STATE DATE	STATUS	INTERVAL
TIMEMARK	STATUS	INTERVAL
TRKGRP	IDENTIFIER	INTERVAL
TRK NDX	IDENTIFIER	INTERVAL
TSTATE	STATUS	INTERVAL
VECCALL	STATUS	INTERVAL
VECSTARTDATE	STATUS	INTERVAL
VECSTARTTIME	STATUS	INTERVAL
VECTOR	IDENTIFIER	INTERVAL

Table E-8   Database Items in the Current and Previous Vector Files

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
ANSBACK	EVENT	CALL
ANSDELAY	TIME	CALL
ANSMAIN	EVENT	CALL
CARRIED	EVENT	CALL
DNS	STATUS	INTERVAL
FBUSYCALLS	EVENT	CALL
FBUSYTIME	TIME	CALL
FDISCCALLS	EVENT	CALL
FDISCTIME	TIME	CALL
FLOWTIME	TIME	CALL
INFLOW	EVENT	CALL
INPROGRESS	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTFLOW	EVENT	CALL
QUECALLS	STATUS	INTERVAL
ROUTEDCALLS	EVENT	CALL
ROUTETIME	TIME	CALL
VECTIME	TIME	CALL
VECTOR	IDENTIFIER	INTERVAL

Historical Database

Table E-9   Database Items in the Half-Hour Agent File

DATABASE ITEM	TYPE	CALL/INTERVAL BASED
ACDCALLS	EVENT	INTERVAL
ACDTIME	TIME	INTERVAL
ACWINCALLS	EVENT	INTERVAL
ACWINTIME	TIME	INTERVAL
ACWOUTCALLS	EVENT	INTERVAL
ACWOUTTIME	TIME	INTERVAL
ACWTIME	TIME	INTERVAL
AGHOUR	STATUS	INTERVAL
AGMINUTE	STATUS	INTERVAL
ASSISTS	EVENT	INTERVAL
AUXINCALLS	EVENT	INTERVAL
AUXINTIME	TIME	INTERVAL
AUXOUTCALLS	EVENT	INTERVAL
AUXOUTTIME	TIME	INTERVAL
AUXTIME	TIME	INTERVAL
CMODE	STATUS	INTERVAL
EXTENSION	IDENTIFIER	INTERVAL
GROUP	IDENTIFIER	INTERVAL
IDLETIME	TIME	INTERVAL
INTERVAL	STATUS	INTERVAL
JDATE	STATUS	INTERVAL
LOGID	IDENTIFIER	INTERVAL
LOGMODE	STATUS	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SPLIT	IDENTIFIER	INTERVAL
STAFTIME	TIME	INTERVAL
STROKE1	EVENT	INTERVAL
STROKE2	EVENT	INTERVAL
STROKE3	EVENT	INTERVAL
STROKE4	EVENT	INTERVAL
STROKE5	EVENT	INTERVAL
STROKE6	EVENT	INTERVAL
STROKE7	EVENT	INTERVAL
STROKE8	EVENT	INTERVAL
STROKE9	EVENT	INTERVAL

Table E-10   **Database Items in the Half-Hour VDN File**

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
AGTIME	TIME	CALL
ANSDELAY	TIME	CALL
ANSWERED	EVENT	CALL
CARRIED	EVENT	CALL
DNEXT	IDENTIFIER	INTERVAL
DNWAITTIME	TIME	CALL
FBUSYCALLS	EVENT	CALL
FBUSYTIME	TIME	CALL
FDISCCALLS	EVENT	CALL
FDISCTIME	TIME	CALL
FLOWTIME	TIME	CALL
INFLOW	EVENT	CALL
INTERVAL	STATUS	INTERVAL
JDATE	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTFLOW	EVENT	CALL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
VECTOR	IDENTIFIER	INTERVAL

Table E-11   Database Items in the Half-Hour Split File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDON1	EVENT	CALL
ABANDON10	EVENT	CALL
ABANDON2	EVENT	CALL
ABANDON3	EVENT	CALL
ABANDON4	EVENT	CALL
ABANDON5	EVENT	CALL
ABANDON6	EVENT	CALL
ABANDON7	EVENT	CALL
ABANDON8	EVENT	CALL
ABANDON9	EVENT	CALL
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
ACDCALLS	EVENT	INTERVAL
ACDTIME	TIME	INTERVAL
ACWINCALLS	EVENT	INTERVAL
ACWINTIME	TIME	INTERVAL
ACWOUTCALLS	EVENT	INTERVAL
ACWOUTTIME	TIME	INTERVAL
ACWTIME	TIME	INTERVAL
ANSDELAY	TIME	CALL
ANSWERED	EVENT	CALL
ASSISTS	EVENT	INTERVAL
AUXINCALLS	EVENT	INTERVAL
AUXINTIME	TIME	INTERVAL
AUXOUTCALLS	EVENT	INTERVAL
AUXOUTTIME	TIME	INTERVAL
AUXTIME	TIME	INTERVAL
CALLPROFCHG	STATUS	INTERVAL
CALLS1	EVENT	CALL
CALLS10	EVENT	CALL
CALLS2	EVENT	CALL
CALLS3	EVENT	CALL
CALLS4	EVENT	CALL
CALLS5	EVENT	CALL
CALLS6	EVENT	CALL
CALLS7	EVENT	CALL
CALLS8	EVENT	CALL
CALLS9	EVENT	CALL

Table E-11   Database Items in the Half-Hour Split File (Contd)

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
CUMACW	TIME	CALL
CUMTALK	TIME	CALL
HOLDABANS	EVENT	CALL
HOLDABANTIME	TIME	CALL
HOLDS	EVENT	CALL
HOLDTIME	TIME	CALL
IDLETIME	TIME	INTERVAL
INFLOW	EVENT	INTERVAL
INTERVAL	STATUS	INTERVAL
JDATE	STATUS	INTERVAL
MAXAGENTS	EVENT	INTERVAL
MAXCALLSWAIT	EVENT	CALL
MAXOLDCW	TIME	CALL
NUMACW	EVENT	CALL
NUMTALK	EVENT	CALL
OUTFLOW	EVENT	INTERVAL
PRICALLS	EVENT	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SPLIT	IDENTIFIER	INTERVAL
STAFTIME	TIME	INTERVAL
STROKE1	EVENT	INTERVAL
STROKE2	EVENT	INTERVAL
STROKE3	EVENT	INTERVAL
STROKE4	EVENT	INTERVAL
STROKE5	EVENT	INTERVAL
STROKE6	EVENT	INTERVAL
STROKE7	EVENT	INTERVAL
STROKE8	EVENT	INTERVAL
STROKE9	EVENT	INTERVAL
SVCLVL	STATUS	INTERVAL
TRAFFIC	EVENT	INTERVAL
WINDOW	STATUS	INTERVAL

Table E-12   Database Items in the Half-Hour Trunk Group File

DATABASE ITEM	TYPE	CALL/INTERVAL BASED
ABANDONS	EVENT	CALL
ALLINUSE	TIME	INTERVAL
ANSWERED	EVENT	CALL
FAILURES	EVENT	CALL
GROUPSIZE	STATUS	INTERVAL
INCALLS	EVENT	INTERVAL
INTERVAL	STATUS	INTERVAL
INTIME	TIME	INTERVAL
JDATE	STATUS	INTERVAL
MBUSYTIME	TIME	INTERVAL
NONACD	EVENT	CALL
OUTCALLS	EVENT	INTERVAL
OUTTIME	TIME	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SOFTFAIL	EVENT	CALL
TRKGRP	IDENTIFIER	INTERVAL

Table E-13   Database Items in the Half-Hour Trunk File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ANSWERED	EVENT	CALL
CABINET	STATUS	INTERVAL
CARRIER	STATUS	INTERVAL
CIRCUIT	STATUS	INTERVAL
FAILURES	EVENT	CALL
INCALLS	EVENT	INTERVAL
INTERVAL	STATUS	INTERVAL
INTIME	TIME	INTERVAL
JDATE	STATUS	INTERVAL
MBUSYTIME	TIME	INTERVAL
MODULE	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTCALLS	EVENT	INTERVAL
OUTTIME	TIME	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SLOT	STATUS	INTERVAL
SOFTFAIL	EVENT	CALL
TRKGRP	IDENTIFIER	INTERVAL
TRK NDX	IDENTIFIER	INTERVAL

Table E-14   Database Items in the Half-Hour Vector File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
ANSBACK	EVENT	CALL
ANSDELAY	TIME	CALL
ANSMAIN	EVENT	CALL
CARRIED	EVENT	CALL
FBUSYCALLS	EVENT	CALL
FBUSYTIME	TIME	CALL
FDISCCALLS	EVENT	CALL
FDISCTIME	TIME	CALL
FLOWTIME	TIME	CALL
INFLOW	EVENT	CALL
INTERVAL	STATUS	INTERVAL
JDATE	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTFLOW	EVENT	CALL
QUALITY	STATUS	INTERVAL
ROUTEDCALLS	EVENT	CALL
ROUTETIME	TIME	CALL
SERIAL	STATUS	INTERVAL
VECTIME	TIME	CALL
VECTOR	IDENTIFIER	INTERVAL

Table E-15   Database Items in the Daily Agent File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ACDCALLS	EVENT	INTERVAL
ACDTIME	TIME	INTERVAL
ACWINCALLS	EVENT	INTERVAL
ACWINTIME	TIME	INTERVAL
ACWOUTCALLS	EVENT	INTERVAL
ACWOUTTIME	TIME	INTERVAL
ACWTIME	TIME	INTERVAL
ASSISTS	EVENT	INTERVAL
AUXINCALLS	EVENT	INTERVAL
AUXINTIME	TIME	INTERVAL
AUXOUTCALLS	EVENT	INTERVAL
AUXOUTTIME	TIME	INTERVAL
AUXTIME	TIME	INTERVAL
EXTENSION	IDENTIFIER	INTERVAL
GROUP	IDENTIFIER	INTERVAL
IDLETIME	TIME	INTERVAL
JDATE	STATUS	INTERVAL
LOGID	IDENTIFIER	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SPLIT	IDENTIFIER	INTERVAL
STAFTIME	TIME	INTERVAL
STROKE1	EVENT	INTERVAL
STROKE2	EVENT	INTERVAL
STROKE3	EVENT	INTERVAL
STROKE4	EVENT	INTERVAL
STROKE5	EVENT	INTERVAL
STROKE6	EVENT	INTERVAL
STROKE7	EVENT	INTERVAL
STROKE8	EVENT	INTERVAL
STROKE9	EVENT	INTERVAL

Table E-16   Database Items in the Daily VDN File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
AGTIME	TIME	CALL
ANSDELAY	TIME	CALL
ANSWERED	EVENT	CALL
CARRIED	EVENT	CALL
DNEXT	IDENTIFIER	INTERVAL
DNWAITTIME	TIME	CALL
FBUSYCALLS	EVENT	CALL
FBUSYTIME	TIME	CALL
FDISCCALLS	EVENT	CALL
FDISCTIME	TIME	CALL
FLOWTIME	TIME	CALL
INFLOW	EVENT	CALL
JDATE	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTFLOW	EVENT	CALL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
VECTOR	IDENTIFIER	INTERVAL

Table E-17   Database Items in the Daily Split File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDON1	EVENT	CALL
ABANDON10	EVENT	CALL
ABANDON2	EVENT	CALL
ABANDON3	EVENT	CALL
ABANDON4	EVENT	CALL
ABANDON5	EVENT	CALL
ABANDON6	EVENT	CALL
ABANDON7	EVENT	CALL
ABANDON8	EVENT	CALL
ABANDON9	EVENT	CALL
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
ACDCALLS	EVENT	INTERVAL
ACDTIME	TIME	INTERVAL
ACWINCALLS	EVENT	INTERVAL
ACWINTIME	TIME	INTERVAL
ACWOUTCALLS	EVENT	INTERVAL
ACWOUTTIME	TIME	INTERVAL
ACWTIME	TIME	INTERVAL
ANSDELAY	TIME	CALL
ANSWERED	EVENT	CALL
ASSISTS	EVENT	INTERVAL
AUXINCALLS	EVENT	INTERVAL
AUXINTIME	TIME	INTERVAL
AUXOUTCALLS	EVENT	INTERVAL
AUXOUTTIME	TIME	INTERVAL
AUXTIME	TIME	INTERVAL
CALLPROFCHG	STATUS	INTERVAL
CALLS1	EVENT	CALL
CALLS10	EVENT	CALL
CALLS2	EVENT	CALL
CALLS3	EVENT	CALL
CALLS4	EVENT	CALL
CALLS5	EVENT	CALL
CALLS6	EVENT	CALL
CALLS7	EVENT	CALL
CALLS8	EVENT	CALL
CALLS9	EVENT	CALL

Table E-17   Database Items in the Daily Split File (Contd)

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
HOLDABANS	EVENT	CALL
HOLDABANTIME	TIME	CALL
HOLDS	EVENT	CALL
HOLDTIME	TIME	CALL
IDLETIME	TIME	INTERVAL
INFLOW	EVENT	INTERVAL
JDATE	STATUS	INTERVAL
MAXAGENTS	EVENT	INTERVAL
MAXCALLSWAIT	EVENT	INTERVAL
MAXOLDCW	TIME	CALL
OUTFLOW	EVENT	INTERVAL
PRICALLS	EVENT	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SPLIT	IDENTIFIER	INTERVAL
STAFTIME	TIME	INTERVAL
STROKE1	EVENT	INTERVAL
STROKE2	EVENT	INTERVAL
STROKE3	EVENT	INTERVAL
STROKE4	EVENT	INTERVAL
STROKE5	EVENT	INTERVAL
STROKE6	EVENT	INTERVAL
STROKE7	EVENT	INTERVAL
STROKE8	EVENT	INTERVAL
STROKE9	EVENT	INTERVAL
SVCLVL	STATUS	INTERVAL
TRAFFIC	EVENT	INTERVAL
WINDOW	STATUS	INTERVAL

Table E-18   Database Items in the Daily Trunk Group File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ALLINUSE	TIME	INTERVAL
ANSWERED	EVENT	CALL
BABANDONS	EVENT	CALL
BALLINUSE	TIME	INTERVAL
BFAILURES	EVENT	CALL
BHANDLEDIN	EVENT	INTERVAL
BINCALLS	EVENT	INTERVAL
BINTIME	TIME	INTERVAL
BMBUSYTIME	TIME	INTERVAL
BNONACD	EVENT	CALL
BOUTCALLS	EVENT	INTERVAL
BOUTTIME	TIME	INTERVAL
BSOFTFAILS	EVENT	CALL
BUSYHOUR	STATUS	INTERVAL
FAILURES	EVENT	CALL
GROUPSIZE	STATUS	INTERVAL
INCALLS	EVENT	INTERVAL
INTIME	TIME	INTERVAL
JDATE	STATUS	INTERVAL
MBUSYTIME	TIME	INTERVAL
NONACD	EVENT	CALL
OUTCALLS	EVENT	INTERVAL
OUTTIME	TIME	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SOFTFAIL	EVENT	CALL
TRKGRP	IDENTIFIER	INTERVAL

Table E-19 Database Items in the Daily Trunk File

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ANSWERED	EVENT	CALL
CABINET	STATUS	INTERVAL
CARRIER	STATUS	INTERVAL
CIRCUIT	STATUS	INTERVAL
FAILURES	EVENT	CALL
INCALLS	EVENT	INTERVAL
INTIME	TIME	INTERVAL
JDATE	STATUS	INTERVAL
MBUSYTIME	TIME	INTERVAL
MODULE	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTCALLS	EVENT	INTERVAL
OUTTIME	TIME	INTERVAL
QUALITY	STATUS	INTERVAL
SERIAL	STATUS	INTERVAL
SLOT	STATUS	INTERVAL
SOFTFAIL	EVENT	CALL
TRKGRP	IDENTIFIER	INTERVAL
TRK NDX	IDENTIFIER	INTERVAL

Table E-20   **Database Items in the Daily Vector File**

DATABASE ITEM	TYPE	CALL/ INTERVAL BASED
ABANDONS	EVENT	CALL
ABANTIME	TIME	CALL
ANSBACK	EVENT	CALL
ANSDELAY	TIME	CALL
ANSMAIN	EVENT	CALL
CARRIED	EVENT	CALL
FBUSYCALLS	EVENT	CALL
FBUSYTIME	TIME	CALL
FDISCCALLS	EVENT	CALL
FDISCTIME	TIME	CALL
FLOWTIME	TIME	CALL
INFLOW	EVENT	CALL
JDATE	STATUS	INTERVAL
NONACD	EVENT	CALL
OUTFLOW	EVENT	CALL
QUALITY	STATUS	INTERVAL
ROUTEDCALLS	EVENT	CALL
ROUTETIME	TIME	CALL
SERIAL	STATUS	INTERVAL
VECTIME	TIME	CALL
VECTOR	IDENTIFIER	INTERVAL

CMS Calculations and Formulas

The following table lists every standard calculation and the associated formula used by CMS. Do not change or delete standard calculations because you may invalidate CMS reports. Standard calculations are written in all capital letters. Therefore, if you decide to create other calculations for use in custom reports, identify them with names in lower-case letters so you can differentiate your calculations from standard calculations.

Table E-21   Calculation and Formula Cross-Reference

CALCULATION	FORMULA	DESCRIPTION
AGENT CALL OUT	ACWOUTCOUNT+AUXOUTCOUNT	Number of agents on outgoing calls
AUX WORK TIME	AUXTIME-AUXOUTTIME-AUXINTIME	Time in auxiliary work
AVG ABANDON TIME	ABANTIME/ABANDONS	Average abandon time
AVG ABANDON TIME SUM	SUM(ABANTIME)/SUM(ABANDONS)	Average abandon time summary
AVG ACD TALK TIME	ACDTIME/ACDCALLS	Average talk time for ACD calls
AVG ACD TALK TIME HH	CUMTALK/NUMTALK	Average talk time for completed ACD calls
AVG ACD TALK TIM SUM	SUM(ACDTIME)/SUM(ACDCALLS)	Average talk time for ACD calls summary
AVG ACD TT HH SUM	SUM(CUMTALK)/SUM(NUMTALK)	Average talk time for completed ACD calls summary
AVG ACW TIME	(ACWTIME-ACWOUTTIME-ACWINTIME) / ACDCALLS	Average after call work time
AVG ACW TIME SUM	SUM(ACWTIME-ACWOUTTIME-ACWINTIME) / SUM(ACDCALLS)	Average after call work time summary
AVG ANSWER SPEED	ANSDELAY/ANSWERED	Average speed of answer
AVG ANSWER SPEED SUM	SUM(ANSDELAY)/SUM(ANSWERED)	Average speed of answer summary
AVG COMP ACW TIME	CUMACW/NUMACW	Average time spent in completed after call work sessions
AVG COM TALK TIME	CUMTALK/NUMTALK	Average of time on completed ACD calls
AVG HOLD TIME IN	INTIME/INCALLS	Average trunk usage time on incoming calls
AVG HOLD TIME IN SUM	SUM(INTIME)/SUM(INCALLS)	Average trunk usage time on incoming calls summary
AVG HOLD TIME OUT	OUTTIME/OUTCALLS	Average trunk usage time on outgoing calls
AVG HOLD TIM OUT SUM	SUM(OUTTIME)/SUM(OUTCALLS)	Average trunk usage time on outgoing calls summary

Table E-21   Calculation and Formula Cross-Reference (Contd)

CALCULATION	FORMULA	DESCRIPTION
AVG HUNTABN TIME*	(ABANTIME-RINGABNTIME)/ (ABANDONS-RINGABANDON)	Average time calls waited in a split queue before ringing an agent's voice terminal.
AVG HUNTANS TIME*	(ANSDELAY/ ANSWERED)-(RINGANSTIME/ RINGANSWER)	Average time calls waited in a split queue before an agent answered.
AVG INIT RING TIME*	RINGTIME/ RINGCALLS	Average time agents spent in the ring-state per call ringing the agent voice terminals (interval-based).
AVG RINGABN TIME*	RINGABNTIME/ RINGABANDON	Average ring time for calls that abandoned while ringing at the agent's voice terminal.
AVG RINGANS TIME*	RINGANSTIME/ RINGANSWER	Average ring time for ACD calls that rang at the agent's voice terminal.
AVG TALK TIME IN	(ACWINTIME+ AUXINTIME)/ (ACWINCALLS+ AUXINCALLS)	Average talk time on ACW and AUX work incoming calls
AVG TALK TIME IN SUM	SUM(ACWINTIME+ AUXINTIME)/ SUM (ACWINCALLS+ AUXINCALLS)	Average talk time on ACW and AUX work incoming calls summary
AVG TALK TIME OUT	(ACWOUTTIME+ AUXOUTTIME)/ (ACWOUTCALLS+ AUXOUTCALLS)	Average talk time on ACW and AUX work outgoing calls
AVG TALK TIM OUT SUM	SUM(ACWOUTTIME+ AUXOUTTIME)/ SUM (ACWOUTCALLS+ AUXOUTCALLS)	Average talk time on ACW and AUX work outgoing calls summary
AVG TERM RING TIME*	CUMRING/ NUMRING	Average time agents spent in the ring-state per call ringing agent voice terminals (call-based).
AVG WORK TIME	(ACDTIME+ ACWTIME-ACWOUTTIME-ACWINTIME)/ ACDCALLS	Average work time
AVG WORK TIME SUM	SUM(ACDTIME+ ACWTIME-ACWOUTTIME-ACWINTIME)/ SUM(ACDCALLS)	Average work time summary
CALLS OFFERED	ANSWERED+ ABANDONS+ OUTFLOW	Total calls offered to a split
DNTIME	DNWAITTIME+ AGTIME	Total VDN call time
EXT CALL IN	ACWINCALLS+ AUXINCALLS	Number of incoming extension calls
FULLTIME AGENT	STAFTIME/ 1800	Average number of agent positions staffed during half hour
FULL AG NUM CALL	1-800*(ACDCALLS/ STAFTIME)	Average number of calls handled by staffed agents during half hour
HR STAFF TIME	STAFTIME/ 3600	Staffed time (in hours)

* Data appears only on a Generic 2 switch with ring-state enabled.

Table E-21   Calculation and Formula Cross-Reference (Contd)

CALCULATION	FORMULA	DESCRIPTION
HUNTABANDON*	ABANDONS-RINGABANDON	Total number of calls that abandoned while in the split queue (**before** ringing an agent voice terminal).
HUNTANSTIME*	ANSDELAY-RINGANSTIME	Total time answered ACD calls waited in the split queue before ringing an agent's voice terminal.
INCOMING CCS	INTIME/ 100	Incoming CCS
MIN STAFF TIME	STAFTIME/ 60	Staffed time (in minutes)
NUM CALL IN	ACDCALLS/ MAXAGENTS	Number of incoming calls
NUM CALL OUT1	1-800*((AUXOUTCALLS+ ACWOUTCALLS)/ (STAFTIME-AUXTIME))	Average number of outgoing calls made by staffed agents
NUM CALL OUT2	ACWOUTCALLS+ AUXOUTCALLS	Number of outgoing calls
OUTGOING CCS	OUTTIME/ 100	Outgoing CCS
PERCENT ACD TIME	1-00*((ACDTIME+ ACWTIME)/ STAFTIME)	Percent of time on ACD call and in ACW
PERCENT ACD TIME SUM	1-00*(SUM(ACDTIME+ ACWTIME)/ SUM(STAFTIME))	Percent of time on ACD and in ACW summary
PERCENT AUX WORK	1-00*(AUXTIME/ STAFTIME)	Percent of staffed time spent in auxiliary work
PERCENT AUX WORK SUM	1-00*(SUM(AUXTIME)/ SUM(STAFTIME))	Percent of staffed time spent in auxiliary work summary
PERCENT BUSY ALL	ALLINUSE/ 18	Percent of time all trunks in trunk group are busy
PERCENT BUSY ALL SUM	SUM(ALLINUSE)/ SUM(18)	Percent of time all trunks in trunk group are busy summary
PERCENT CALL ABAN	1-00*(ABANDONS/ (ANSWERED+ ABANDONS+ OUTFLOW))	Percent of calls abandoned

 * Data appears only on a Generic 2 switch with ring-state enabled.

Table E-21   Calculation and Formula Cross-Reference (Contd)

CALCULATION	FORMULA	DESCRIPTION
PERCENT CALL ANS	1-00*(ACDCALLS/ (ACDCALLS+ ABANDONS))	Percent of calls answered
PERCENT CALL ANS SUM	1-00*(SUM(ACDCALLS)/ SUM(ACDCALLS+ ABANDONS))	Percent of calls answered summary
PERCENT MAINT TIM	MBUSYTIME/ (18*GROUPSIZE)	Percent of time trunks were maintenance busy
PERCENT MAINT TM SUM	SUM(MBUSYTIME)/ SUM(18*GROUPSIZE)	Percent of time trunks were maintenance busy summary
PERCENT SERV LEVL	1-00*(TRAFFIC/ (ANSWERED+ ABANDONS+ OUTFLOW))	Percent of calls answered within service level
PERCENT STAFF IN	1-00*((ACDTIME+ ACWTIME-ACWINTIME-ACWOUTTIME)/ STAFTIME)	Percent of time on ACD and in ACW excluding ACW calls
PERCENT STAFF OUT	1-00*((ACWOUTTIME+ AUXOUTTIME)/ STAFTIME)	Percent of time on outgoing extension calls
SEC STAFF TIME	STAFTIME	Staffed time (in seconds)
TRKBUSY	INTIME+ OUTTIME	Total time trunk is in use
V AVG ANS SPEED SUM	SUM(ANSDELAY)/ SUM(ANSMAIN+ ANSBACK)	Vector average speed of answer summary

Criteria Statement Values for CMS State Names

The following table lists status database items that generate state names in reports. If, in a custom report, you want to select data from records based on a particular state, you must enter a numerical value for the state, **not** the name. The following table lists the numerical values that coincide with state names.

Table E-22   State Names and Criteria Statement Values Cross-Reference

Status Database Items	State Names	Numerical Values For Criteria
ASTATE	UNSTAF	0
	AVAIL	1
	ACD	2
	ACW	3
	AUX	4
	ACWO (*ACW outgoing call*)	5
	ACWI (*ACW incoming call*)	6
	AUXO (*AUX outgoing call*)	7
	AUXI (*AUX incoming call*)	8
	RING	18
TSTATE	IDLE	0
	SEIZED	1
	QUEUED	2
	CONN	3
	ABAN	4
	FWRD	5
	MBUSY	6
	HOLD	15
EXTCALL	(none)	0
	ACWOUT	1
	ACWIN	2
	AUXOUT	3
	AUXIN	4
DIRECTION	OUT	0
	IN-1	
LOGMODE	UNSTAF	0
	LOGIN	1
EVENT	(none)	0
	MCT	1
	ASSIST	2
PRILEVEL	LOW	0
	MED	1
	HIGH	2
	TOP	3

Criteria Statement Values for CMS State Names

NOTES

Glossary

Abandoned Call
A call queued to a split in which the caller hangs up before receiving an answer from an agent.

ACD
Automatic Call Distribution, a switch feature. Software to channel high-volume incoming call traffic to agent groups (splits).

ACW
After Call Work, an agent state representing work related to the preceding ACD call. Going on-hook after an ACD call during MANUAL-IN operation places the call in ACW. In addition, System 75 ACW is accessible by a button on the agent's set.

Agent
A member of an ACD split. Known to CMS by a login identification keyed into a voice terminal.

Agent Login ID
A-1-to-4-digit number (System 85/ DIMENSION PBX) or a 1-to-9-digit number (System 75) entered by the agent at an ACD extension to activate (STAFF) the position. Agent logins are required for all CMS-measured ACD extensions.

Agent Position
The physical station where the agent works or the agent's extension.

Agent State
A feature of agent call handling that allows an agent to change his or her availability to the system.

Agent Trace Report
Displays, by individual agent, every activity performed for a specified time period.

Algorithm

The steps taken to solve a problem, usually associated with math problems.

Archive Parameters

A CMS feature allowing tuning of the database by enabling the user to specify the archive period (the length of time data will be kept) for different types of data.

ASA

Average Speed of Answer, the average amount of time a caller waits in queue before connecting to an agent.

Associated Extension

Internal extension number assigned to a split. See QDN.

Automatic-In Routing

Trunk routing of calls to internal PBX numbers without the need for the CO (Central Office) to pass the digits to the PBX.

AUX

Auxiliary work, an agent state representing work not related to a particular call; also for breaks, meetings, or lunch. The state is reached by the agent's pressing the AUX-WORK button or dialing the proper access code at his or her voice terminal. The state can also be reached by the agent's going off hook to make or answer an extension call while in AVAIL, and by the agent's placing an outgoing call.

Average Abandon Time

A report item covering one or more splits indicating the average number of seconds callers who hung up before receiving answers waited before doing so.

Average ACD Talk Time

A report item averaging the number of seconds ACD calls in one or more splits lasted from the time an agent connects to the call to the end of the call.

Average After Call Work

A report item giving the average number of seconds an after-call work session lasted in one or more splits over some amount of time.

Average Hold Time (Incoming/Outgoing)

A report item averaging the trunk occupancy per call. All calls seizing the trunk are averaged, whether they connect to an agent or not. In other words, calls that abandon have a "hold time" just as calls that connect to an agent do. Queue time is considered part of hold time.

Average Outgoing Talk Time

A report item giving the average length in seconds of extension-out calls.

Average Talk Time - In (Average Ext In Talk Time)
A report item indicating the average length of incoming ACD calls for some period.

Average Time to Abandon
A report item that averages the number of seconds abandoning callers waited before hanging up.

Avg. Pos. Staffed
A report item indicating the average number of extensions with an agent logged in during some period.

Backup
The process of protecting data by writing the contents of the disk to a tape that can be removed from the computer environment and stored safely.

Blocking
Blocking is used by the forecast system just as traffic engineers use it: to model system performance based on specified levels of accessibility to the system. This feature is administered on a trunk-group-by-trunk-group basis. This feature also allows you "what if" modeling options — by allowing conceptual control over the trunking just as call characteristics allow conceptual control over agent activities.

Call-Based Item
The category of database items in CMS that are pegged after the event is complete. Their purpose is to allow the creation of more accurate averages and percentages.

Call Characteristics
Screen and process that are part of the forecasting system. They divide the forecast day into 48 half-hour intervals. For each split, you specify your expectations or desires for queue delay (similar to Average Speed of Answer), number of trunks, and expected Weighted Call Value (WCV) for each interval. Call characteristics are specified individually for each split. WCV is the combined total of ACD talk time and the associated after-call work.

Calculation
One of the features of the CMS Data Dictionary that gives an abbreviated name to a formula for use in reports.

Calls/Pos Staffed
A report item indicating the average number of calls received by a staffed position during some period of time. The total ACD calls received by a split are divided by the "Avg. Pos. Staffed."

Call Profile Report
Shows the wait times of incoming calls handled and abandoned in a split during the current half hour, used with real-time reports. Also used to determine what answering speed is required to reduce abandoned calls.

CCS

Centum (hundreds of) Call Seconds, an engineering term for occupancy of a channel (e.g., a trunk).

CMS

Call Management System, sometimes called an MIS (Management Information System); collects call data on a switch-resident ACD and provides management reporting plus some ACD administration. Resides on an adjunct computer.

CMS Data-Entry Screen

A formatted screen display available via CMS menus that operates interactively to provide control over CMS and the ACD.

Command Line

An SLK that allows you to schedule an activity at a later time or on a recurring basis. Also, the text of the user's specifications for the scheduled activity.

Conditional Intraflow

Selective forwarding and acceptance of calls depending on the conditions in the sending and receiving locations. In System 85 and DIMENSION PBX, the number of queued calls at the sending and/ or receiving splits are the relevant conditions.

Current Interval

The current half-hour, a portion of the real-time CMS database. Event messages cause items in this portion of the database to be altered, creating a real-time picture of conditions in the measured portion of the ACD.

Current Day

A current day forecast is generated each day when the Forecast Manager executes. When you order a Current Day report, you get the current day output.

Custom Reports

Real-time or historical reports that have been customized from standard reports or created from scratch.

Daily Data

Data that has been converted to a 1-day summary.

Database

A collection of data available for a particular use. In INFORMIX, a database is a collection of files whose data is all accessible to an executing process.

Database Allocation

Also called Shared Memory Allocation, the numbers of splits, agents, trunks, and trunk groups for which space has been set aside in the database.

Database Item

One of the categories about which CMS collects data; for example, ACDCALLS — the number of ACD calls. Database contents are changed, item by item, by the messages the switch sends to the CMS.

DCIU

Data Communication Interface Unit, a hardware device on the System 85 and DIMENSION PBX that sends and receives messages to and from other switches or to and from application processors.

Default Printer

One of the system printers defined as the default destination of CMS print jobs.

Delay

The wait a caller experiences before receiving an answer.

Dial-Repeating

A type of routing of calls to a PBX extension in which the digits are passed from the Central Office to the PBX. Direct Inward Dial calls are typical of dial-repeating routing.

dsave

Data save, the UNIX directory that contains CMS historical data.

DNIS

Dialed Number Identification Service, a feature of 800-number service that sends the dialed digits to the call destination. Can be used with display voice terminals to indicate the source of a call to an agent.

Edit Mode

The mode of operation in the custom reports screen painter in which changes can be made to the custom report.

Events

Events or changes of status make up the bulk of the message traffic from the switch to the CMS application on the 3B computer. Event messages cause items in the CMS database to be changed.

Event Counts

A feature of the ACD/ CMS that records button strokes by agents and can report in printed reports how many stokes have occurred.

Exception

An ACD event whose data the CMS tags as violating some parameter. A message goes to a terminal at the time of the event and, later, exception notification can be included in a printed exception report. The CMS users control the definition of exceptions.

Exception Manager
The CMS process that polls the real-time database, comparing its contents to exception conditions established by the CMS administrator. If a valid exception is found, the Exception Manager logs this fact and sends notification to those terminals accessing real-time reports.

Exception Report
Displays occurrences of unusual call-handling events.

Extension
The number identifying a voice terminal attached to a switch.

EXT-IN
Agent state of being on an extension-in call.

Ext-In Calls (No. of Ext-In Calls)
A report item indicating the number of extension-in calls received over some period of time.

Extension-In Call
Call dialed directly to an agent position— not to the split.

EXT-OUT
An agent state of being on an extension-out call.

Field
The smallest element in a database. The schema for a database file specifies the individual fields that will contain data in that file.

Flow In
A report item indicating the peg count of calls intraflowed into a split.

Flow Out
A report item indicating the peg count of calls intraflowed out of a split.

Forecast Manager
A CMS process that runs daily to update the forecast files with new historical and administration data.

Forecast Report
One of a series of CMS reports that combines user-specified performance objectives, historical data, and forecasting algorithms to output projected traffic and staffing requirements. Can be ordered for individual splits. Can also be used for modeling. In modeling, you vary system parameters and use forecasts to predict possible results.

Formula

A part of a report that combines the basic database items with arithmetic operators to produce a calculated output item in a CMS report.

Half-Hour Portion

One portion of the CMS historical database that contains half-hour-by-half-hour data for up to 3-1 days.

Historical Database

A disk-resident database that contains up to 387 days' worth of call data. The historic database contains half-hour and daily records for each agent, split, trunk group, and trunk that is translated as being measured.

Historical Report

A management information report containing ACD performance data for one day or several days up to 387 days in the past. Normally output to a system printer. Can also be viewed at a terminal with 132-column capacity.

HLK

Hard-labeled key, a sequence of key depressions that performs a certain task.

Inflow Threshold

The number of queued calls below which calls will be accepted into the destination split of an intraflow.

INFORMIX

The relational database management system used to organize most of CMS's data. INFORMIX is accessible from the UNIX system option on the CMS main menu.

INFORMIX File

File that INFORMIX creates and that is part of an INFORMIX database.

Interflow

Forwarding or outflow of queued ACD calls to a destination on a remote PBX.

Internal Caller

Caller from another switch extension.

Interval Based Items

A category of database items that makes up the majority of items. These items are pegged when an event begins. See call-based items.

Intraflow

The automatic, administered flow of excess calls from one ACD split's queue to an extension, another split, or the attendant.

I/O
Input/ output. A characteristic of screens or fields in screens when they both accept user input and display system output.

Label
One of three types of additions the screen painter can help you make to custom reports. Text that will be the same in all report outputs, usually identifying report data.

Link
As used in the Maintenance— Session Status screen, the protocol-defined, electrical and packet layers of the PBX-3B interface. Supports the session and application layers.

Max Delay
A report item indicating the longest wait any caller experienced before abandoning or connecting to an agent.

Mbyte
Megabyte, one million bytes.

Message
The unit of communication between the switch and the CMS.

Movement Mode
A mode of custom report creation allowing the changing of location within the report.

Non-ACD Calls
Calls handled by ACD agents that are either direct-to-extension or extension-out calls.

Number in After Call Work
A report item indicating the number of agents engaged in work relating to the previous ACD call.

Number in AUX Work
A report item indicating the number of agents currently in auxiliary work.

Number of Abandoned Calls
A report item that represents the peg count of calls in queue that abandoned (the caller hung up) before receiving an answer.

Number of ACD Calls (ACD Calls)
A report item giving the total number of ACD calls receiving an answer in one or more queues for some time period.

Number of Agents Available
A report item indicating the number of agents in one or more splits who are available to take new ACD calls.

Number of Agents Staffed
A report item indicating the current number of logged-in agents in one or more splits.

Number of Assist Calls (Number of Assists)
A report item indicating the number of calls in which the agent requested supervisor assistance.

Number of Calls Answered
A report item indicating the number of queued calls that connect to an agent.

Number of Calls Carried
A trunk-related report item indicating the total number of calls that seize the trunk.

Number of Calls - ACD
A Split-Agent Comparison report item indicating the number of ACD calls to one or more agents in some period of time.

Number of Calls - Out
A report item indicating the number of outgoing calls from one or more extensions during some period of time.

Number of Calls Waiting
A report item indicating the number of calls in queue to a split.

Number of Failures
A report indicator of trunk failures.

Number of Outgoing Calls (No. of Ext. Out Calls)
A report item giving the peg count of extension-out calls by agents in one or more splits over some time period. Can include calls transferred by agents.

Number on ACD Calls (No. of Agents on ACD)
A report item indicating the number of agents in one or more splits currently connected to an ACD call.

Number on Outgoing Calls
A report item indicating the number of agents on extension-out calls.

Object Code
The compiled version of source code — machine-readable code.

Oldest Call Waiting

A report item indicating the time in seconds the first call in queue has been waiting.

Outbound Call Management (OCM)

A feature that works with the AT&T DEFINITY Communications Systems Generic 1. OCM is a telemarketing tool that automatically dials specific business or home telephone numbers for agents, and an agent can simultaneously view an account, product, or promotional information.

Outflow Threshold

The number of calls queued above which additional calls trigger forwarding of calls from the queue to other locations.

Packet

An independently-addressed package of data that is the basic unit of the link between the switch and the 3B in a CMS installation.

Parameter

A user option for what a standard or custom report will cover. Also, "Report Parameter."

Parameterization

An option in specifying a data item in a custom report that leaves the choice of what splits, intervals, and so forth the data will cover to the person ordering the report.

Percent Abandoned

A report item indicating the the percentage of queued calls that abandon before connecting to an agent.

Percent ACD Time (% ACD Time)

A report item covering one or more agents indicating the percentage of staffed (logged-in) time the agent or agents spend on ACD calls.

Percent Answered

A report item indicating the percentage of queued calls that receive an answer.

Percent AUX Work Time (% AUX Work)

A report item indicating the percent of staffed time one or more agents spends in auxiliary work.

Percent of Staffed Time (on In or Out Calls)

A report item indicating the percent of his or her staffed time (the time the agent is logged in) he or she is on incoming or outgoing calls.

PIB

Processor Interface Board, a System 75 device similar to the DCIU on the System 85 or DIMENSION PBX.

Previous Interval

One segment of the real-time database representing one half hour. Each half hour, the contents of the current half hour portion are copied to the previous half-hour portion.

Priority Queue

A segment of a split's queue, from which calls are taken first (no matter in which order received) before calls considered nonpriority in the same queue. Requires the split be administered with priority queuing.

Program

A schedulable object in the CMS Schedule Subsystem. Contains one or more command lines.

Published Number

The number outside callers normally use to reach an ACD split.

QDN

Queue Directory Number— an associated extension number of a split. Is not normally dialed to reach the split, but can be, using direct dialing. System 85/ DIMENSION PBX term. See Split Extension.

Queue

An ordered list of calls attempting to reach an ACD split. Their order is arrival order, and they are served in order, unless priority queuing is in effect.

Read Permission

An option in the Administration and Schedule Subsystems that grants access to view, but not change, data within portions of the CMS.

Real-Time Database

A main-memory-resident database consisting of current and previous half-hour data on each agent, split, trunk group, and trunk translated as CMS-measured. Used by real-time reports.

Real-Time Report

A formatted report on a CRT logged into the CMS system that displays current data about ACD activity, and refreshes periodically (30 through 300 seconds) with new data.

Report Item

One category of output data in a CMS standard or custom report. Defined by one database item, formula, constant, or calculation.

Report Parameter

The selection of what a report will cover (which agent, etc.) and how long a period it will cover.

Relational Operators

Code statements used in specifying criteria in the Database Item Window of the Custom Reports screen painter. These statements specify database search conditions used to extract data from the database.

Relative Day

A number that can be used to order a Long Term Forecast. For example, instead of forecasting a specific date in the future, you can run a forecast each Friday for the following Friday. The relative day is 7, which is 7 days in the future. Each Friday your system will, using some other information you supply, predict the staffing for the following week — in time for you to react to staffing requirements. Relative Days are similar to the negative number used to order historical reports in the Report Parameters screen.

Screen Painter

The interactive reports creation and editing feature of the Custom Reports Subsystem.

Service Level

A user-specified value that represents a split or system goal for caller delay in seconds. The time in which management would like to have all calls answered.

SIP

Switch Interface Process, the receiving and sending point in CMS for communication to and from the switch.

SLK

Screen-labeled key, a key near the top of an AT&T terminal keyboard whose definition is given in a corresponding inverse video block at the bottom of the screen. SLKs change with the screen you are working in.

Source Code

A programming-type language that, when compiled and executed, produces CMS report output. Resides on UNIX system files in CMS.

Special Days

Certain key business days — such as poor weather days, sales, holidays, etc., that the database will record traffic. This allows you to plan staffing around your business cycles. Each CMS split can be given up to 15 special days for which the Forecast Manager process in CMS will retain the call-traffic data. Then, with some parametric information you supply, the forecast system can predict staffing for these days.

Service Level

A time specified in seconds in which all calls should be answered. Normally set as an objective by management.

Split

A group of extensions staffed by agents trained to handle a certain type of incoming phone call.

Split Extension

Same as a QDN in System 75.

Split number

The split's identity to the switch and to CMS.

Staffed

An active ACD position. The agent has logged in or pressed the STAFFED button.

Status Item

A category of database items that report the current state of a trunk or agent.

Synonyms

User-supplied Dictionary items that customize the names of splits and trunks for report output. Also can refer to Agent Names in the Dictionary and possibly also Calculations (which in a sense are synonyms for formulas).

Terminal

A Cathode Ray Tube (CRT) connected to a computer. A *voice* terminal is another name for a telephone.

Time Busy

A report item indicating the number of seconds a trunk is seized — meaning occupied with queued or connected calls.

Time in AUX Work

A report item indicating the time one or more agents spent in auxiliary work during some period.

Time Item

A database item that contains duration data on ACD events— how long certain events are lasting or did last.

Time Maint. Busy

A report item indicating time a trunk has been busied out for maintenance purposes.

Total CCS (incoming, outgoing)

Hundred of call seconds — a traffic engineering measurement.

Total Time (Hours, Minutes) Staffed

A report item indicating the time one or more agents was logged in.

Translations

Routing instructions for a category of calls. In an ACD, "translations" is sometimes used to refer to the configuration of splits, trunks, and extensions, as administered at the switch.

Trunk

Call path between any two switches, either public or private.

Trunk Calls

The normal category of calls to an ACD system. The digits are not passed from the Central Office to the PBX.

Trunk Group

A group of similarly administered trunks carrying calls to the switch. An ACD has its own trunk groups, but other trunk groups such as DID trunk groups can carry ACD calls.

Trunk Group Number

The trunk group's identity to the switch and to CMS.

Trunk State

A report item indicating the current condition of a trunk.

Unconditional Intraflow

In this option of intraflow, all calls are forwarded from the split to some other destination. Often used for night service.

UNIX System

The operating system on the 3B computer on which CMS runs. A user can access the system via the UNIX system option on the CMS main menu. An AT&T trademark.

UNIX System File

A storage area for data in the UNIX operating system. A UNIX system file can be opened from the UNIX system environment. An INFORMIX file can only be viewed from INFORMIX. See INFORMIX file.

Unmeasured Facilities

Internal trunk lines called ICOMs in a PBX, for which CMS can keep state information, but they do not archive the data in historical files.

Unmeasured Trunks

Unmeasured facilities.

User

A person logged into the CMS application on the 3B.

User ID

Login identification for CMS users. The CMS administrator gives subordinate users their IDs.

WCV

Weighted Call Value.

Weighted Call Value (WCV)

A report item, sometimes called "Work Time," the time to process one call including ACD talk time and the after-call work associated with that call.

Weighting

A technique that is used in forecasting. Most prominently, the "Weighting Coefficients" screen in Forecast Administration provides the facility of relative weighting of the previous 3 weeks' data. This weighting specification is, in turn, used by the forecasting algorithms to base predictions on recent traffic history in the phone system. Weighting is also used to vary, for the purposes of a single report, parameters that have been specified into the forecasting system.

Write Permission

An option in the Administration and Schedule Subsystems that allows another user to change data in a portion of the CMS. See read permission.

% All Trunks Busy

A report item indicating the percentage of time a trunk is occupied (could be with queued or connected calls).

% Ans

A report item indicating the percentage of queued calls that eventually connect to an agent (1 - abandoned calls).

% Time Maint. Busy

An historical item indicating the percentage of time a trunk has been busied out for maintenance.

% Within Service Level

An historical item indicating the percentage that actually received an answer within the service level.

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Preface

The *3B Call Management System Administration, Issue 3* (585-215-504) document was written for the primary Call Management System (CMS) administrator with access to all parts of the CMS, and for secondary administrators (such as split supervisors) with limited access to the CMS. This document is current with 3B CMS Release 2, Issue 1.4.

| NOTE | If you are a new CMS administrator, read Chapter 1, "Introduction," and Chapter 2, "Getting Started," to learn more about the Call Management System. If you are unfamiliar with the Automatic Call Distribution (ACD) feature, see Appendix C, "ACD Basics." |

Organization and Use of This Document

The following list describes the contents of each chapter and appendix in this document.

Chapter 1   "Introduction" describes the CMS, ACD/CMS parameters, terminals and printers, menus and keyboard, terminal refresh rates for real-time reports, remote alarming system, and escalation procedures.

Chapter 2   "Getting Started" is for new CMS Administrators and is presented in a step-by-step sequence with worksheets, a checklist, and procedures to help them through the beginning phase of CMS administration.

Chapter 3   "Standard Real-Time Reports" tells you how to order standard real-time reports on call-center activity and describes every item contained in each report.

Chapter 4   "Standard Historical Reports" tell you how to order standard historical reports on call-center activity and describes every item contained in each report.

Chapter 5   "Dictionary" tells you how to assign agent names to login IDs and how to name and describe your splits and trunk groups, all of which make your reports easier to read. The chapter also tells you how to access and administer the data elements you use in custom reports. Finally, the chapter tells you how to create special agent report groups within splits.

Chapter 6 "Configuration" tells you how to reassign extensions and trunk groups to different splits, forward calls from splits to other destinations, set up automatic announcements for calls in queue, and trace individual agent activity.

Chapter 7 "Schedule" tells you how to schedule the execution of tasks (such as forwarding calls, printing reports, or archiving data) for times convenient for you and your system. Though you define your tasks in other subsystems, this chapter also tells you how you can edit previously-defined tasks to create new tasks for scheduling.

Chapter 8 "Forecast" tells you how to order forecast reports on future call traffic and future agent and trunk requirements. The chapter also tells you how to set parameters to be figured into the forecasts. CMS forecasts are based on historical data from your call center.

Chapter 9 "Exceptions" tells you how to specify exception conditions for split or trunk group activity so that CMS notifies you when an unusual call-handling event occurs. The chapter also tells you how to order exception reports and monitor exceptions on your terminal.

Chapter 10 "Administration" tells you how to assign user IDs and give access permission to CMS users for CMS subsystems and specific splits and trunk groups within your call center.

Chapter 11 "Maintenance" tells you how to backup and restore CMS data, monitor the 3B link to the switch, and archive summary historical data. The chapter also tells you how to transfer historical data to the forecast database.

Chapter 12 "UNIX* System" tells you how to use the UNIX operating system for various tasks that affect CMS. Also included in this chapter are the "CMS Directory Names." These names are a list of the most important UNIX system files names that can help you do partial CMS restores.

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* Registered trademark of UNIX System Laboratories, Inc.

Appendix A "The UNIX System Visual Editor (vi)†" covers the major tools of *vi* that are used to perform editing of UNIX system files and programs in the Schedule subsystem.

Appendix B "6500 Display Terminals" gives the login procedures and the screen-labeled key (SLK) differences with these terminals versus other CMS support display terminals.

Appendix C "ACD Basics" serves as an overview of the ACD environment. This chapter contains descriptions of concepts, such as call routing, agent states, call processing, and switch administration that should be understood by all CMS administrators.

Appendix D "Outbound Call Management (OCM)" briefly describes the OCM feature and how CMS has been modified to support OCM. This appendix also describes the new/modified reports and database items.

Appendix E "Database Reference" contains a list of all CMS database items and calculations that are used in specifying report items.

Glossary Defines important terms used in this document.

NOTE | For a description of the 3B CMS Custom Reports Creation subsystem, see the *3B Call Management System Custom Reports* (585-215-503) document.

Other 3B CMS Publications

- *3B Call Management System Vectoring Administration* (585-215-502)

- *3B Call Management System Custom Reports* (585-215-503)

- *3B Call Management System Planning, Configuration, and Implementation* (585-215-601)

- *3B Call Management System Graphics Administration* (585-215-505)

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† The Visual editor is based on software developed at The University of California, Berkeley, California; Computer Science Division, Department of Electrical Engineering and Computer Science, and such software is owned and licensed by the Regents of the University of California.

- *3B Call Management System Quick Reference* (585-215-704)

- *3B2 Call Management System Installation and Maintenance* (585-215-104)

Other Necessary or Useful Publications

- *DEFINITY* Communications System Generic 2 and System 85 Features Description* (555-104-301), Issue 1. See the section on Automatic Call Distribution.

- *AT&T System 85 Automatic Call Distribution (ACD) Supervisor Instructions* (555-103-714)

- *AT&T System 85 Automatic Call Distribution (ACD) Agent Instructions* (555-103-713)

- *DEFINITY Communications System, Generic 1 and System 75 Feature Description* (555-200-201)

- *AT&T System 75 Reference Manual, Release 1 Version 3 Capabilities* (555-200-499) — See the section on Automatic Call Distribution.

- *DEFINITY Communications System Generic 1 and Generic 3i Feature Description* (555-230-201)

- *DEFINITY Communications System Generic 3i Implementation* (555-230-650)

- *AT&T System 75 Automatic Call Distribution (ACD) Supervisor Instructions* (555-200-724)

- *AT&T System 75 Automatic Call Distribution (ACD) Agent Instructions* (555-200-722)

- *Automatic Call Distribution Feature Document, DIMENSION† PBX* (554-191-264 IS)

- *Enhanced Uniform Call Distribution Feature Document,* DIMENSION PBX (554-191-121 IS)

- *UNIX System V User Guide* (307-100)

- *UNIX System V User's Guide* (307-231) for Release 3.1.1

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*   Registered trademark of AT&T.

†   Registered trademark of AT&T.

- *AT&T 3B2 Computer UNIX System V Release 3.1 System Administration Utilities Guide* (305-502) (for systems running on a 3B2 computer)

- *AT&T 3B2 Computer UNIX System V Release 3.1.1 Owner/Operator Manual* (305-527) for 3B2/600s

- *AT&T 3B2 Computer UNIX System V Release 3.2 and 3.2.1 User's and System Administrator's Reference Manual* (305-646) for 3B2/600s and 3B2/400s

- *AT&T 3B2 Computer UNIX System V Release 3.2.1 Owner/Operator Manual* (305-612) for 3B2/600s

- *AT&T 3B2 Computer UNIX System V Release 3.2 Owner/Operator Manual* (305-665) for 3B2/400s

- *AT&T 3B2/400 Computer Owner/Operator Manual* (305-501)

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