CAS for Windows™
Administration and Operations

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Contents

About This Document

This document is intended to guide those who want to understand how CAS for Windows works and how it is used for call accounting operations.

How to Use This Document

This document describes every CAS function in the order in which they are typically used. An introductory chapter precedes the body of function descriptions; appendixes provide additional reference material.

First-time users should read the following material:

- Chapter 1, *Overview*, introduces call accounting terms and provides a bird's eye view of your call accounting system.

- Chapter 2, *Basic Operations*, describes how to log in and use the menu system and data entry windows.

Users who wish to run reports should read the following material:

- Chapter 3, *Reports & Listings*, describes all report-generating, viewing, and scheduling functions.

- Appendix B, *Sample Reports*, shows sample printouts of all call accounting reports.

System administrators should read the following material:

- Chapter 4, *System Management*, describes the functions used in processing calls and adapting the system to its operational environment.

- Chapter 5, *Utilities*, describes the functions used in maintaining the system files, as well as backup and install operations.

- Appendix A, *Worksheets*, provides blank worksheets to collect the information required to install your system.

- Appendix C, *Specifications*, provides technical information about the system requirements and capacities.

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Related Resources

This document may provide you with additional information:

CAS for Windows Installation (555-006-116) provides instructions to install CAS software, set it up, and verify call processing.

Overview

1

AT&T CAS for Windows is a new tool to help you control and administer telecommunications costs in your business. Before describing it in detail, this chapter provides some basic background on call accounting in general.

This chapter is organized into two major sections:

- *Basics of Call Accounting* — introduces such telephony concepts as the public switched network, long distance carriers, trunks, and private telephone routing on premises.

- *Your Call Accounting System* — introduces CAS, how the system works, and what it can do for you.

Basics of Call Accounting

Using telephones costs money. In small as well as large companies, telephone expense is a major budgetary item, and rising costs are a concern to every manager.

- Reducing costs and optimizing resources go hand in hand. ("Am I using my telephone services to the fullest?" "Do I have a problem with unauthorized use of services?" "What kind of facilities will serve me best?")

- Then, there is the problem of allocating expenses. ("Who gets charged for these calls?" "How do I bill back clients? ...company departments? ...extension users?")

- The total picture is not always clear. ("Can our calling patterns be handled better with special services? …is the expense justified?" "Is there a trend in long distance calling? …is it company-wide? …what are our sales and services departments doing?")

CAS for Windows can help you answer these and similar questions.

Doing so is not difficult; however, there are some concepts concerning telecommunications management — the national telephone network, your own telephone switch, and basic call accounting — that should be familiar before you use the system.

Let's begin by looking at how the public switched network functions, then at the carriers, trunks, and services in the network.

The Public Network

The structure of the national public network has changed rapidly in recent years due to the breakup of the Bell System and advances in telecommunications technology. Today's national network grew from, and retains many characteristics of the traditional telephone network briefly described below.

The traditional national public telephone network is built upon the central office (CO) system. COs are switching offices that provide the equipment to route and connect calls originating from any point. Calls are directed from the caller into the CO and out to the number called. When you dial a local call, the first three digits identify the CO — or *exchange* — serving the called number; the last four digits identify the called line — or *station*.

Each user is connected to a local CO. Local COs are connected to each other via tandem switching offices which provide the link to other COs. In a long-distance call, a 3-digit *area code* identifies the regional link to the group of local COs. Depending on the call destination, several COs may be used to reach the called party — across the street or across the nation.
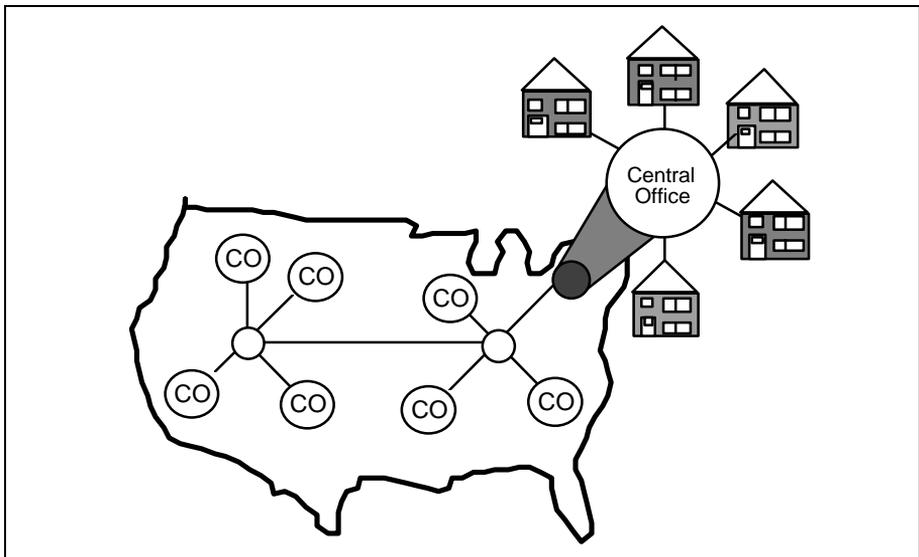
Figure 1-1. Building Blocks of the National Network

The international network follows a similar system of local switching offices, connected to a hierarchy of larger groups. This network also has a numbering plan to connect callers from different parts of the world. The calling pattern is a 1- to 2-digit *country code*, followed by the specific national network calling pattern (area or city code, local exchange, and user line number).

Carriers

Telephone companies are called "carriers." They include your local telephone company and long-distance carriers like AT&T and MCI.

■ Local telephone companies operate the COs that route calls via a local exchange. They lease the CO lines to a customer's premises and provide access to long distance and international services offered by other carriers for calls outside their Local Access Transport Area (LATA). A LATA covers many COs.

■ Long-distance carriers — also called interexchange carriers (IXCs) — provide services between LATAs. For example, the AT&T Communications Services companies provide direct distance dial, international direct distance dial, and operator assistance through CO lines. Some carriers also provide custom long-distance services such as toll-free numbers, PROWATS, FX, TIE, and ISDN services.

Equal Access

According to the agreement established with the breakup of the Bell System, local telephone companies have reprogrammed their larger electronic COs so that their customers can have the same type of connection — that is, "equal access" — to any long distance carrier's network.

In areas where equal access has been implemeted, subscribers can dial 1 plus the number to place the call serviced by their selected primary carrier. To access another carrier's services, subscribers can dial the IXC code — a10xxx or 950xxxx number assigned to the carrier — then, the area code and local number.

Trunks and Services

Today's technology makes it possible for carriers to offer a wide range of
telephone lines and services in voice and data communications. Telephone
lines are also called "trunks." The most widely used trunks are:

■   *CO* trunks or point-to-point lines between the local CO and, for example,
    your premises.

■   *FX* (foreign exchange) lines connecting a private switch to a remotely
    located CO. This allows placing local calls to the remote exchange. FX
    services are charged a flat monthly fee for the leased line and not per call
    (toll charges, if any, are billed separately). This service is commonly used
    by businesses that place frequent calls to a specific remote location.

■   A *TIE* line "tying" together two private switches. Users at either end can
    dial extensions as if they were on premises and can also make "local"
    calls through the remote exchange. Because this service is also charged
    at a flat monthly fee, intracompany call costs can be dramatically
    reduced.

■   *WATS* (wide area telecommunications service) lines providing in-or out-
    bound access from/to any point within the subscribers' service areas.
    Out-WATS is used to place calls by the subscriber; In-WATS is used to
    receive calls toll-free for the caller. The base rate for WATS services is
    set by distance, with discounts based on bulk monthly usage.

    AT&T long distance discount services such as PROWATS (which use
    regular CO lines) are quickly replacing dedicated WATS lines.

■   *Software Defined Network (SDN)* lines connecting subscribers' multi-site
    networks.   A call over an SDN line first goes to a local service office that
    interprets, then forwards the call via the public network.   "On-net" calls go
    to a local service office and on to the called site' over an SDN line; "off-
    net" calls go to a local CO and out of the SDN.

■   *Integrated Services Digital Network (ISDN)* lines. Although not universally
    available, ISDN promises many benefits to its users. Two important
    benefits are *Automatic Number Identification (ANI)*, which allows users of
    services like AT&T Megacom 800 to capture the phone number of the
    calling party, and *Answer Supervision* .

Private Switching Systems

As in the telephone network, businesses face similar traffic problems — how to route calls in the most efficient and cost-effective manner. To do so, they install private switching systems or they subscribe to Centrex services.

■   A private switch — a KTS (key telephone system) or PBX (private branch exchange) — is a processor that allows data and voice communications within and outside a business. Switches offer such features as hold, transfer, call forwarding, and least-cost routing. PBXs differ in that you dial "9" to place outside calls; with key systems you use push buttons.

■   Centrex services, provided by some local telephone companies, allow subscribers to share public switching facilities, and thus acquire PBX-like capabilities.

Private switches and a few Centrex systems offer a feature essential to call accounting: Station Message Detail Recording (SMDR).

Station Message Detail Recording

SMDR-capable systems can output an electronic record of every call routed through the system. This record "details" information such as:

■   Time and date of call

■   Call duration

■   Call origin (extension or incoming trunk)

■   Call destination (extension or outgoing trunk)

■   Trunk or carrier service used

■   Account or authorization code (if used)

■   Number called (outgoing call or calling number in an incoming call if the switch supports this feature)

CAS for Windows supports collection of SMDR data from many AT&T PBX and "hybrid" switches.

Answer Supervision

Answer Supervision is the capability to detect when a call is answered. Telephone charges start when your telephone company billing equipment detects that the called party has answered.

Some private switches, however, cannot tell when a call has completed its connection. To compensate, these switches reduce the "duration" reported in the call record by a fixed amount.

CAS for Windows can accommodate any duration adjustments — including setting up its own, if required.

Call Accounting Systems

Controlling telecommunication costs starts by finding a balance between services needed on premises, services that are available outside, and of course, whether their costs are justifiable.

To make informed decisions, managers must wait for the telephone bill or for monthly reports from an off-premise call accounting service, or use special-purpose systems that gather data directly from the switch on premises.

On-premise systems — such as CAS for Windows — offer the following advantages:

- Online access and ad hoc reports provide current and historical data, either as summaries of trends and traffic patterns or in detail to pinpoint problem areas.

- Organization reports consistent with your company's corporate structure and billing practices allow flexible cost allocation.

- Complete coverage of your carriers and services gives you a wealth of information to reduce costs and assess current needs.

- Latest call pricing — optionally available from CAS for Windows in the form of periodic rate updates — results in accurate costing of calls without the hassle of keeping up a complex database of telephone tariffs.

Your Call Accounting System

CAS for Windows is a comprehensive call accounting package that runs on your personal computer (PC) as a Windows application. It receives SMDR directly from a switch on premises and then processes the information into a wealth of management reports.

If your company has remote sites, the Multi-site option enables collection and processing of SMDR from each site. SMDR at each site is handled locally by any call collector system — switch, switch adjunct, or another PC running the CAS for Windows application — that can communicate with this application.
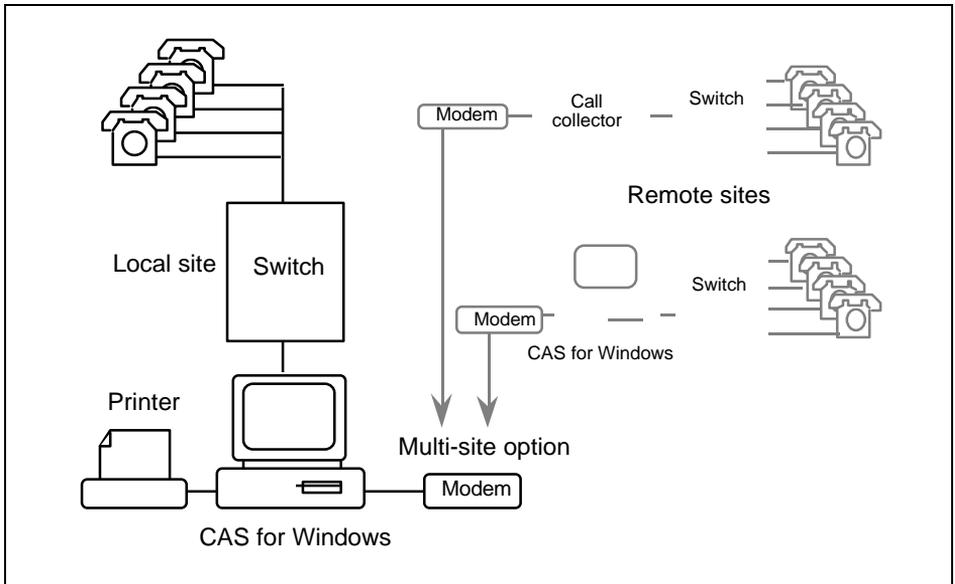
Figure 1-2. System Components

Figure 1-3 illustrates the flow of a working system:
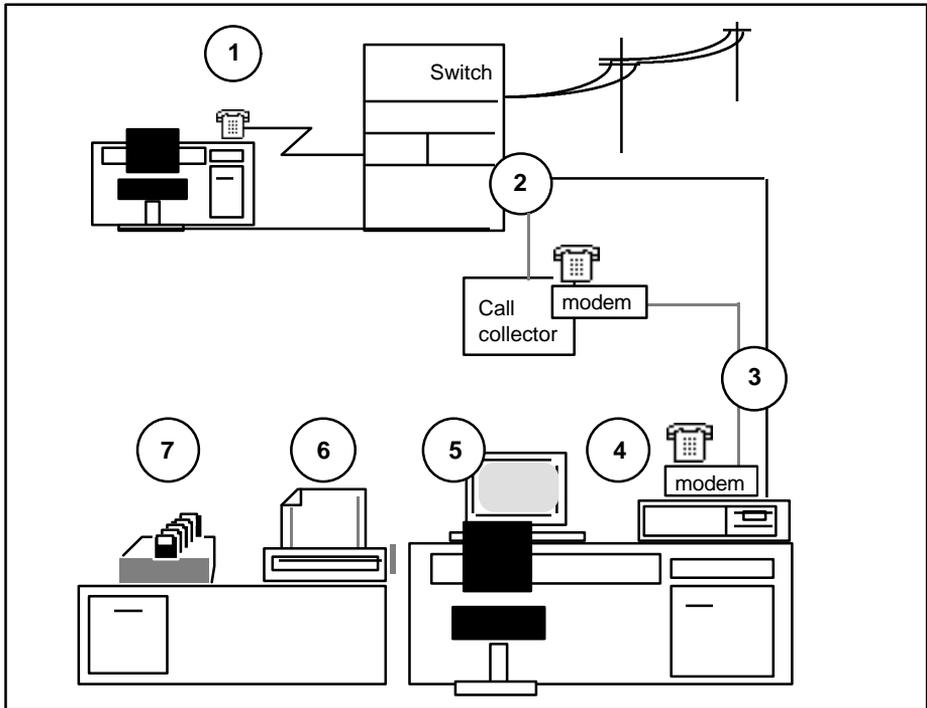
Figure 1-3. Operational Flowchart

1. As a phone call is placed or received at a CAS site, it is routed through the switch to its final destination.

2. The switch prepares an electronic record of the transaction.
   If the switch is on a remote site in your network, its "call collector" stores the output until your PC can retrieve it.

3. CAS call collection interface regulates direct and remote transmissions to your PC, then interprets the call records.

⇒ See *Configuring Call Collection Interfaces* in chapter 4 for details.

4. The call rating functions screen and cost the calls, which are then stored in the file for the site's current accounting period. Privacy for dialed numbers is used, if applicable.

    ➡ See *Configuring Call Rating Tables* and *Providing Dialed Number Privacy* in chapter 4 for details.

5. Calls to alert numbers or calls flagged for immediate output are made available for viewing.

    ➡ See *Flagging Calls for Immediate Output* in chapter 4 for details.

6. At report time — by request or scheduled — the system sorts through the stored call records to charge all telephone extension and accounts used, and then, generates the report.

    ➡ See chapter 3, *Reports*, and *Administering the Organization Table* and *Administering Account Codes* in chapter 4 for details.

7. At the end of your accounting period, the system automatically generates scheduled reports, archives the period's call records, resets summary statistics, and starts a new period.

    ➡ This is a good time to back up archived data onto diskettes. See *Using the Backup and Restore Utility* in chapter 5 for details.

Basic Operations

2

This chapter is designed for first time users. It describes how to log into CAS for Windows and use the menu system, enter data into dialog boxes, or request help.

You will find that CAS for Windows is easy to use. If you are familiar with Windows, you will recognize all its basic elements — icons, menus, dialog boxes, and windows.

At installation, CAS for Windows automatically creates icons for various tasks — call collection interfaces, Message Log, and Immediate Output — and opens the main menu:
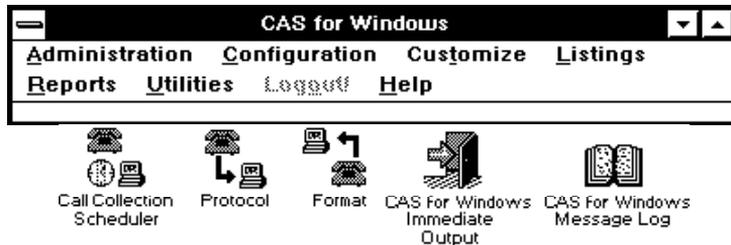
All CAS operations are initiated here through a system of sub-menus. Menu options ultimately open adialog box used to exchange information with the system and complete the task.

Using Menus

The main menu displays the names of CAS function groups, listed under "pull-down" menus. Select a menu as in Windows:

	Open menu	**Close menu**
By mouse	Click on its name	Click elsewhere
By keyboard	Press **ALT**, then use arrow keys to select its name and press **ENTER** or Press **ALT** then type under-lined letter in menu name	Press **ESC**
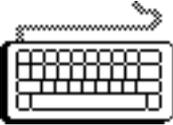
On the resulting menu — for example:
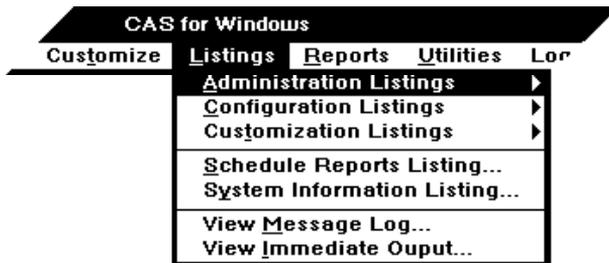
The triangle (▶) next to an option leads to a "cascading" menu; an ellipsis (...) leads to a dialog box.

Dimmed options either are not applicable or you do not have user privileges to access them.

Using Dialog Boxes

Menu selections that lead into dialog boxes have an ellipsis (…) by their names. For example, **Organization...** opens:

List box   check box   text box   buttons
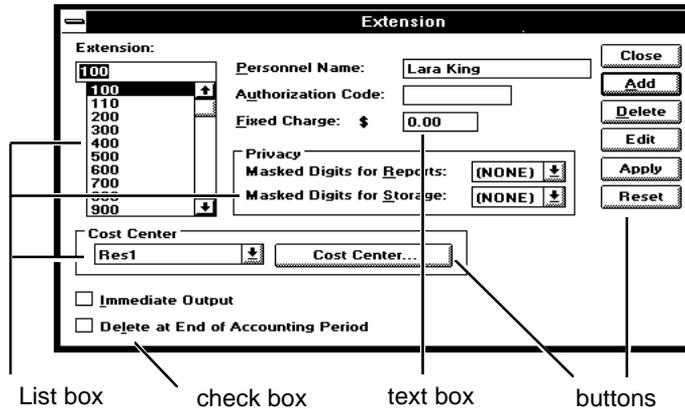
To complete a box, supply all requested information in the choice, text, and/or check boxes and then use a command button (Add, Close, etc.) to carry out the operation.

	Select any box or button	**Select from list box**
By mouse	Click on item	Click on ⬇ to open list box, then click on item
By keyboard	Press **TAB** (forward) or **SHIFT + TAB** (back) to item or Press **ALT**, then type underlined letter on item	Use arrow keys

See your Windows manuals for further details on these elements.

Using Online Help

CAS for Windows online Help is a convenient way to look up information —
basic concepts, how to perform an operation, the meaning of a technical term
— when this manual is not easily accessible.

CAS for Windows Help works like Windows Help.   To request it, select **Help**
from the main menu. Help to complete every dialog box is available by
pressing **F1**.

Logging In

After CAS for Windows has been configured for users, a startup menu
contains only the **Login!** entry.

To access the main menu, click on **Login!** (press **ALT**, then **L**) and complete
the dialog box:
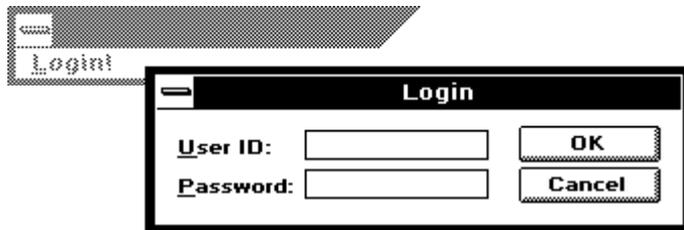
Type your *user id*, then move to the next entry (press **TAB**) and type your
password (asterisks mask your entries).

When complete, click on the **OK** button (press **ENTER**).

Reports and Listings

3

This chapter describes how to generate reports and listings and how to use the viewer functions on reports and system messages accessible via window displays.

The chapter is organized into the following sections:

- *Common Functions* — which describes the general procedures to run reports on a schedule or immediately, how to define their output and set up charts.

- *Report-specific Functions* — which describes each call accounting report and how to set them up:

  — Organization Reports
  — Selection Reports
  — Account Code Reports
  — Traffic Reports
  — Exception Reports

- *Viewer Functions* — which describes how to display, print, save, or delete the message log and immediate output files, as well as any report sent to the screen or saved to a system file.

Common Functions

CAS for Windows offers a variety of reporting options to meet practically all your information needs.

■ You can produce reports and listings on demand (via the individual report-generating functions) and schedule up to 25 groups of reports (for a maximum of 100 scheduled reports).

■ You can choose data from the current or an archived periodf or on-demand reports; many reports can be set for very specific criteria to pinpoint exceptions or see general trends.

■ You can send all output to aprinter, window display, system file (for later viewing or printing), or text file (for transfer to another application).

■ You can represent most summary reports as a 2- or 3-dimensional pie or bar chart.
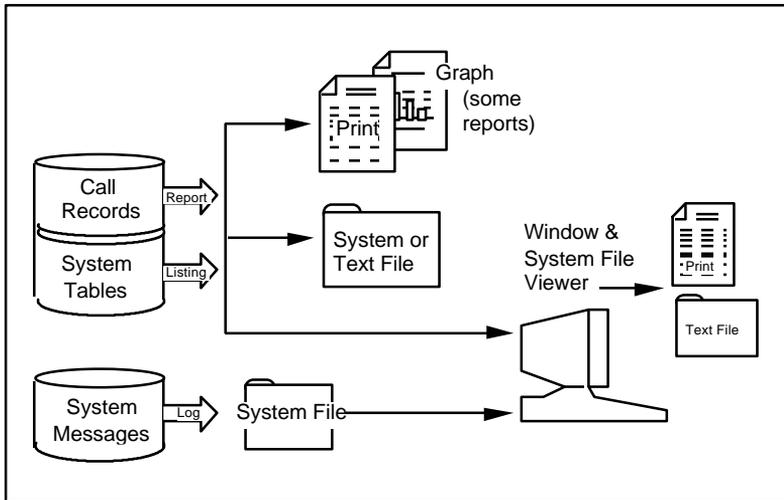
Running a Current or an
Archived Period's Report

You can generate any report or listing from the stored current or archived accounting period.

1. Open **Select Accounting Period** from the **Reports** menu and enable the accounting period of interest.

   For an archived period residing on backup diskettes, restore it to your PC — see *Using the Backup and Restore Utilities* in chapter 5 for details.

2. Select the item of interest from the **Listings** or **Reports** menu.
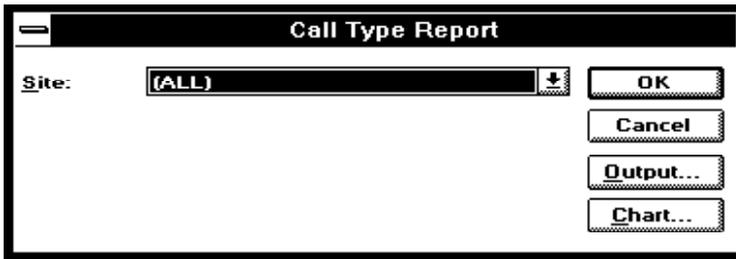
3. Complete the dialog box — see the report specifics in this chapter and *Defining the Output* and/or *Setting Up a Chart* for details.

4. Choose **OK** to start the report; choose **CANCEL** to quit.

Scheduling Reports

CAS for Windows allows you to define up to 25 groups of up to 100 reports (combined) to run on automatic schedules. Definitions include frequency to run the group and setup criteria for each report, including its output and graphic representation.

1. Open **Schedule Reports** from the **Reports** menu.
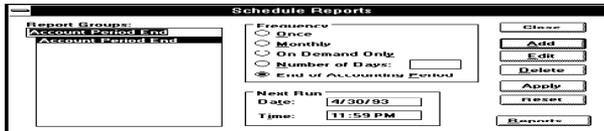
2. a. For a new schedule, choose **ADD**. Enter a name (²20 characters) for the new *report group.*

   b. For deletions, select the *report group* and choose **DELETE**. Confirm and proceed to step 5.

   c. For changes, select the *report group* and choose **EDIT**.

3. Complete the dialog box:

   Frequency. Select from:

   — once, monthly, or a number of days (**1** to **999**), on the next run *date* and *time*.

   — at the end of accounting period, at the next run *time*.

   — on demand only (via the **Run Scheduled Reports** option under the **Reports** menu).

   Next Run. Enter the *date* and/or *time.*

4. Choose **REPORTS** to set up individual reports in this group.
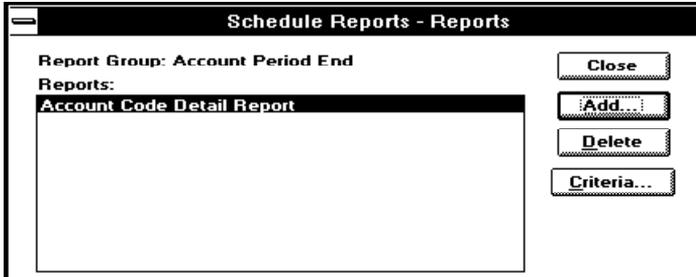
a. To remove a report from the list, select it and choose **DELETE**; confirm and proceed to step 5.

b. To add a report to the list, choose **ADD**. When the list box (below) appears, select a report and choose **OK** .
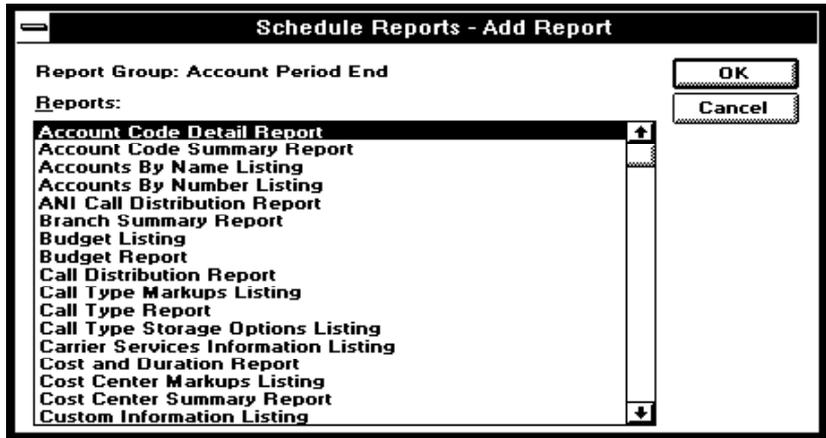
c. To define the output and other options on the selected report, choose **CRITERIA**. See the report specifics in this chapter and *Defining the Output* and/or *Setting Up a Chart* for details.

d. When complete, choose **CLOSE**.

5. Back at the **Schedule Reports** dialog box, choose **APPLY** to save your schedules and report definitions (**RESET** cancels all changes).

6. When complete, choose **CLOSE** to exit.

Defining the Output

All CAS reports and listings have an **OUTPUT** button used to open the following dialog box:

```
┌─────────────────────────────────────────────────────────────────────┐
│ ▬                            Output                                   │
│ ┌─Printer──────────────────────────────────────────┐   ┌──────────┐  │
│ │ Laser Printer                                  �│   │   OK     │  │
│ │                                                  ▼│   └──────────┘  │
│ │        Font:    Courier                 ▼│           ┌──────────┐  │
│ │                                                  │   │  Cancel  │  │
│ │        Points:  12  ▼│                              └──────────┘  │
│ └──────────────────────────────────────────────────┘                │
│ ┌─Output Device──────────────────────────────────────────────────┐  │
│ │ ⊠ Ports:     LPT1:                        ▼│                     │  │
│ │ ☐ Window                                                        │  │
│ │ ☐ System File:   [                      ]                       │  │
│ │ ☐ Text File:     [                                            ] │  │
│ └────────────────────────────────────────────────────────────────┘  │
│ ┌─Margins──────────────────────────────────┐  ┌─Orientation──────┐  │
│ │ Left:   [        ]                        │  │ ⦿ Portrait       │  │
│ │                        ⊠ Center Left to Right│  ○ Landscape      │  │
│ │ Right:  [        ]  ┌─Units────────────┐  │  └──────────────────┘  │
│ │ Top:    [ 0.50 ]   │                   │  │                     │  │
│ │                    │ ⦿ Inches  ○ Millimeters│  Paper Size:        │  │
│ │ Bottom: [ 0.50 ]   └───────────────────┘  │  8.5 X 11 in.        │  │
│ └──────────────────────────────────────────┘                        │
└─────────────────────────────────────────────────────────────────────┘
```

1. For printed reports:
    — Select a printer, font, and point size from the PC lists.
    — Make certain to enable the printer's port as output device (below).

2. Enable [X] the Output Device:
    — Port. To send the report to the printer (see above, default).
    — Window. To display the report on the screen. See Viewing Reports in this chapter for details.
    — System File. Enter the file name to save the report for later viewing. See *Viewing Reports* in this chapter for details. See caution below.
    — Text File. Enter the drive, path, and file name (*.txt) to save the report output for use by other applications. See caution below.

⚠ *Saving large detail reports to file may limit available disk space for call record storage.*

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3. Select the Margins:

    —   Center Left to Right. Enable [X] automatic selection of left and right margins; this choice results in a report centered on the page.

    —   Left, Right, Top, Bottom. Enter size of margins in the measuring unit specified below (if "Center Left to Right" is enabled, the left and right margins are set by the system).

    —   Units. Choose between inches or millimeters.

4. Select the Orientation between portrait or landscape printing.

5. Choose **OK** to save changes and close the dialog box; **CANCEL** closes the dialog box without changes.

Setting Up a Chart

Some report dialog boxes have a **CHART** button, which allows you to choose from one or both of the following graphic representations:

■   The bar chart is used to display report parameters — for example, *dates* in a Date Report or *hours* in a Time of Day Report — as bars against a vertical or horizontal scale.

   A vertical bar's height (or a horizontal bar's length) corresponds to a value on the scale — which may be either the cost, number of calls, or usage — depending on the report.

■   A pie chart is used to display the report parameters as individual "slices" in a pie.   The size of each slice represents the percent of the total cost, number of calls, or usage — depending on the report.

The figures on the next page show some chart samples. CAS for Windows supports 2- or 3-dimensional graphics, as well as color.

To specify graphic report options in a report, proceed as follows:

1.   Choose the **CHART** button in the **Reports** dialog box.
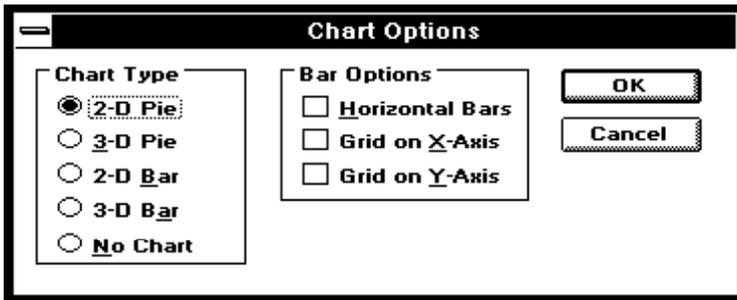
2.   Select a chart type — a 2- or 3-dimensional pie or a 2- or 3-dimensional bar (with the appropriate bar options).

3.   Choose **OK** to save your entries and exit (**CANCEL** exits without changes).

Call Type Call Distribution

1. LOCAL
2. IS-OL
3. IDDD
4. OS-OL

Call Type Call Distribution
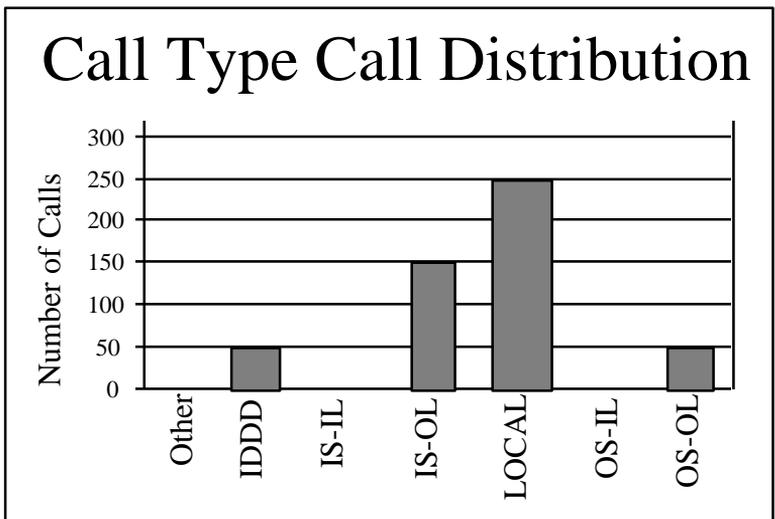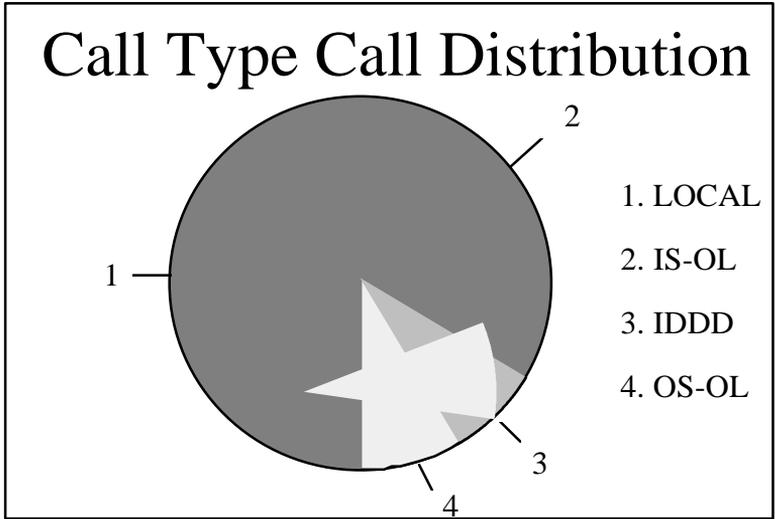
Report-specific Functions

This section describes all CAS reports and typical applications, as well as the selection criteria with which you can focus report information.

Generating Organization Reports

Organization Reports show your company's telephone call activity sorted by organization level. These reports are typically used in allocating costs[*] — particularly when groups or individuals must be accountable and need to remain within their respective budgets.

- The Organization Detail Report shows the record of each call that match the selected organization levels, date and time ranges, minimum cost or duration, call type, and/or dialed number pattern. Calls appear in chrono-logical order (as received from the SMDR source), followed by taxes or other summaries, if so desired (see *Specifying Reporting Options* in chapter 4). Organization summaries[†] appear at the end of the report.

- The Organization Summary Report shows call statistics[†] for the current accounting period on calls matching selected organization levels.

- The Cost Center, Department, Division, and Branch Summary Reports provide statistics[†] for the date range and named organizations. These reports may be generated as charts.

- The Organization Trends and Budget Reports provide information on the named organizations at the budget-tracking level. Trends show statistics[†] for the last 12 accounting periods in the fiscal year; the Budget shows current period's and year-to-date's actual vs. budgeted costs. These reports may be generated with charts.

---

[*] Call costs include all active taxes and markups (except Account Code markups).

[†] Summary statistics include total count, duration, and cost, average duration and cost per call, and average cost per minute. If duration > 9999:59:59 (hr:min: sec), only hours are reported.

1. From the **Reports** menu, select **Organization Reports** and then, your choice of report.

2. For an Organization Detail Report, complete the dialog box:

Organization selections. Type or select a site (multi-site systems) and an organization entry for each level. Enter up to 8 extensions. You may use wild cards (? = single character; % = any number of characters) in every level entry and on the first extension.

Range selections.   Enter date and time ranges (values are inclusive).

Minimum selections. Enter a minimum cost and duration (calls meeting either criteria will be included).

Other selections. Select a call type and/or enter a dialed number. You may use wild cards (? = single character; % = any number of characters) on the dialed number.

Enable [X] or disable page breaks.

3. For an Organization Summary, complete the dialog box:

```
┌─────────────────────────────────────────────────────┐
│ ═      Organization Summary Report                   │
├─────────────────────────────────────────────────────┤
│ Site:      (ALL)                     ▼    ┌────────┐ │
│                                           │  OK    │ │
│ Branch:         (ALL)                ▼    └────────┘ │
│                                           ┌────────┐ │
│ Division:       (ALL)                ▼    │ Cancel │ │
│                                           └────────┘ │
│ Department:     (ALL)                ▼    ┌────────┐ │
│                                           │ Output…│ │
│ Cost Center:    (ALL)                ▼    └────────┘ │
│ Extension:      %                                    │
│                                                      │
│                                                      │
│ □ Page Break After Each Cost Center                  │
└─────────────────────────────────────────────────────┘
```

Type or select a site (multi-site systems) and an organization entry for each level. Enter up to 8 extensions. You may use wild cards in every level entry and on the first extension.

Enable [X] or disable page breaks.

4. For all other reports, complete its dialog box. For example:

```
┌─────────────────────────────────────────────────────┐
│ ═          Cost Center Summary Report                │
├─────────────────────────────────────────────────────┤
│ Department:                               ┌────────┐ │
│ (ALL)            ▼              ▼          │  OK    │ │
│                                           └────────┘ │
│                  ▼              ▼          ┌────────┐ │
│                                           │ Cancel │ │
│                  ▼              ▼          └────────┘ │
│                                           ┌────────┐ │
│ □ Page Break After Each Department:       │ Output…│ │
│                                           └────────┘ │
│                                           ┌────────┐ │
│                                           │ Chart… │ │
│                                           └────────┘ │
└─────────────────────────────────────────────────────┘
```

5. a. Choose **OUTPUT** if you wish to change the default printed output (see *Defining the Output* in this chapter for details).

    b. Choose **CHART** to add a chart, if applicable (see *Setting Up a Chart* in this chapter for details).

    c. Choose **OK** to start the report; choose **CANCEL** to quit.

Generating Selection Reports

Selection Reports provide summary or detail information based on criteria such as organizations, date, time, cost, duration, account code, trunk, call type, and/or dialed number.

Details are sorted in chronological order; summaries provide total number of calls, duration, and cost.[*] Costs include all but Account Code markups.

The Selection Report is a versatile tool, used to pinpoint details or summarize trends in problem areas discovered by other reports.

1. From the **Reports** menu, select **Selection**, then your choice of **Summary** or **Detail Report.**

```
┌──────────────────────── Selection Detail Report ────────────────────────┐
│ ┌─ Organization Selections ──┐   ┌─ Minimum Selections ─┐                 │
│ │ Site:    [ALL]        [±]  │   │ Cost:                │    ┌── OK ──┐    │
│ │ Branch:  [ALL]        [±]  │   │ $  [0.00]            │    ┌─ Cancel ─┐  │
│ │ Division: [ALL]       [±]  │   │      -OR-            │    ┌─ Output… ─┐ │
│ │ Department: [ALL]     [±]  │   │ Duration:            │                 │
│ │ Cost Center: [ALL]    [±]  │   │   [0:00:00]          │                 │
│ │ Extension: [%]  [    ]     │   └──────────────────────┘                 │
│ │  [    ] [    ] [    ]       │   ┌─ Other Selections ─┐                   │
│ │  [    ] [    ] [    ]       │   │ Account Code:       │                  │
│ └────────────────────────────┘   │ [ALL]         [±]   │                  │
│ ┌─ Range Selections ─┐           │ Trunk:              │                  │
│ │ Date Range:        │           │ [ALL]         [±]   │                  │
│ │  [3/31/93] to [4/30/93]        │ Call Type:          │                  │
│ │ Time Range:        │           │ [ALL]         [±]   │                  │
│ │  [12:00 AM] to [11:59 PM]      │ Dialed Number:      │                  │
│ └────────────────────┘           │ [%]                 │                  │
│                                  └─────────────────────┘                  │
└──────────────────────────────────────────────────────────────────────────┘
```

───────────────────────────────

[*]   If duration > 9999:59:59 (hr:min: sec), only hours are reported.

2. Type or select entries for the site (multi-site systems) and for each organization level that you wish to include. You may use wild cards (? = single character; % = any number of characters) on all organization entries and for the first extension.

3. Enter dates and times for the reporting period. Range values are inclusive.

4. Type or select values for the following criteria:

    — a minimum cost and duration (calls meeting either criteria are included)

    — an account code, trunk, and/or dialed number pattern (you may use wild cards)

    — a call type

5. a. Choose **OUTPUT** if you wish to change the default printed output (see *Defining the Output* in this chapter for details).

    b. Choose **OK** to start the report; choose **CANCEL** to quit.

Generating Account Code Reports

Account codes are typically dialed when placing or receiving a call to identify the call subject matter, client account, and so on.

CAS for Windows offers two account code reports — the Account Code Summary and Account Code Detail — used to allocate telephone charges to the account associated with the call.

Details are sorted as received from the switch or SMDR source, within the account; the Summary provides the number, duration, and cost for each account. [*] Call costs include all markups and active taxes.

To generate an Account Code Report, proceed as follows:

1. From the Reports menu, select Account Code and then, your choice of Summary or Detail.

2. (Detail Report only) Enter a date range.   Range values are inclusive. Default = day before the start of period to today's date (or end of period, if reached).

3. Type or select entries for up to 6 accounts. You may use wild cards (? = single character; % = any number of characters) on the first entry.

4. (Detail Report only) Enable [X] or disable page breaks between accounts.

5. a. Choose **OUTPUT** if you wish to change the default printed output (see *Defining the Output* in this chapter for details).

   b. Choose **OK** to start the report; choose **CANCEL** to quit.

_____

[*] If duration > 9999:59:59 (hr:min: sec), only hours are reported.

Generating Traffic Reports

CAS for Windows offers an extensive library of Traffic Reports used to summarize call activity for different categories.

⇒ Summaries are based on the collected information for the selected accounting period (current or archived).

Except where noted, summary statistics include the count, total and average duration per call, total and average cost (per minute and per call). If duration > 9999:59:59 (hr:min: sec), only hours are reported.

Costs include all active taxes, but no markups.

Charts are available, except where noted.

The list that follows describes each Traffic Report.

■ The Call Type Report summarizes activity by call type. This report helps spot facility misuse.

■ The Date Report summarizes activity for each day in the reporting period.

■ The Cost and Duration Report provide statistics by cost and duration ranges. This report, together with the Exception Reports, provides the basis to track expensive or lengthy calls.

■ The Time of Day Report provides outgoing and/or incoming call summaries for each of the 24 hour-bands in a day. This report is used for busy and after-hours call analysis.

■ The Call Distribution Report summarizes activity by dialed areas. This report is helpful in determining your calling patterns —for example, to plan for discount long distance services or to find out if there is abuse. There are no charts for this report.

■ The Rejected Call Summary Report summarizes calls that were under the minimum duration and/or cost "storage option" set for that call type. There are no charts for this report.

- The Facility Summary Report summarizes activity by "trunk" (or the appropriate switch identifier for routing calls) under the named facilities.

- The Facility Trends Report summarizes activity by each named facility for the last 12 accounting periods.

- The Facility Grade of Service[*] Report analyzes facility busy hours: it lists the number of trunks in each facility, the average number of calls carried during its busy hour, their total and average duration, the facility's actual and target GOS, and the number of trunks required to meet the target GOS. The chart shows GOS trends for the last 12 accounting periods.

If the SMDR source for a site supports such ISDN features as Automatic Number Identification (ANI) and answer supervision and it provides "ring times" information,[**] CAS for Windows offers these reports:

- The ANI Call Distribution Report summarizes incoming call activity by calling areas. There are no charts for this report.

- The Ring Time Analysis Report summarizes activity by ring time ranges. Summaries show totals and over-all percentages, as well as answered and unanswered call totals and range percentages.

- The Incoming Traffic Analysis Report provides hourly incoming call statistics: total number, answered and unanswered calls, percentages, and average ring times. The hour with the worst percentage of unanswered calls is flagged. This report reflects the view of this site from a caller's perspective and may be helpful in planning for staffing levels.

_____

[*] Grade of Service (GOS) is a way to measure outgoing service on a worst case scenario: it represents the probability of a call attempt receiving a busy signal on any given day, during a facility's (average) busy hour.

[**] Currently supported AT&T switches do not provide information to generate a Ring Time Analysis Report.

To generate a Traffic Report, proceed as follows:

1. From the **Reports** menu, select **Traffic Reports** and then, your choice of report. (In a multi-site system, select a site.)

2. For a Time of Day Report, select whether or not you wish to include incoming and outgoing calls.

3. For a Facility Summary, Trends, or Grade of Service Report, type or select 6 facility names. You may use wild cards (? = single character; % = multiple characters) on the first facility field.
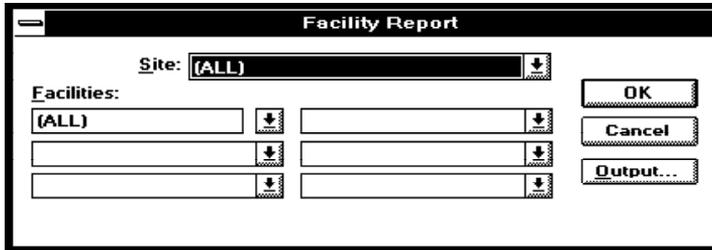
4. a. Choose **OUTPUT** if you wish to change the default printed output (see *Defining the Output* in this chapter for details).

   b. Choose **CHART** to add a chart, if applicable (see *Setting Up a Chart* in this chapter for details).

   c. Choose **OK** to start the report; choose **CANCEL** to quit.

Generating Exception Reports

Exception Reports provide information on calls or conditions that may require investigation. Call costs include all except Account Codes markups and all active taxes.

■ The Expensive Calls, Longest Calls, and Frequently Called Numbers show the top 25 entries for a named extension.

■ The Telecom Managers Report shows the following information (based since the last time a report was run):

— count, duration, and cost of valid and rejected calls
— unanswered call count
— details on the five most expensive and longest calls
— call count in storage and available space
— system messages, if any

To generate an Exception Report, proceed as follows:

1. From the **Reports** menu, select **Exception Reports** and then, your choice of report.
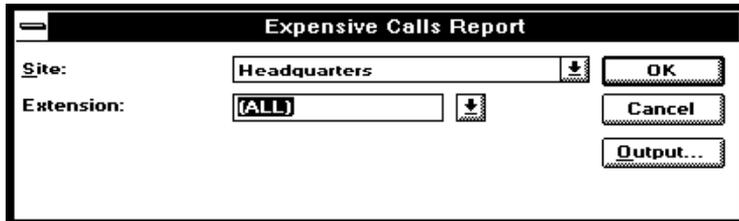
Expensive Calls Report		
Site:	Headquarters ⊥	OK
Extension:	[ALL] ⊥	Cancel
		Output...

2. Complete the dialog box.

   a. In a multi-site system, select the site name or "ALL.")

   b. For an Expensive Calls, Longest Calls, or Frequently Called Numbers Report, type or select an extension or "ALL." You may use wild cards (? = single character; % = multiple characters).

3. Choose **OUTPUT** if you wish to change the default printed output (see *Defining the Output* in this chapter for details).

4. When complete, choose **OK** to start the report or **CANCEL** to quit.

Viewing Functions

You can access CAS for Windows reports and system messages via window displays.

Viewing Reports

Use the Report Viewer to access reports output to the "window" temporarily or saved to a "system file."

1. For reports saved to a system file:

    a. Select **Report Viewer** from the **Reports** menu.

    b. Use **Open** from the **File** menu, then choose the report of interest from the selection box.
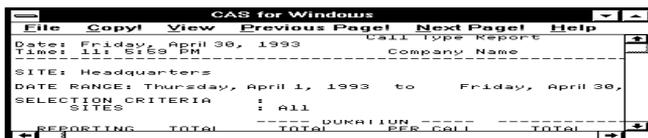
2. Adjust your view with the maximize button and scroll bars, the **PreviousPage!** and **NextPage!** menu options, and/or use the **View** menu options:

    —   Page. Enter the page number and choose **OK**.

    —   Printer Font. Toggle the viewer font between the one used by the printer (Ã = on) and the one used on displays.

3. To copy the display into the Windows clipboard, use the **Copy!** menu option. (You may then paste the clipboard contents onto another application that can use the image.)

4. To use other **File** functions:

— Save as. Enter a file name.

— Delete. Confirm the report deletion.

— Print. Select output devices, margins and orientation. See *Defining the Output* in this chapter for details.

— Exit. Closes the window.

Viewing the Message Log

To view and/or print system messages, proceed as follows:

1. Select the Message Log icon
   or
   the **View Message Log** option under the **Listings** menu.

2. Use the **View** menu to select (Ã) fatal, severe, information, and/or other types of messages, with or without a detail header.

3. Use the **File** menu for these functions:

— Clear. Removes all messages from the file.

— Print. Select output devices, margins and orientation. See Defining the Output in this chapter for details.

Viewing Immediate Output

Calls to alert numbers or meeting immediate output criteria (optionally, ANI abandoned, default-rated, incoming, or over a minimum cost or duration) are recorded in the Immediate Output file.[*]

To view and/or print this file, proceed as follows:

1. Select the Immediate Output icon
   or
   the **View Immediate Output** option under the **Listings** menu.

➡ Calls marked by an asterisk (*) denote a rejected call; calls to alert numbers have an "**ALERT**" or "**ALARM**" call type.

2. Use the **View** menu to toggle (on/off) the display of alarm, alert, rejected, and/or normal call record details.

3. Use the **File** menu for these functions:

   — Clear. Removes all messages from the file. Confirm with the **OK** button.

   — Print. Select output devices, margins and orientation. See *Defining the Output* in this chapter for details.

_____

[*] To set up "immediate output" conditions, see *Flagging Calls for Immediate Output* (under Administration Functions) in chapter 4.

System Management

4

This chapter describes how to manage the functions used in processing calls, in charging them to the appropriate organization and/or account, and in adapting the system to its operational environment.

It is organized into the following sections:

- *Administration Functions* — which describes how to use the functions under the **Administration** menu.

- *Configuration Functions*— which describes how to use the call rating, call collection interfaces, and other functions under the **Configuration** menu.

- *Customize Functions*— which describes how to use the functions under the **Customization** menu.

Administration Functions

This section describes the functions in the **Administration** menu. It is organized into the following topics:

- *Administering the Organization Table* — describes how to set up the site-specific table of telephone extensions, their attributes, and their place in the system-wide organizational hierarchy.

- *Providing Dialed Number Privacy* — describes how to mask dialed numbers for reports only and/or permanently.

- *Flagging Calls for Immediate Output* — describes how to specify conditions and/or dialed numbers that require attention. Flagged call details are accessible via the Immediate Output viewer.

- *Administering Account Codes* — describes how to set up the system-wide table of accounts (sorted by name or by number) and their attributes — account name and call charges (if any).

- *Changing Your Password* — describes how to change the current user's login password.

- *Selecting a Site* — (Multi-site systems only) describes how to identify the site (from a list of installed sites) prior to accessing site-specific tables.

Administering the Organization Table

The company organization table is used to allocate telephone expenses for calls charged to extensions and to track corporate budgets; personnel information provides useful directory listings.

The corporate structure reflects your installation (see *Setting Up Organization Levels* in this chapter). This document uses the 5-level defaults: 1 = Extension , 2 = Cost Center, 3 = Department, 4 = Division, and 5 = Branch. In multi-site systems, extensions and their attributes (user names, charges, privacy, etc.) are site-specific; all other level entries are system-wide.

To obtain a printed copy of this table, use the Organization Directory Listings; for call accounting information, use the various Organization Reports (see Chapter 3 for details).

$\Longrightarrow$ CAS for Windows allows data transfers of organization files to/from an external source. See *Using the File Import/Export Utility* in Chapter 5 for details.

To change the organization table, proceed as follows:

1. In a multi-site system, select the site (see *Selecting a Site* in this chapter for details).

2. From the **Administration** menu, select **Organization**.

3. To access a particular organization level, proceed to the indicated step:

   — For the extension level, step 4.
   — For the cost center level, step 5.
   — For the department level, step 6.
   — For the division level, step 7.
   — For the branch level, step 8.

```
┌─────────────────────────────────────────────────────────────┐
│ ▄                          Extension                         │
├─────────────────────────────────────────────────────────────┤
│ Extension:                                        ┌─ Close ─┐│
│ ┌────────┐   Personnel Name:   Lara King          └─────────┘│
│ │ 100    │                                         ┌─ Add ──┐│
│ │────────│↑  Authorization Code: ┌──────────┐      └────────┘│
│ │ 100    │   ─ ─ ─ ─ ─ ─ ─ ─ ─ ─                  ┌ Delete ┐│
│ │ 110    │   Fixed Charge:  $   │ 0.00     │       └────────┘│
│ │ 200    │                                         ┌─ Edit ─┐│
│ │ 300    │  ┌─ Privacy ──────────────────────┐     └────────┘│
│ │ 400    │  │ Masked Digits for Reports:  (NONE) ↕  ┌Apply ┐│
│ │ 500    │  │ Masked Digits for Storage:  (NONE) ↕  └──────┘│
│ │ 600    │  └────────────────────────────────┘     ┌ Reset┐│
│ │ 700    │                                         └──────┘│
│ │ 800    │                                                  │
│ │ 900    │↓                                                 │
│ └────────┘                                                  │
│ ┌─ Cost Center ──────────────────────────────────┐         │
│ │ Res1              ↕   ┌── Cost Center... ──┐    │         │
│ └──────────────────────────────────────────────┘           │
│                                                             │
│ □ Immediate Output                                          │
│                                                             │
│ □ Delete at End of Accounting Period                        │
└─────────────────────────────────────────────────────────────┘
```

4. For a new entry, choose **ADD** ; for changes, select the desired extension
    and choose **EDIT** or **DELETE** , as appropriate.

    ⇒ If the **DELETE** button is disabled, use **EDIT** and select [x] Delete at
    End of Accounting Period.

    Complete the dialog box, then choose **APPLY** (**RESET** cancels changes):

    Extension. The number (1 to 10 digits) corresponding to a voice terminal
    or station, which can be reported by the switch as the source of an
    outgoing call or destination of an incoming call.

    Personnel Name. The name (up to 20 characters) of the extension user.

    Authorization Code. The code (up to 10 digits) set up in your switch to
    use limited-access facilities and/or charge the call to this extension.

    Fixed Charge. An amount for equipment or other costs chargeable to the
    extension. This charge appears as an additional line item in an
    Organization Detail or Summary Report.

    Privacy for reports and/or for storage. The number of digits to hide on
    numbers dialed by this extension ("None," 1 to 17, or "All").   The right-
    most digits will be replaced with question marks (?).

    Immediate Output. The option to copy calls charged to this extension to
    the Immediate Output file.   For details in accessing this file, see *Viewer
    Functions* in Chapter 3.

Delete at End of Accounting Period. The option to remove this extension after the period closes.

Cost Center. The name of the level-2 organization that owns this extension, selected from the list box. You must define a new entry before you can select it (see step 5).

5. To access the Cost Center level, use the **COST CENTER** button on the Extension dialog box.

For a new entry, choose **ADD**, for changes, select the desired cost center and choose **EDIT**. Complete the dialog box, then choose **APPLY** (**RESET** cancels changes):

Cost Center. The name (1 to 15 characters) of the level-2 organization that owns extensions.

Call Rating. The markup (-100.00 to 1000%), surcharge and minimum cost (all defaults = 0) for every call charged to this cost center. Reports will show the largest of (a) minimum cost or (b) (call cost x markup %) + surcharge.

Budget (if set for this level). The annual figure budgeted for this cost center; default = 0.

Delete at End of Accounting Period. The option to remove this entry and its lower levels after the period closes.

Department (if this level exists). The level-3 organization that owns this cost center, selected from the list box. You must define a new entry before you can select it (see step 6).

6. To access the Department level, choose in succession:

— **COST CENTER** in the Extension dialog box
— **DEPARTMENT** in the Cost Center dialog box

```
┌──────────────────────────────────────────────────────┐
│ ▬                    Department                        │
├──────────────────────────────────────────────────────┤
│ Department:                          ┌─────────────┐   │
│ ┌──────────────────────────┐         │    Close    │   │
│ │Research                  │         └─────────────┘   │
│ ├──────────────────────┬───┤         ┌─────────────┐   │
│ │ Office               │ ▲ │         │    Add      │   │
│ │ Product-Fleet        ├───┤         └─────────────┘   │
│ │ Production-MOS       │░░░│         ┌─────────────┐   │
│ │ R&D-Fleet            │░░░│         │    Edit     │   │
│ │ Research             │░░░│         └─────────────┘   │
│ │ Sales                │░░░│         ┌─────────────┐   │
│ │ Sales-Fleet          │ ▼ │         │   Apply     │   │
│ └──────────────────────┴───┘         └─────────────┘   │
│ ┌─Division──────────────────────     │   Reset     │   │
│ │ ┌──────────────┬───┐  ┌──────────────────────┐  │   │
│ │ │VOTAN         │ ▼ │  │     Division...      │  │   │
│ │ └──────────────┴───┘  └──────────────────────┘  │   │
│ └─────────────────────────────────────────────┘      │
│ Budget:  $   ┌──────────┐                             │
│              │0.00      │                             │
│              └──────────┘                             │
│ ☐ Delete at End of Accounting Period                 │
└──────────────────────────────────────────────────────┘
```

For a new entry, choose **ADD**; for changes, select the desired department and choose **EDIT**. Complete the dialog box, then choose **APPLY** (**RESET** cancels changes):

Department. The name (one to 15 characters) of the level-3 organization that owns cost centers.

Budget (if set for this level). The annual figure budgeted for this department; default = 0.

Delete at End of Accounting Period. The option to remove this entry and its lower levels after the period closes.

Division (field appears only if this level exists). The level-4 organization that owns this department, selected from the list box . You must define a new entry before you can select it (see step 7).

7. To access the Division level, choose in succession:

— **COST CENTER** in the Extension dialog box
— **DEPARTMENT** in the Cost Center dialog box
— **DIVISION** in the Department dialog box

```
┌──────────────────────────────────────────────────┐
│ ▭                   Division                       │
├──────────────────────────────────────────────────┤
│ Division:                          ┌──────────┐    │
│ ┌──────────────────────────┐       │  Close   │    │
│ │ LOTAN                     │       └──────────┘    │
│ │   Default                │       ┌──────────┐    │
│ │   Fleet                  │       │   Add    │    │
│ │   MOSS                   │       └──────────┘    │
│ │   LOTAN                  │       ┌──────────┐    │
│ │                          │       │  Edit    │    │
│ │                          │       └──────────┘    │
│ └──────────────────────────┘       ┌──────────┐    │
│                                    │  Apply   │    │
│ ┌Branch────────────────────────┐   └──────────┘    │
│ │ Telecom        │ ▼ │ │Branch...│ ┌──────────┐    │
│ └──────────────────────────────┘   │  Reset   │    │
│                                    └──────────┘    │
│ ☐ Delete at End of Accounting Period               │
└──────────────────────────────────────────────────┘
```

For a new entry, choose **ADD** ; for changes, select the desired division and choose **EDIT**.   Complete the dialog box, then choose **APPLY** (**RESET** cancels changes):

Division. The name (one to 15 characters) of the level-4 organization that owns departments.

Budget (if set for this level). The annual figure budgeted for this division; default = 0.

Delete at End of Accounting Period. The option to remove this entry and its lower levels after the period closes.

Branch (if level exists). The level-5 organization that owns this division, selected from the list box. You must define a new entry before you can select it (see step 8).

8. To access the Branch level, choose in succession:

— **COST CENTER** in the Extension dialog box
— **DEPARTMENT** in the Cost Center dialog box
— **DIVISION** in the Department dialog box
— **BRANCH** in the Divisiondialog box

```
┌─────────────────────────────────────────────┐
│ ▬                  Branch                    │
├─────────────────────────────────────────────┤
│ Branch:                      ┌──────────┐    │
│                              │  Close   │    │
│ ┌─────────────────────────┐  └──────────┘    │
│ │Telecom               │  ┌──────────┐    │
│ ├─────────────────────────┤  │  Add     │    │
│ │  Default                │  └──────────┘    │
│ │  Fleet                  │  ┌──────────┐    │
│ │  Telecom                │  │  Edit    │    │
│ │                         │  └──────────┘    │
│ │                         │  ┌──────────┐    │
│ │                         │  │  Apply   │    │
│ └─────────────────────────┘  └──────────┘    │
│                              ┌──────────┐    │
│                              │  Reset   │    │
│                              └──────────┘    │
│ ☐ Delete at End of Accounting Period         │
└─────────────────────────────────────────────┘
```

For a new entry, choose **ADD** ; for changes, select the desired entry and choose **EDIT**. Complete the dialog box, then choose **APPLY** (**RESET** cancels changes):

Branch. The name (one to 15 characters) of the level-5 organization that owns divisions.

Budget (if set for this level). The annual figure budgeted for this branch; default = 0.

Delete at End of Accounting Period. The option to remove this entry and its lower levels after the period closes.

Providing Dialed Number Privacy

You can provide privacy on all outgoing and/or incoming ANI calls.

⟹   For privacy for specific extensions, see *Administering the Organization Table* in this chapter for details.

1. In a multi-site system, select the site (see *Selecting a Site* in this chapter for details).

2. From the **Administration** menu, select **General Privacy**.

```
┌──────────────────────────────────────────────────┐
│ ▭           General Privacy - Headquarters        │
│ ┌─Outgoing Calls──────────────────┐ ┌──────────┐  │
│ │ Masked Digits for Storage: [(NONE) ▼]│    OK    │  │
│ │                                  └──────────┘  │
│ │ Masked Digits for Reports: [(NONE) ▼]│  Cancel  │  │
│ └─────────────────────────────────┘ └──────────┘  │
│ ┌─ANI Calls───────────────────────┐               │
│ │ Masked Digits for Storage: [(NONE) ▼]│           │
│ │                                                  │
│ │ Masked Digits for Reports: [(NONE) ▼]│           │
│ └─────────────────────────────────┘               │
└──────────────────────────────────────────────────┘
```

3. Select how many digits to hide on any dialed number ("None," 1 to 17, or "All").   Masked digits are replaced with question marks (?), starting on the right.   Options for Outgoing and/or ANI Calls:

   — Masked Digits for Reports stores complete numbers, but hides them on reports.

   — Masked Digits for Storage stores incomplete numbers (permanent privacy).

4. When complete, choose **OK** to save changes (or **CANCEL** to ignore them) and close the dialog box.

Flagging Calls for Immediate Output

You can flag calls to up to 250 alert numbers (optionally sounding an alarm) or calls that meet general criteria (costly, lengthy, etc.).

A copy of the flagged call is placed in the Immediate Output file. If enabled, an alarm sounds at the PC until you view the Immediate Output file (see *Viewing Functions* in Chapter 3 for details).

➯ You can flag calls by extensions (see A*dministering the Organization Table* in this chapter for details).

1. In a multi-site system, select the site (see *Selecting a Site* in this chapter for details).

2. For general criteria flags, select **Immediate Output** from the **Administration** menu.

```
┌────────────────────────────────────────────────┐
│ ▭    Immediate Output - Headquarters            │
├────────────────────────────────────────────────┤
│ ☐ Print ANI Abandoned Calls    ┌──────────┐     │
│ ☐ Print Default Rated Calls    │    OK    │     │
│                                └──────────┘     │
│ ☐ Print Incoming Calls         ┌──────────┐     │
│                                │  Cancel  │     │
│ Minimum Cost:      $ │999.99 │ └──────────┘     │
│ Minimum Duration:    │24:00:00│                 │
└────────────────────────────────────────────────┘
```

Complete the dialog box, then choose **OK** to save changes (or **CANCEL** to ignore them) and close the dialog box:

Print ANI Abandoned Calls, Default Rated Calls, and/or Incoming Calls. Enable [X] the options to print (respectively): calls terminated by the caller (use only if your switch reports their telephone number), calls whose proper rating could not be identified, and/or all incoming calls.

Minimum Cost and Duration. Thresholds for flagging expensive calls (default = maximum allowable entry for your currency) and long calls (in hours:minutes:seconds, default = 24:00:00).

3. For specific call flags, select **Alert Numbers** from the **Administration** menu.

For a new entry, choose **ADD** ; for changes, select the desired entry and choose **DELETE** or **EDIT**, as appropriate.

Complete the dialog box then, choose **APPLY** (**RESET** cancels changes):

Dialed Digit Pattern . A dialed number or a general pattern to match. Patterns are set by up to 18 digits and/or wild cards (? = single digit; % = any number of digits).

Audible Alarm. The option to sound an alarm at the PC.

⇒ If enabled, the PC alarm sounds until you view the Immediate Output file (see Viewing Functions in Chapter 3 for details in accessing the file).

Administering Account Codes

CAS for Windows supports the account code feature of telephone switches by maintaining a user-editable table of accounts and by automatically adding any new codes that appear in call records. In multi-site systems, accounts are unique across all sites.

Stored calls with accounts are reported via the Account Code Reports (see Chapter 3 for details) and may be edited to correct dialed errors (see *Correcting Misdialed Accounts in Call Records* in Chapter 5 for details).

1. From the **Administration** menu, select **Accounts by Name** or **by Number**.

```
┌─────────────────────────────────────────────────────────────┐
│ ▭                    Accounts by Number                      │
├─────────────────────────────────────────────────────────────┤
│ Account Code Number:  Account Name:              ┌────────┐  │
│ ┌─────────────────┐  ┌──────────────────────┐    │ Close  │  │
│ │1234567890       │  │Acme Toys             │    └────────┘  │
│ │ 1234567890      │  ┌─Call Cost Adjustments─┐   ┌────────┐  │
│ │                 │   Percent Markup:          │ Add    │    │
│ │                 │  ┌──────────┐              └────────┘    │
│ │                 │  │0.00      │ %            ┌────────┐    │
│ │                 │  └──────────┘              │ Delete │    │
│ │                 │   Surcharge per Call:      └────────┘    │
│ │                 │                            ┌────────┐    │
│ │                 │    $ │0.00      │          │ Edit   │    │
│ │                 │                            └────────┘    │
│ │                 │   Minimum Cost per Call:   ┌────────┐    │
│ │                 │    $ │0.00      │          │ Apply  │    │
│ │                 │                            └────────┘    │
│ └─────────────────┘                            ┌────────┐    │
│                     □ Delete at end of Accounting Period     │
│                                                └ Reset ─┘    │
└─────────────────────────────────────────────────────────────┘
```

2. For a new entry, choose **ADD** ; for changes, select the desired entry and choose **DELETE** or **EDIT**, as appropriate.

   ⇒ If the **DELETE** button is disabled, use **EDIT** , then select [x] Delete at End of Accounting Period.

3. Complete the dialog box, then choose **APPLY** (**RESET** cancels changes):

   Account Name. The name (² 20 characters) as it will appear in reports.

   Account Number. The dialed code (² 16 digits) as reported by the switch.

   Call Cost Adjustments. The markup (-100.00 to 1000%), surcharge and minimum cost (all defaults = 0). Reports will show the largest of (a) minimum cost or (b) (call cost x markup %) + surcharge.

   Delete at End of Accounting Period. The option to remove this entry when the period ends.

Changing Your Password

If your system is set up with restricted user access, users must provide their current passwords at login (see *Setting Up System Users* in the next section).

This dialog box is used to change your personal password.

1. From the **Administration** menu, select **Passwords**.

2. Complete the dialog box.

3. Choose **OK** to save changes (or **CANCEL** to ignore them) and close the dialog box.

Selecting a Site

In a multi-site system, a site must be made accessible — i.e. the menu bar must display the site's name — before you can work with its database.

1. From the **Administration** menu, open **Site Selection**.
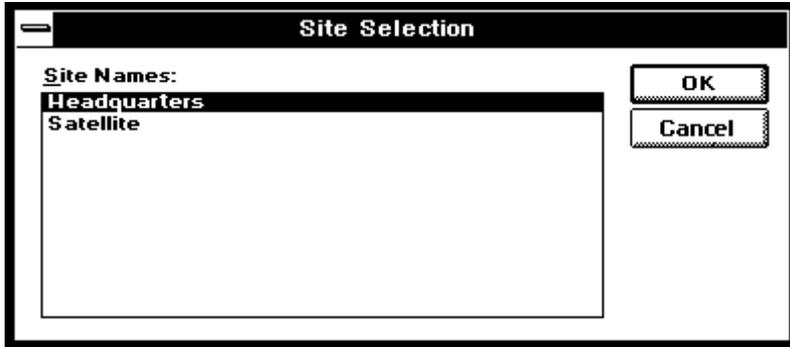
2. Select the name of the desired site from the list box.

3. Choose **OK** to confirm (or **CANCEL** to ignore selection) and close the dialog box.

Configuration Functions

This section describes the functions in the Configuration menu. It is organized into the following topics:

- *Configuring Call Rating Tables* —provides an overview of the rating functions and describes how to set up or change the Carrier Services, Dialed Digit Processing, Call Types, Facilities, Access Codes, Holidays, and ISDN BCC Markups.

- *Configuring Call Collection Interfaces* — describes how to set up the connection to your SMDR source(s) and the programs that interpret the call records.

- S*etting Up the Call Sender Interface* — describes how to make your call record data accessible to an external poller system.

- *Setting Up the Callback Receiver* — describes how to dedicate a port for receiving emergency poll requests from remote sites.

- *Defining Accounting Period* — describes how to set up the system-wide values for the length of your accounting period and the start of your fiscal year.

- *Setting Up System Users* — describes how to set up or change the login names and access privileges of all system users (including other processors that communicate with your PC).

Configuring Call Rating Tables

Call rating is set up at installation by loading the site-specific Fixed Rates diskette, then entering the information in the *Carrier Services* and the *Trunks & Facilities* worksheets.

After installation, you may edit this, as well as other costing-related information that applies to the site. See the *Overview of Call Rating Tables* for an explanation of the relationship between rating tables and a typical setup.

Overview of Call Rating Tables

CAS for Windows uses the following tables in rating calls:

- Trunks — associates the call's route (trunk, access code, line used, etc.) to a facility's carrier services. [*]

- Carrier Services — specifies how a carrier costs calls (specifically, it associates dialed number patterns to a rate method and to a call type name). [*]

- Call Types — associates a call type name to cost adjustments and to storage filters based on cost and duration.

- Holidays — specifies days for which to apply rate discounts.

- ISDN BCC Markups — associates ISDN services with a markup.

- Dialed Digit Processing — a troubleshooting tool used to resolve dialed number inconsistencies.

- Access Codes — a troubleshooting tool used only if it is necessary to remove access codes from dialed numbers.

_____

[*] The diagram and detailed explanation in the next two pages show typical setups of these tables for costing basic calls on the public network (including calls to special numbers or those serviced by a secondary carrier), calls on dedicated or leased service lines, and internal calls (that is, calls from one extension to another).

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Table 4-1. Basic Setup

TRUNKS - FACILITY

Basic call — CO lines
Facility: CO
Carr. svc. out: A (primary carrier)

Call to special number (*nnn-nnnn*)

Call dialed via carrier B (10*xxx* + call)

Basic, leased service calls — Leased lines
Facility for C
Carr. svc. out: C (primary carrier)

Incoming service calls — Dedicated lines
Facility for D
Carr. svc. in: D (primary carrier)

Internal calls — ------ (special trunk)
Facility: internal calls
Carr. svc. out: E

CARRIER SERVICES - RATE METHODS

Carrier Service: A - - dialing prefix: none
Dialing pattern: % (any)
Rate method: fixed rate table
Call type: default (derived from dialed number)

Carrier Service: A - - dialing prefix: none
Dialing pattern: *dddddd*
Rate method: cost / call or charge band (cost / minute)
Call type: SPCL or user-defined

Carrier Service: B - - dialing prefix: 10*xxx*
Dialing pattern: % (any)
Rate method: fixed rate table (± markup)*
Call type: default (derived from dialed number)

Carrier Service: C - - dialing prefix: none
Dialing pattern: % (any)
Rate method: cost / call or charge band (cost / minute)
Call type: user-defined

Carrier Service: D - - dialing prefix: none
Dialing pattern: % (any)
Rate method: fixed rate table (± markup)*
Call type: default (derived from dialed number)

Carrier Service: E
- - IXC, NSF, home code, dialing prefix: none
Dialing pattern: % (any)
Rate method: cost per call (typically, free)
Call type: user-defined (for example, INTRN)

* If a carrier's fixed rate table is not installed, mark up an installed one to approximate rates.

Detailed explanation of table:

- Basic calls. The cost of basic calls (i.e. using no dialing prefix) is based on the Carrier Services associated with the Facility used by the call:

    — If the Facility trunks connect to the CO, the rate method and call types are derived automatically from the fixed rate tables installed in your system.

    — If the Facility trunks are dedicated to a carrier (i.e. they connect directly to the carrier's network), the rate method and call types are derived as above (if carrier's tariffs are not installed, you may approximate its rates by a markup on an installed tariff).

    — If the Facility trunks connect to a leased service (for example, to a Foreign Exchange, SDN, or Tie line), you estimate the rate method as a flat cost per call or per minute and you define the call types — for example, "T-NYC" (Tie to New York City) or "FX" (foreign exchange).

- Calls dialed via a secondary carrier. The cost of calls dialed via a secondary carrier is based on the carrier identified by its dialing prefix. The rate method and call types are derived from fixed rates or a markup on an installed tariff.

- Calls to special numbers. The cost and call type for special numbers are based on the dialing pattern you define; rate method = flat cost per call or per minute. The system has a default list (calls to emergency, information, 800 numbers, and 900 service numbers) and may not need further entries.

- Internal calls. These are calls interpreted by CAS as using a special trunk ("--------") with a destination prefixed by two dashes ("--*extension*").

    ⇒ CAS discards internal calls; to keep them, you must delete the entry "--%" in the Dialed Digit Processing table and perform the setup outlined in table 4-1:

    1. Create the call type (e.g. "INTRN").
    2. Create a carrier service with carrier E's attributes.
    3. Create the internal calls facility for trunk ("------").

Carrier Services

Use this dialog box to set up or change the table of carrier services — in particular, to set up attributes of the carrier services supplied at installation and/or to set up additional carrier services and their rates. A site may have up to 256 carrier services.

➡️ See *Overview of Call Rating Tables* in this section for the role of related tables in costing calls and setup examples.

1. In a multi-site system, select the site (see S*electing a Site under Administration Functions* in this chapter for details).

   ➡️ If you wish to name your own call types based on dialing patterns or specific carrier services, you must create the call types first. See *Call Types* in this section for details.

2. Select **Carrier Services** from the **Configuration** menu.

3. For new entries, choose **ADD**; for changes, select a carrier service name and choose **DELETE** or **EDIT**, as appropriate.

   For additions or edits, proceed to step 4; for deletions, confirm and proceed to step 10.

4. Complete the Carrier Services dialog box:

Carrier service. Name, one to 15 characters.

Direction. Outgoing or incoming calls.

Home Code. The site's area code and exchange.

ISDN Information (if applicable). The IXC code (IntereXchange Carrier, for example, AT&T = 288, MCI = 222, Sprint = 333) and NSF code (Network Service Field) as supplied by your phone company.

Dialing Prefix. The number dialed to access the carrier, if applicable. Typically, a local 950xxxx number (without dashes or other separators) or the 10xxx Equal Access code.

Digits in Authorization Code. In Equal Access areas = 0; elsewhere, the length of your account with the carrier (this value is used to strip off the authorization code digits prefixed to the dialed number).

Format Dialed Digits. The option to place dashes between area code, exchange, and station number in reports.

5. Use the **RATE METHOD** button to set up or change the call costing scheme(s) associated with this carrier service.
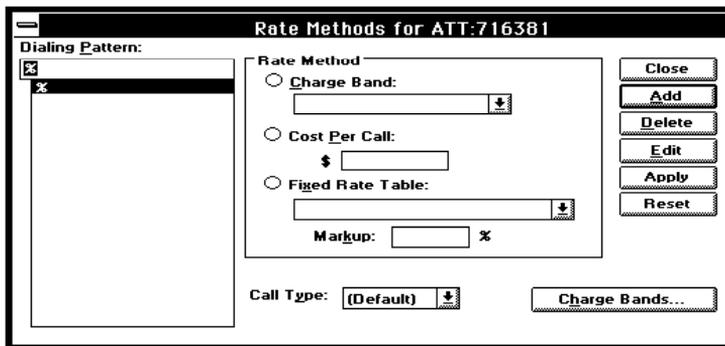
6. For a new entry, choose **ADD**; for changes, select a dialed pattern and choose **DELETE** or **EDIT**, as appropriate.

   For additions or edits, proceed to step 7; for deletions, confirm and proceed to step 9.

7. Complete the Rate Method dialog box:

   Dialing pattern. The pattern to the called area to cost, represented by up to 18 digits and/or wild cards (? = single digit; % = any number of digits).

   Call type. The name for this type of call, from the list box; use "(Default)" for an automatic association with the internal list:

   > INCOM = Incoming calls
   > LOCAL = 7-digit calls
   > IS-IL = In-state, in-LATA calls
   > IS-OL = In-state, Out-of-LATA calls
   > OS-IL = Out-of-state, in-LATA calls
   > OS-OL = Out-of-state, Out-of-LATA calls
   > MEX = Calls to Mexico
   > IDDD = International calls, except calls to Mexico
   > SPCL = Special number calls
   > OTHER = Undefined

   Rate Method options:

   — Charge band. Select a charge band number or proceed to step 8 to set it up before selecting it.

   — Cost per call in your currency; proceed to step 9.

   — Fixed rate table. Select the name of the tariff. If necessary, enter the markup (-100.00 to 1000.00%) that best approximates these rates; proceed to step 9.

8. Choose **CHARGE BANDS** to set up or change rate schedules.

a. For a new charge band, choose **ADD**; for changes, select a band number and choose **DELETE** or **EDIT**, as appropriate.

b. For deletions, confirm and proceed to step 8f; for additions or edits, choose **RATES** to specify the rate schedule.

    c.   For a new entry, choose **ADD**; for changes, select a time period and choose **DELETE** or edit, as appropriate.

    d.   For additions or edits, complete the Rates dialog box:

        Time period. The start-to-end times during the week and holidays, when rates apply.

        Time period rate information. The 3-tiered schedule for the period: initial, next, and remaining time intervals (0 - 999 seconds), and the cost per (0 - 999) seconds.

    e.   When complete, choose **APPLY** (**RESET** cancels changes) and **CLOSE** to return to the Charge Bands dialog box.

    f.   Whent he Charge Bands dialog box is complete, choose **APPLY** to save changes, including any changes in Rates (**RESET** cancels them); then choose **CLOSE** to return to the Rate Methods dialog box.

9.   When the Rate Methods dialog box is complete, choose **APPLY** to save changes (**RESET** cancels them); then choose **CLOSE** to return to the Carrier Services dialog box.

10.   When the Carrier Services dialog box is complete, choose **APPLY** to save changes, including any changes in Rate Methods (**RESET** cancels them); then choose **CLOSE** to exit.

Dialed Digit Processing

Use this dialog box to set up or change the Dialed Digit Processing table — in particular, to specify dialed patterns that require additional processing in order to cost the call correctly.

Dialed Digit Processing is a diagnostic tool, typically used to remove invalid characters or numbers placed by the switch in the dialed number field of a call record.

1. In a multi-site system, select the site (see *Selecting a Site* under *Administration Functions* in this chapter for details).

2. From the **Configuration** menu, select **Dialed Digit Processing.**

3. For a new entry, choose **ADD**; for changes, select a dialed pattern and choose **DELETE** or **EDIT**, as appropriate.

4. For additions or edits, complete the dialog box:

Search For Dialed Digit Pattern and Facility. The *dialed number pattern* and *facility* targeted for additional processing. Dialing patterns are represented by up to 18 digits and/or wild cards (? = single digit; % = any number of digits).

Cost As Dialed Digits. The dialing pattern (up to 18 digits and/or wild cards) conforming to the following replacement rules:

— Every digit found by a <?> in the search-for pattern is matched either to a <?> to keep the digit or to a <-> to discard it. (For example, a search for **?381????** and cost as **-381????** finds **13811234** and costs it as **3811234**.)

— Trailing digits found in a <%> in the search-for pattern are matched to a <%> in the cost as pattern.   (For example, a search for **88%** and cost as **%** finds **8817165551212**, and costs it as **17165551212**.)

Cost As Carrier Service. The applicable carrier service for costing.

Change Dialed Digits (stores the replaced number) and Discard Matching Calls. The disposition of calls matching the search criteria.

5. When complete, choose **APPLY** to save changes (**RESET** cancels them), then choose **CLOSE** to exit.

Call Types

Use this dialog box to add, change, or delete call type names for identifying calls and to set up call type attributes (cost adjustments, taxes, storage options, etc.).

See *Overview of Call Rating Tables* in this section for the role of related tables in costing calls and setup examples.

1. In a multi-site system, select the site (see *Selecting a Site* under *Administration Functions* in this chapter for details).

2. From the **Configuration** menu, select **Call Types**.

3. For a new entry, choose **ADD**; for changes, select a call type name and choose **EDIT** or **DELETE**, as appropriate.

4. For additions or edits, complete the dialog box:

    Call type. The system name (one to 5 characters) used on dialog boxes and listings.

    Reporting Name. The identifier (one to 5 characters) for reports, if different from the system name. This option allows you to group call types under a more general name, for example, to report IS-IL and OS-IL as "LATA" calls.

Call Cost Adjustments for every call of this type:

— Markup: -100.00 to 1000%; default = 0.
— Surcharge: in your currency; default = 0.
— Minimum Cost: in your currency; default = 0.

➡ The adjusted cost on reports = the largest of (a) Minimum Cost or (b) (Call Cost x Markup %) + Surcharge

Taxes. Enter values (-100.00 to 1000%; default = 0.00%) for active taxes on calls of the named type. Taxes are applied to basic call costs in addition to other cost adjustments.

Call Storage Options:

— Network Correction Time (0:00:00 to 9:59:59 in hours:minutes:seconds; default = 0:00:15), used to correct switches without answer supervision.

— Minimum Duration (0:00:00 to 9:59:59 in hours:minutes:seconds; default = 0:00:00) and Minimum Cost (default = 0), used to filter calls too short to be valid.

➡ The Rejected Call Summary Report provides statistics by call type on calls below the minimum cost and duration.

Delete at End of Accounting Period — option to remove this call type after the period closes.

5. When complete, choose **APPLY** to save changes (**RESET** cancels them); then choose **CLOSE** to exit.

Trunks and Facilities

CAS uses "trunks" as identifier for the route of the call — typically, the lines or group of lines programmed at the switch to carry calls using similar facilities. Use this dialog box to set up or change the Trunk and Facilities tables.

⇛ See *Overview of Call Rating Tables* in this section for the role of related tables in costing calls and setup examples.

1. In a multi-site system, select the site (see *Selecting a Site* under *Administration Functions* in this chapter for details).

2. From the **Configuration** menu, select **Trunk**.

    ⇛ "Trunk" is a switch-dependent term; your system will display the name used by the Call Collection Interface selected for this site (for example, "used access code," "trunk group," "circuit ID," etc.).

3. To add trunks, choose **ADD**; to change trunk information, select the trunk and choose **DELETE** or **EDIT**, as appropriate.

    ⇛ If the **DELETE** button is disabled, use **EDIT** and select [x] Delete at end of Accounting Period.

    Complete the dialog box, then choose **APPLY** to save changes (**RESET** cancels them):

    Trunk. The route identifier, exactly as it would appear in a call record from the switch.

Facility. The billing service associated with this trunk, from the list box. You must define a new entry before selecting it (see step 4).

Delete at end of Accounting Period. The option to remove this trunk after the period closes.

4. To set up facilities and their attributes, choose **FACILITY**.
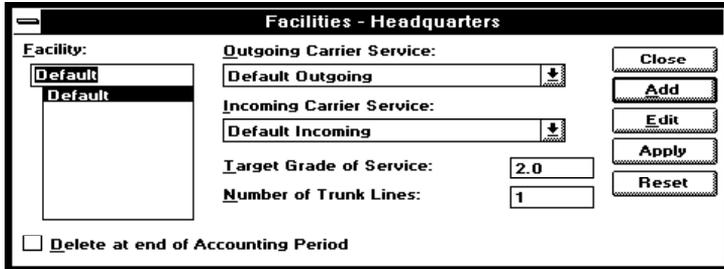
For a new entry, choose **ADD**; for changes, select a facility name and choose **DELETE** or **EDIT**, as appropriate.

⇒ If the **DELETE** button is disabled, use **EDIT** and select [x] Delete at end of Accounting Period.

Complete the dialog box, then choose **APPLY** to save changes (**RESET** cancels them):

Facility. The identifier (up to 15 characters) for a group of trunks that carry calls requiring similar services.

Outgoing / Incoming Carrier Service. The name of the carrier service for costing calls routed through this facility.

Target Grade of Service (GOS). The desired probability (0.0 to 20.0 %; default = 2.0 %) of receiving a busy signal during the facility busy hour. The system uses actual traffic data to estimate the number of trunk/lines required to meet this value.

Number of Trunk Lines (if enabled). The number of physical lines in this facility.

Delete at end of Accounting Period. The option to remove this facility after the period closes.

5. When complete, choose **CLOSE** to return to the Trunk dialog box; then choose **CLOSE** to exit from the Trunk dialog box.

Access Codes

"Access Code" appears as a menu option only if the Call Collection Interface in use recognizes that access codes appear in the call record dialed number field — in this case, access codes must be removed to process the call properly:

1. In a multi-site system, select the site (see *Selecting a Site* under *Administration Functions* in this chapter for details).

2. From the **Configuration** menu, select **Access Codes**.
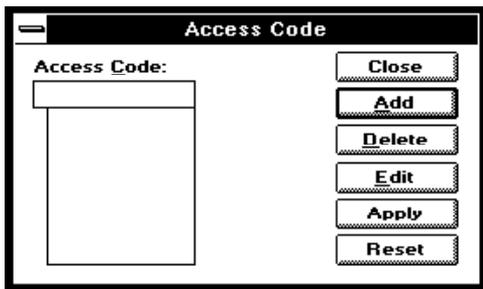
3. For a new entry, choose **ADD** and type the access code; for changes, select the access code and choose **DELETE** or **EDIT**.

4. When complete, choose **APPLY** to save changes (**RESET** cancels them); then choose **CLOSE** to exit.

Holidays

Use this dialog box to add or remove a date from the list of holidays that offer call rate discounts.

1. In a multi-site system, select the site (see *Selecting a Site* under *Administration Functions* in this chapter for details).

2. From the **Configuration** menu, select **Holidays**.
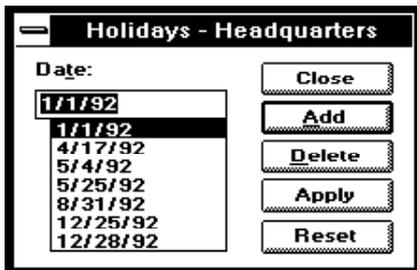
3. For a new entry, choose **ADD** and type a date; for changes, select the date and choose **DELETE** or **EDIT** .

4. When complete, choose **APPLY** to save changes (**RESET** cancels them), then choose **CLOSE** to exit.

ISDN BCC Markups

The Bearer Capability Class (BCC) is a field in an ISDN call record that identifies classes of service. Classes of services include Voice, Mode 0 (64Kbps clear), Mode 1 (56Kbps synchronous), Mode 2 (19.2 Kbps synchronous or asynchronous), and Mode 3 (LAPD protocol and circuit/packet switches data).[*]

Use this dialog box to set up or change markups associated with BCC services offered on ISDN calls.

1. In a multi-site system, select the site (see *Selecting a Site* under *Administration Functions* in this chapter for details).

2. From the **Configuration** menu, select **ISDN BCC Markups**.

3. For new entries, choose **ADD** and type a Bearer Capability Class Code; for changes, select a code and choose **DELETE** or **EDIT**.

4. For an addition or edit, enter the markup (-100.00% to 1000.00%) for the named class of service.

5. When complete, choose **APPLY** to save changes (**RESET** cancels them); then choose **CLOSE** to exit.

---

[*] BCC Mode 6 (wideband calls) is not currently supported.

Configuring
Call Collection Interfaces

You can set up interface details with the source of call records for a site (typically, a telephone switch, switch adjunct, or call collector, on- or off-premises). These details consist of:

- A transmission protocol and its options (PC port used and transmission parameters)

- A format to interpret call records

- The dates to enable call collection

- A schedule to set the polling timetable for remote sites

- The option to save call data for sending it out to an external poller system

To set up the Call Collection interface, proceed as follows:

1. In a multi-site system, select the site (see *Selecting a Site* under *Administration Functions* in this chapter for details).

2. From the **Configuration** menu, select **Call Collection Interface.**

```
┌─────────────────────────────────────────────────────────────┐
│ ▭                  Call Collection Interface                 │
├─────────────────────────────────────────────────────────────┤
│ ┌─Protocol──────────────────────────────┐    ┌──────────┐    │
│ │ No Protocol                            │    │  Close   │    │
│ │ ┌──────────────────────────────────┐  │    └──────────┘    │
│ │ │ Direct Connect 1.0            ▼│  │    ┌──────────┐    │
│ │ └──────────────────────────────────┘  │    │  Apply   │    │
│ │ ┌──────────────┐                       │    └──────────┘    │
│ │ │  Options...  │                       │    ┌──────────┐    │
│ │ └──────────────┘                       │    │  Reset   │    │
│ └───────────────────────────────────────┘    └──────────┘    │
│                                               ┌──────────┐    │
│ ┌─Format────────────────────────────────┐    │  Add...  │    │
│ │ 24▼ ISDN Unformatted, 15 char Acct Code│    └──────────┘    │
│ │ ┌──────────────────────────────────┐  │                    │
│ │ │ (125) AT&T DG 1 1.0           ▼│  │                    │
│ │ └──────────────────────────────────┘  │                    │
│ │ ┌──────────────┐                       │                    │
│ │ │  Options...  │                       │                    │
│ │ └──────────────┘                       │                    │
│ └───────────────────────────────────────┘                    │
│                                                               │
│ Enable from: │ 01/01/90 │ to: │ 12/31/36 │   ┌──────────┐    │
│ ☐ Save call data for sending                 │ Schedule.. │    │
│                                               └──────────┘    │
└─────────────────────────────────────────────────────────────┘
```

3. Select the protocol and format used to communicate with the source of call records for this site.

⇒ You may have to load a Call Collection Interfaces Disk before you can select a protocol and/or format. To do so, choose **ADD** and follow screen instructions to name a drive and load the diskette in it.

Protocol options may include:

— Direct Connect (for a switch, no protocol)
— CAS for Windows (for another PC running this application)
— PSU (polled or direct)
— CDRU PC (polled or direct)
— 3B2 CDRU (polled or direct)
— CDRU/S or CDRU/SE

Call record format options typically list the name of the switch, software release/version, and/or features.

4. Choose the protocol **OPTION** button for transmission details — Port name, baud rate, etc. Press the **F1** key for help on specific values.

5. Type the enable from and to call collection dates. To completely disable collection, enter the same date on both fields.

6. If this site uses the Call Sender Interface to an external poller system, enable "Save call data for sending."

7. If call collection is not on "real-time," choose **SCHEDULE** to set the timetable for collecting calls from this site.
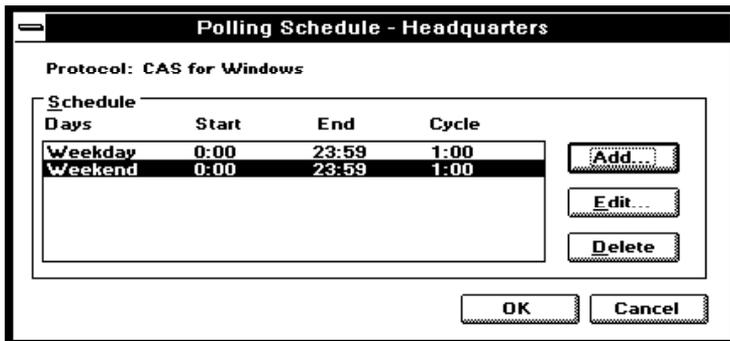
For a new schedule, choose **ADD**; for changes, select a day-time slot and choose **DELETE** or **EDIT**, as appropriate.
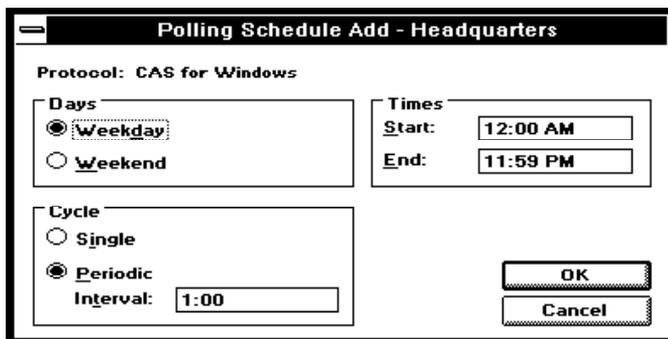
```
┌──────────────────────────────────────────────────────┐
│ ▭    Polling Schedule Add - Headquarters             │
├──────────────────────────────────────────────────────┤
│  Protocol:  CAS for Windows                           │
│  ┌─Days────────────────┐  ┌─Times──────────────────┐  │
│  │ ● Weekday           │  │ Start:  12:00 AM        │  │
│  │ ○ Weekend           │  │ End:    11:59 PM        │  │
│  └─────────────────────┘  └─────────────────────────┘ │
│  ┌─Cycle───────────────┐                              │
│  │ ○ Single            │                              │
│  │ ● Periodic          │     ┌──────────────┐         │
│  │   Interval:  1:00   │     │      OK      │         │
│  │                     │     └──────────────┘         │
│  └─────────────────────┘     │    Cancel    │         │
│                              └──────────────┘         │
└──────────────────────────────────────────────────────┘
```

Complete the dialog box, then choose **OK** to accept the changes and return to the Call Collection Interface dialog box.

Days. The polling schedule for weekdays or weekends, as defined in your workweek.

Times. The start and end of a time-slot during which polls occur at the frequency set by the cycle. Time-slots may not overlap others scheduled on that day, through the same port.

Cycle. A single poll at the start time (above) or periodic polls at every hour:minute intervals.

8. When the Call Collection Interface dialog box is complete, choose **APPLY** (**RESET** cancels all changes to schedules and options) and acknowledge messages. Choose **CLOSE** to exit.

Setting Up the Call Sender Interface

Your call record data is accessible to any external poller system — including another PC running CAS — that is able to communicate with your PC.

Use this option to set up communications with the external poller and to specify how and when to request an emergency poll.

⮕ Actual data transfers require these other features:

— Add the poller as a "user" of your PC and inform the poller's system manager how to access this PC. See *Setting Up System Users* in this chapter.

— Enable "save call data for sending" on the Call Collection Interface for the site(s) involved in the transfer.

1. From the **Configuration** menu, select **Call Sender Interface**.

2. Complete the dialog box, then choose **OK** to save changes (**CANCEL** ignores them) and close the dialog box:

Port Name. Type or select the port used to communicate with the external Poller.

Baud Rate. Type or select the transmission speed for the port — 300, 600, 1200, 2400, 4800, 9600 (or any other supported by the poller interface).

Home System. (Not used in a direct connection) Enter the phone number, user ID, and Password   for calling the Poller in an emergency. Use the phone number format expected by your modem — i.e. "T" or "P" (for tone or pulse), digits, commas "," (for pauses) if required. For example, T9,5551212 uses touch tone to dial 9, pause, then dial 555-1212.

Free Disk Space. (Not used in a direct connection) Enter the call record storage conditions that trigger an emergency call:

— Minimum (available storage ihreshold in kilobytes)

— Check Time (frequency to check for space in hours:minutes)

— Drives (where calls are stored)

Direct Connection. Check [X] when directly connected to the poller system.

Enabled. Set [X] the ability to be polled.

Setting Up the Callback Receiver

Use this option for a PC acting as server/poller in a telecommunications management network, to dedicate a port for receiving emergency poll requests from call collectors at remote sites.

⇒ Remember to add each potential emergency caller as a "user" of your PC. See *Setting Up System Users* in this chapter.

1. From the **Configuration** menu, select **Callback Receiver**.
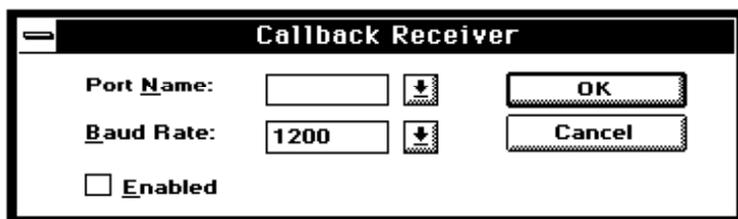
```
┌─────────────────────────────────────────────────────┐
│ ▬          Callback Receiver                         │
├─────────────────────────────────────────────────────┤
│                                                      │
│   Port Name:    ┌──────────┐ ┌� ┐  ┌┄┄┄┄┄┄┄┄┄┄┄┄┐     │
│                 └──────────┘ └▼┘  ┊    OK      ┊     │
│                                   └┄┄┄┄┄┄┄┄┄┄┄┄┘     │
│   Baud Rate:    ┌──────────┐ ┌� ┐  ┌┄┄┄┄┄┄┄┄┄┄┄┄┐     │
│                 │ 1200     │ └▼┘  ┊   Cancel   ┊     │
│                 └──────────┘      └┄┄┄┄┄┄┄┄┄┄┄┄┘     │
│                                                      │
│   ☐ Enabled                                          │
│                                                      │
└─────────────────────────────────────────────────────┘
```

2. Complete the dialog box, then choose **OK** to save changes (**CANCEL** ignores them) and close the dialog box:

   Port Name. Type or select the port used to receive emergency poll requests from remote call collectors.

   ⇒ This port must be different from the one(s) used for call collection.

   Baud Rate. Type or select the transmission speed for the port — 300, 600, 1200, 2400, 4800, 9600 (or any other supported by the modem used).

   Enable [X] or disable the port for receiving emergency calls.

Defining Accounting Period

CAS for Windows uses the concept of accounting period to create "current" and "archive" call record files automatically and to produce complete period statistics on closing dates and times.

Use this option to set up system-wide values based on your company's fiscal year and accounting practices.

1. From the **Configuration** menu, select **Accounting Period.**

2. Complete the dialog box:

    Accounting Period . The length of the period: Monthly, Bi-monthly, Quarterly, or Number (3 to 365) of days (default = monthly).

    First Day of Budget Year. The month and day (default = January 1).

    Time of day for closing accounting period. The time in a 24-hour format (0:00 to 23:59 — default = 0:00).

3. Choose **OK** to save changes (**CANCEL** ignores them) and close the dialog box.

Setting Up System Users

You can set up or change the login names and access privileges of all system users — these include all PC operators, as well as other systems that require access to your PC (such as call senders and receivers in a multi-site system).

1. From the **Configuration** menu, select **Users**.
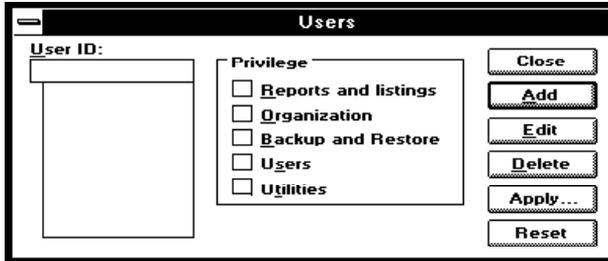
2. a. For deletions, select the user ID and choose **DELETE**; proceed directly to step 5.

    b. For a new entry, choose **ADD**; for changes, select the user ID and choose **EDIT**.

3. Enter the User ID to log in and enable [x] the privileges — that is, the functions available to this user. Privileges are not required for call sender or receiver systems that access your PC.

4. Choose **APPLY** to set a password. When complete, choose **OK** to accept changes and return to the Users dialog box.

5. When the Users dialog box is complete, choose **CLOSE** to exit.

Customization Functions

This section describes the functions in the Customize menu. It is organized into the following topics:

- *Setting Up the Organization Levels* — describes how to identify system-wide information on your company name, the number and names of the hierarchical levels used in your organization, and the level at which to track budgets.

- *Specifying Currency Attributes* — describes how to specify currency attributes at a site. In Multi-site systems, this includes a conversion factor from local to central site's currency.

- *Specifying the Tax Structure* —describes how to activate and name up to three taxes in your system-wide tax structure.

- *Enhancing the Location Table* — describes how to associate call destination names with specific dialing patterns, and thus customize detail reports.

- *Defining the Work Week* — describes how to identify the days when "weekdays," "weekend-1," and "weekend-2" call rates apply.

- *Specifying Reporting Options* — describes how to set system-wide detail report attributes (such as summarizing all local, incoming, zero-cost calls, and/or taxes as separate line-items and marking call costs derived by default due to faulty or insufficient costing information).

- *Selecting a Language* — describes how to change the language used on screen displays and reports.

Setting Up the Organization Levels

CAS for Windows is built with a system-wide Organization structure composed of a five-level hierarchy and the following attributes:

- Level 1 = Extension — corresponds to the station source or destination in a call record. Required level.

- Level 2 = Cost Center — can set cost adjustments to calls charged to its extensions. Required level.

- Level 3 = Department — budget tracking level. Optional.

- Levels 4 and 5 = Division and Branch. Optional levels.

To enter your company name and customize the organization structure, proceed as follows:

1. From the **Customize** menu, select **Organization Levels**.

2. Enter the Company Name (up to 25 characters), Number of Levels, Budget Level, and Level Names (up to 25 characters).

3. When complete, choose **OK** to save changes and close the dialog box; **CANCEL** closes box without changes.

Specifying Currency Attributes

CAS for Windows creates a site whose currency is based on the fixed rate tables loaded at installation. This means that systems with actual carrier tariffs should not change the currency itself; however, the way values appear on display and reports may be customized.

1. In a multi-site system, select the site (see *Selecting a Site* in this chapter for details).

2. From the **Customize** menu, select **Currency**.

3. Complete the dialog box:

    Name (1 to 8 characters) and Symbol (1 to 5 characters) for the currency.

    Symbol Placement and Negative. The representation of positive and negative monetary values.

    Leading Zero. The usage of a leading zero on values less than 1.

    Fixed Trailing Zeros and Decimal Digits. A combination that selects the precision of all costing entries.

    ⮕ Changing either field after installation may alter prior costing entries and will require thorough checking.

    1000 Separator and Decimal Separator. The characters separating 3-digit groups and decimals, respectively.

4. The Currency Formats box displays your choices. If correct, choose **OK** to save changes and close the dialog box.

Specifying the Tax Structure

CAS for Windows uses a system-wide tax structure of up to three active taxes that can be charged to the basic cost of calls.

Actual tax rates are site-specific, based on the call type (see *Configuring Call Rating Functions - Call Types* in this chapter for details.)

1. From the **Customize** menu, select **Taxes**.

```
┌─────────────────────────────────────────────────────────────┐
│ ▭       Tax Names - Headquarters                             │
├─────────────────────────────────────────────────────────────┤
│ Tax-1: │Federal            │  ⊠ Active   ┌──── OK ────┐       │
│ Tax-2: │State              │  ⊠ Active   │   Cancel   │       │
│ Tax-3: │Local              │  ⊠ Active   └────────────┘       │
└─────────────────────────────────────────────────────────────┘
```

2. Enter the names (one to 20 characters) and enable [X] all active taxes in your system.

3. When complete, choose **OK** to save changes and exit.

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Enhancing the Location Table

Location Tables are used to identify the area called for detail reports. When you install actual tariffs for a site, a table of dialing patterns from that locality is also included.

To override the installed tariff-based table of location names, proceed as follows:

1. In a multi-site system, select the site (see *Selecting a Site* in this chapter for details).

2. From the **Customize** menu, select **Location Table**.
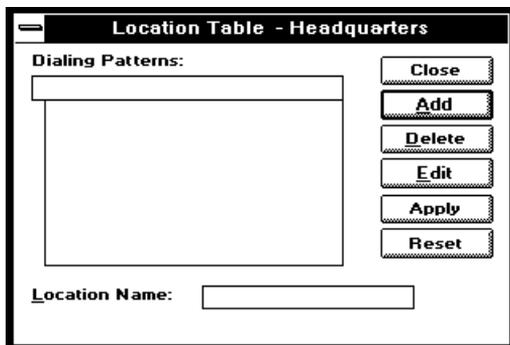
3. For a new entry, choose **ADD**; for changes, select a dialed pattern and choose **DELETE** or **EDIT**, as appropriate.

4. For additions or edits, enter a dialed pattern (represented by up to 18 digits and/or wild cards (? = single digit; % = multiple digits) and the location name (up to 18 characters).

5. When complete, choose **APPLY** (**RESET** cancels changes); then choose **CLOSE** to exit.

Defining the Work Week

The system uses the Work Week *Type of Day* assignments to cost calls by *fixed rate table* or by *charge band* rate methods. Some applications use the *Business Hours* to track calls (for example, the HackerTracker option uses them to set up toll fraud criteria).

⟹ System defaults are Monday to Friday = weekdays, Saturday = weekend-1, Sunday = weekend-2, Business hours = 8 AM to 5 PM.

1. In a multi-site system, select the site (see *Selecting a Site* in this chapter for details).

2. From the **Customize** menu, select **Work Week**.

3. Select the type of day — weekday, weekend-1, or weekend-2 — for Monday through Sunday and the start and end of your business hours.

4. When complete, choose **OK** to save changes and close the dialog box; **CANCEL** closes box without changes.

Specifying Reporting Options

CAS for Windows allows you to set attributes for detail reports such as printing summaries of taxes, local calls, incoming calls, and zero-cost calls, as well as flag calls costed by default due to incomplete information.

To do so, proceed as follows:

1. From the **Customize** menu, select **Reporting Options**.

```
┌──────────────────────────────────────────┐
│ ━    Reporting Options                    │
│ ☐ Summarize Local Calls      ┌─────────┐  │
│ ☐ Summarize Incoming Calls   │   OK    │  │
│ ☐ Summarize Zero Cost Calls  └─────────┘  │
│ ☐ Summarize Taxes            ┌─────────┐  │
│ ☐ Mark Default Rated Calls   │ Cancel  │  │
│                              └─────────┘  │
└──────────────────────────────────────────┘
```

2. Enable [X] or disable options as you want them to appear on detail reports.

3. When complete, choose **OK** to save changes and close the dialog box; **CANCEL** closes box without changes.

Selecting a Language

CAS for Windows can display text in dialog boxes, messages, on-line help, and reports in any of the languages installed in your system.

➡️ Changing languages does not affect the values of any database entries or user-defined parameters.

To change the language, proceed as follows:

1. From the **Customize** menu, select **Language**.

2. Choose the desired language from the list box.

   ➡️ You may have to load its Language Disk before you can select a language.   To do so, press **ADD** and follow screen instructions to name a drive and load the diskette in it.

3. Choose **OK** to close the dialog box and change the language; **CANCEL** closes the box without changes.

Utilities

<div style="text-align: right; font-size: 3em; font-weight: bold;">5</div>

This chapter describes how to perform maintenance tasks — such as backing up the system, checking and repairing database files, installing updates, etc. — using the system Utilities.

The chapter is organized into the following topics:

- *Backing Up the System* — describes how to copy data from the current or an archived accounting period onto diskettes.

- *Restoring the System* — describes how to copy data from a prior backup onto the current or archived accounting period.

- *Editing Misdialed Accounts* — describes how to correct misdialed account codes in the specified call records.

- *Importing/Exporting Files* — describes how to selectively copy text files into/from the Organization database.

- *Maintaining Database Files* — describes how to delete, check, and repair database files.

- *Maintaining Site Information* — (multi-site systems) describes how to rename, add, or delete a site in multi-site systems.

- *Installing Updates/Upgrades* — describes how to load diskettes with fixed rates updates and system options upgrades.

- *Checking Call Processing Status* — describes how to display the stored call count and stop/start processing for a site.

Backing Up the System

Use this utility to copy the current or the archived period's data onto floppy diskettes.

Backups are used to retrieve vital information in case of disk failure or to run reports from an older period. We recommend backing up current data at least weekly and archived data once, after closing the accounting period.

⟹ If your archived database is very large, you should back up to tape.

To do so, wait for CAS to be idle (except for rating calls), then use any procedure appropriate for your drive (pctools, backup, xcopy, etc.).

The archived data resides in **\archive.acv**, located directly under the installation directory (**c:\casw**, unless changed at installation).

To use CAS backup utility, make certain to have a supply of diskettes and labels ready. (This utility will format diskettes. Do not use diskettes containing files that you wish to keep.) Proceed as follows:

1. From the **Utility** menu, select **Backup**.

```
┌──────────────────────────────────────────┐
│ ⊟              Backup                     │
├──────────────────────────────────────────┤
│ Drive: [A:      ↓]       ┌──────────┐     │
│                          │    OK    │     │
│ Type:  [1.44 M  ↓]       └──────────┘     │
│                          ┌──────────┐     │
│ ┌Accounting Period───────│  Cancel  │──┐  │
│ │ ⦿ Current Period       └──────────┘  │  │
│ │      Thursday, April 01, 1993        │  │
│ │         to Friday, April 30, 1993    │  │
│ │ ○ Archived Period                    │  │
│ │      No Archived Period              │  │
│ └──────────────────────────────────────┘  │
└──────────────────────────────────────────┘
```
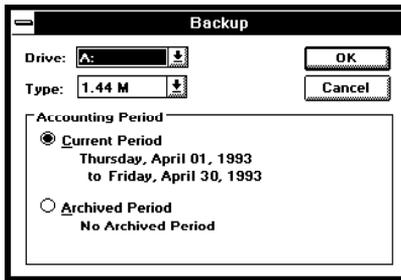
2. Select the drive, the type of diskette to use, and which accounting period to backup — current or archived.

3. Load the first diskette, choose **OK** to start, and follow prompts to continue. Make certain to label all diskettes with their sequence number and the period's dates.

Restoring the System

Use the Restore utility to load a prior backup — typically, to run reports on archived data or to re-build CAS files after a system failure.

1. Retrieve the desired set of backup diskettes.

2. From the **Utility** menu, select **Restore**.
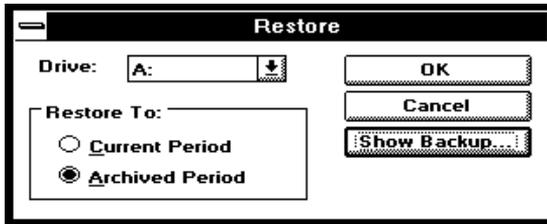
3. Select the drive, the current or archived period to restore, and load the first diskette.

    ⚠️ *Restoring data to the current period's file will replace current call records and system data with older data, including users' login IDs and passwords. You may also lose new call records streaming in during this operation.*

4. To check the dates on the diskette in the named drive, choose **SHOW BACKUP**.

5. Choose **OK** to start; follow prompts to continue.

Editing Misdialed Accounts

Use the Call Record Edit utility to change misdialed account codes in stored call records. Corrections will be reflected in all summary statistics kept by the system.

1. From the **Utility** menu, select **Call Record Edit**.

```
┌─────────────────────────────────────────────────────────────┐
│ ▬        Call Record Edit - Headquarters                     │
├─────────────────────────────────────────────────────────────┤
│ ┌─Search Criteria──────────────────────┐    ┌─────────┐      │
│  Extension:        [ALL]          ▼         │  Close  │      │
│  Date:             [        ]                └─────────┘      │
│  Account Code:     [ALL]           ▼         ┌─────────┐      │
│ └──────────────────────────────────────┘    │ Search  │      │
│                                              └─────────┘      │
│ ┌─Call Record Information──────────────┐    ┌─────────┐      │
│                                              │  Next   │      │
│  Extension:                                  └─────────┘      │
│  Date:                                       ┌─────────┐      │
│  Time:                                       │Previous │      │
│  Duration:                                   └─────────┘      │
│  Cost:                                       ┌─────────┐      │
│  Dialed Digits:                              │  Edit   │      │
│  Account Code:     [NONE]          ▼         └─────────┘      │
│                                              ┌─────────┐      │
│                                              │ Apply   │      │
│                                              └─────────┘      │
│                                              ┌─────────┐      │
│                                              │ Reset   │      │
│                                              └─────────┘      │
└─────────────────────────────────────────────────────────────┘
```

2. Select criteria — extension, date, and/or account code — to narrow down the search, then choose Search.

   The window will display the time, duration, cost, dialed digits and account code of call records matching your criteria.

3. Use **NEXT** until the desiredr ecord appears on display; then choose **EDIT** and type or select the correct account code (or select "NONE" from the list box).

4. When complete, choose **APPLY** to save the changes (**RESET** cancels changes); then choose **CLOSE** to exit.

Importing/Exporting Files

Use the File Import/Export utilities to transfer Organization data from/to an external source — typically, another PC with CAS for Windows — to help maintain shared Organization files.

CAS can import and export files as text in the format described below — we show a pipe "|" as a separator, but you may use any character that does not appear as a field value. Use quotes ("") where indicated. (See *Administering the Organization Table* in chapter 4 for field format and acceptable values.)

File	Format
Level-1	extension|"name"|authorization code|"cost center" |fixed charge|0-18 (masked digits for storage)|0-18 (masked digits for reports)| yes/no (immediate output)
	Example: 6546|"Sohn, Maria"|6546|"Publications"|0|0|0|no
Level-2	"cost center"|markup|surcharge|minimum cost|"department"|budget (if applicable or 0)
	Example: "Publications"|0|0|0|"Marketing"|0
Level-3:	"department name"|budget|"division name"
	Example: "Marketing"|5000.00|"TELECOM"
Level-4:	"division name"|budget|"branch name"
	Example: "TELECOM"|0|"USA BRANCH"
Level-5:	"branch name"|budget
	Example: "USA BRANCH"|0

⟹ To import files, higher level entries must exist in the database for lower levels to refer to them in an association. If an imported entry refers to an undefined higher level, the entry will be added with "Default" as the higher level owner.

For example, to import extension 100 under cost center "Sales-1," you must have imported or added "Sales-1" to the database first.

To import or export files, proceed as follows:

1. From the **Utility** menu, select **File Import** (or **File Export**, as required).
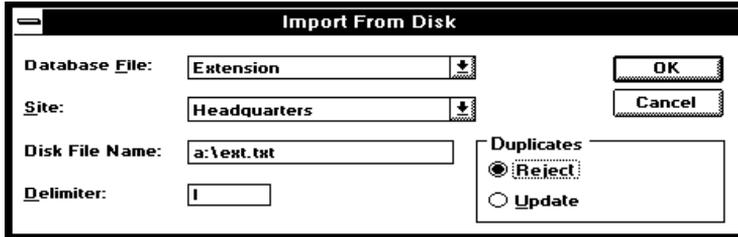
2. Complete the dialog box:

   Database File. Select the organization level for transfer.

   Site. (Multi-site systems) Select the site — enabled only for level-1 file transfers.

   Disk File Name. Enter the path name of the external file — the source of import data or destination of export data.

   Delimiter. Enter the character used to separate fields in the imported or exported records.

   Duplicates. (File import only) Select the action to take if an imported entry duplicates an existing entry: *reject* the new entry or *update* the existing entry.

3. When complete, choose **OK** to start (or **CANCEL** to abort) and close the dialog box.

Maintaining Database Files

CAS for Windows provides you with utilities to check the integrity of your files, repair them if possible, or remove them altogether.

1. From the **Utility** menu, select:

    a. **Call Record Deletion**, to remove all calls from the current period's file. If you wish to remove the statistics accumulated to date, enable [X] Reset Internal Summaries.

    b. **Database Maintenance** functions, for the following tasks:

        —   **Rebuild Internal Summaries**, to process all calls in the current period and recompute summary statistics.

        —   **Rebuild Indexes**, to repair database files (use after a system error or a power interruption).

        —   **Force Deletion**, to remove immediately all organization, account, or facility entries that were earmarked for deletion at end of period.

            ⚠️ *Do not use this function unless you are certain none of the entries are active (linked to current calls). Deleting active entries will corrupt the associated call record database.*

        —   **Verify Database**, to check file integrity.

2. Choose **OK** to confirm or **CANCEL**, to abort.   When the process is completed, the main menu appears on display.

Adding a Site or Changing
Site Information

If you have a multi-site system, you can add new CAS sites, as well as rename, delete, or modify information on any installed sites.   Multi-site systems support up to 4, 25, or 100 sites, depending on the option ordered. One site, typically, the operation center, is designated "central site."

To add a site, you must complete the following requirements:

At the remote sites	Enable SMDR collection. This involves setting up a call collector system (which may be another PC running CAS) to pass call records to the central site.
	Provide information for input at installation: — The Call Collection and the Trunk & Facilities worksheets — The Organization worksheet (or provide Organization information via the File Import utility) — (Optional) the Customization and the Carrier Services worksheets
At the central site	Provide a PC port and modem to poll the remote site (may share modem used to poll other sites).
	Obtain: — Fixed rates diskettes for the new site (one diskette per carrier service used on site)* — The new site's worksheet information
	Install in CAS for Windows: — Multi-site option (via Upgrades function) — New site (via Site Maintenance function)

* You may use the *Fixed Rates (Basic)* diskette shipped with the Multi-Site package to receive calls from this site without rating them; however, we recommend installing a site with *Fixed Rates Updates* diskettes (custom rates).

To install a site or to delete or modify an installed site's information:

1. From the **Utility** menu, select **Site Maintenance**.

```
┌──────────────────────────────────────────────────────┐
│ ▭                        Site                          │
├──────────────────────────────────────────────────────┤
│ Site Name:                                ┌─────────┐ │
│ ┌──────────────────────────────────────┐  │  Close  │ │
│ │Satellite                             │  └─────────┘ │
│ │ Headquarters                         │  ┌─────────┐ │
│ │ Satellite                            │  │   Add   │ │
│ │                                      │  └─────────┘ │
│ │                                      │  ┌─────────┐ │
│ │                                      │  │ Delete  │ │
│ │                                      │  └─────────┘ │
│ │                                      │  ┌─────────┐ │
│ │                                      │  │  Edit   │ │
│ │                                      │  └─────────┘ │
│ │                                      │  ┌─────────┐ │
│ │                                      │  │  Apply  │ │
│ │                                      │  └─────────┘ │
│ │                                      │  ┌─────────┐ │
│ └──────────────────────────────────────┘  │  Reset  │ │
│                                            └─────────┘ │
│ ☐ Central Site      Site ID: │Site-two │               │
└──────────────────────────────────────────────────────┘
```
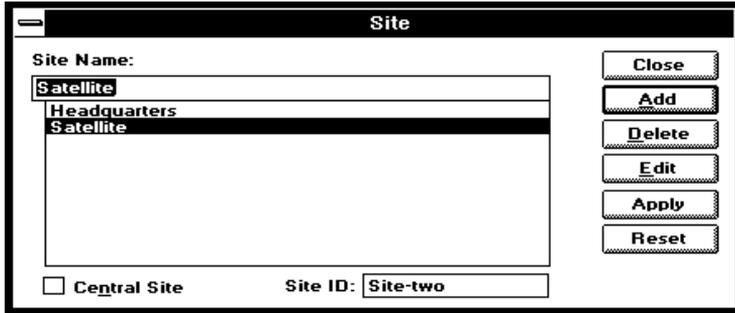
2. For deletions, select the desired site , then choose **DELETE** and confirm removal. Proceed directly to step 7.

   For changes, select the name of the site of interest, then choose **EDIT**; for additions, choose **ADD**.

3. Complete the dialog box:

   Site name. Up to 25 characters used as report headings.

   Site ID. Identification (1 to 8 characters) used for data transfers. For a given site, you must use the same site ID throughout a network of call senders and receivers.

   Central site. Enable [x] only for the central site in your network.

4. When complete, choose **APPLY** to set up the site's databases.

```
┌──────────────────────────────────────────────────────┐
│ ▭                     Setup - new                      │
├──────────────────────────────────────────────────────┤
│ ☐ Tax Names                         ┌──────────┐       │
│                                     │  Close   │       │
│ ☐ Currency Options                  └──────────┘       │
│                                     ┌──────────┐       │
│ ☐ Fixed Rates (Required)            │ Cancel   │       │
│                                     └──────────┘       │
│ ☐ Carrier Services                                     │
│                                                        │
│ ☐ Call Collection Selection (Required)                 │
│                                                        │
│ ☐ Trunk (Required)                                     │
│                                                        │
│ ☐ Organization                                         │
└──────────────────────────────────────────────────────┘
```

5. Have the site's fixed rates diskette(s) and worksheets at hand.

   Select an item and complete its dialog box. When you close the item's dialog box, the Setup dialog box reappears. Proceed to the next item:

   [X] Tax Names — see *Specifying the Tax Structure* in Chapter 4 for details.

   [X] Currency Options — see *Specifying Currency Attributes* in Chapter 4 for details.

   [X] Fixed Rates — load the fixed rate diskette of the site's primary carrier services in the selected drive; when complete, reselect [x] Fixed Rates and repeat with any other diskettes (in any order).

   [X] Carrier Services — see *Configuring Call Rating Tables - Carrier Services* in Chapter 4 for details.

   [X] Call Collection Interface — see *Configuring Call Collection Interfaces* in Chapter 4 for details.

   [X] Trunk — see *Configuring Call Rating Tables - Trunks and Facilities* in Chapter 4 for details.

   [X] Organization — see *Administering the Organization Table* in Chapter 4 for details.

6. When complete, choose **CLOSE** to accept entries (required items must be completed).

   Choose **CANCEL** to abort the installation and close the dialog box. If you confirm, all installed files will be deleted.

7. Choose **CLOSE** to exit the Setup dialog box.

⇒ If you loaded the *Fixed Rates (Basic)* diskette, call rating will be disabled for this site. We suggest that you start call rating (via **Call Processing Status** documented in this chapter) after you install custom rates (via *Fixed Rates Updates*).

Installing Updates/Upgrades

CAS for Windows software comes in floppy diskettes. From these diskettes you can install telephone rate updates and system upgrades — model size increases and options such as Multi-Site and HackerTracker.

To load new software from diskettes, proceed as follows:

1. For a rate update in a multi-site system, first select the site (via the **Site Selection** option in the **Administration** menu).

2. From the **Utility** menu , select (a) F**ixed Rates Updates** or (b) **Upgrades**, as appropriate.

   a.

   ```
   ▭  Fixed Rates Update - Headquarters
   Disk Drive:  A: ▼       OK
                           Cancel
   ```

   b.

   ```
   ▭              Upgrades
   Disk Drive:  A: ▼       OK
                           Cancel
   ```
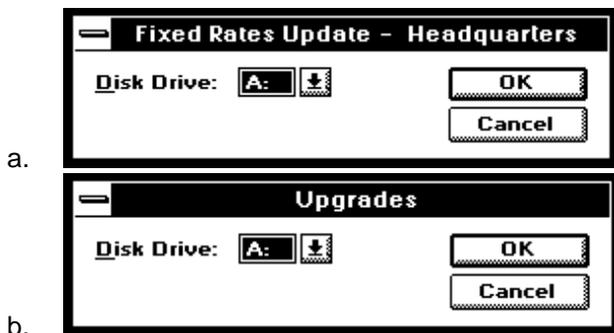
3. Select a drive, load the diskette (or diskette #1 in a multiple disk set), and choose **OK** to start.

4. Follow screen instructions to complete the procedure and remove the diskette from the drive.

Checking Call Processing Status

Use the Rating Window utility to view the number of stored call records in your PC and, optionally, to stop and then start call processing.

The window will display the name of the site whose calls are currently being processed.

➡️ Selecting this menu option (check mark on) opens the Call Processing Status dialog box, which remains on display until you deselect it from the menu (check mark off).

1. From the **Utility** menu, select **Call Processing Status**.

```
┌─────────────────────────────────────────┐
│ ▬         Call Processing Status         │
├─────────────────────────────────────────┤
│ Site:    Headquarters                    │
│ Number of call records stored:    0      │
│              ☐ Stop Rating Calls         │
└─────────────────────────────────────────┘
```
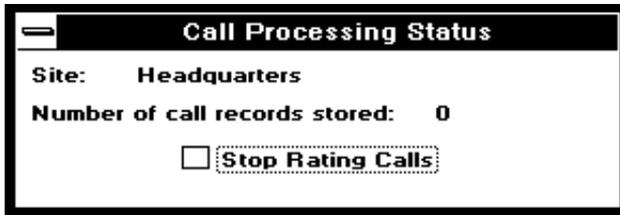
2. To stop processing calls, select the option; to enable processing, deselect the option.

3. To close the window, double-click on the top, left corner.

Worksheets

A

This appendix contains blank forms to collect the information required for installation:

- CUSTOMIZATION WORKSHEET
    - Part I. SYSTEM SETUP
    - Part II. SITE SETUP

- CARRIER SERVICES WORKSHEET
    - Part I. GENERAL INFORMATION
    - Part II. SPECIAL NUMBERS
    - Part III. CODEBOOK
    - Part IV. INSTALLED RATES

- CALL COLLECTION WORKSHEET
    - Part I.   GENERAL INFORMATION
    - Part II. POLLING SCHEDULE

- TRUNKS & FACILITIES WORKSHEET
    - Part I. TRUNKS
    - Part II. FACILITIES

- ORGANIZATION WORKSHEET
    - Part I. LEVEL-1
    - Part II. LEVEL-2
    - Part III. HIGHER LEVELS

CUSTOMIZATION WORKSHEET - Part I. SYSTEM SETUP

Organization Levels	Company Name			
	Number of Levels (Check one)	Level Names (See chapter 4 for defaults)		Budget Level (Check one)
	☐	1		☐
	☐	2		☐
	☐	3		☐
	☐	4		☐
	☐	5		☐

Accounting Period	Accounting Period	☐ Monthly ☐ Quarterly ☐ Bi-monthly ☐ Number of Days:_____
	First day of budget year	Time of day for closing Accounting Period
	Month (1-12) Day (1-31)	(hour:min)

CUSTOMIZATION WORKSHEET - Part II. SITE SETUP

Reference (multi-site systems)	Site Name	
	Site ID	☐ Central site

Tax Names	Tax-1	☐ Active
	Tax-2	☐ Active
	Tax-3	☐ Active

Currency Options	Currency Name	Symbol	Currency format	12.3456
				123.456
	Refer to the examples on the right and select the format that best represents the decimal precision and fixed trailing zeroes that you wish to use in costing a call.			1,234.56
				12,345.60
				12,345.6
	Enter the chosen format using your preferences for symbol placement, decimal separator, 1000-separator, etc.			123,456.0
				123,456.00
	Positive value Negative value			123,456
				1,234,560
				12,345,600
	If appropriate, select to use/not use leading 0's for values <1: ☐ 0.9 ☐ .9			123,456,000
				1,234,560,000

CARRIER SERVICES WORKSHEET - Part I. GENERAL INFORMATION

Carrier service	Home code	Cost calls out ☐ incom ☐	ISDN Information IXC code	NSF code
	Dial prefix		Digits in Auth. Code	
Carrier service	Home code	Cost calls out ☐ incom ☐	ISDN Information IXC code	NSF code
	Dial prefix		Digits in Auth. Code	
Carrier service	Home code	Cost calls out ☐ incom ☐	ISDN Information IXC code	NSF code
	Dial prefix		Digits in Auth. Code	
Carrier service	Home code	Cost calls out ☐ incom ☐	ISDN Information IXC code	NSF code
	Dial prefix		Digits in Auth. Code	
Carrier service	Home code	Cost calls out ☐ incom ☐	ISDN Information IXC code	NSF code
	Dial prefix		Digits in Auth. Code	
Carrier service	Home code	Cost calls out ☐ incom ☐	ISDN Information IXC code	NSF code
	Dial prefix		Digits in Auth. Code	
Carrier service	Home code	Cost calls out ☐ incom ☐	ISDN Information IXC code	NSF code
	Dial prefix		Digits in Auth. Code	

For each carrier service, complete all parts that apply:

Part II. SPECIAL NUMBERS — to identify the cost-per-call number patterns
Part III. CODEBOOK — to build its rate tables based on call destination and duration
Part IV. INSTALLED RATES — to identify its rates as a % of factory-installed tables

CARRIER SERVICES WORKSHEET - Part II. SPECIAL NUMBERS

Carrier Service (from Part I):		
Dial Pattern*	Cost per call	Call Type
* Enter digits (0 - 9) and/or wildcards (? = single digit; % = any number of digits) to represent a number as dialed — INCLUDING toll code, but EXCLUDING a carrier's dialed prefix.		

CARRIER SERVICES WORKSHEET - Part III. CODEBOOK - Dial Patterns for Charge Bands

Carrier service (from Part I):

Dial Pattern list	Charge band	Call Type
Enter digits (0 - 9) and/or wildcards (? = single digit; % = any number of digits) to represent a number as dialed — INCLUDING toll code, but EXCLUDING a carrier's dialed prefix.	From *Charge Band Rates*	From built-in list

CARRIER SERVICES WORKSHEET - Part III. CODEBOOK - Charge band rates

Charge Band	Time Period		Weekday	Weekend-1	Weekend-2	Holiday	Rate Information						Remaining time	
	Start Time hour:min	End Time hour:min					Initial secs.	cost	per secs.	Next secs.	cost	per secs.	cost	per secs.

CARRIER SERVICES WORKSHEET - Part IV. INSTALLED RATES

Carrier Service (From Part I)	Dial Pattern*	Fixed Rate Table from a Fixed Rates diskette	Markup %	Call Type

*   Enter digits (0 - 9) and/or wildcards (? = single digit; % = any number of digits) to represent a number as dialed — INCLUDING toll code, but EXCLUDING a carrier's dialed prefix.

CALL COLLECTION WORKSHEET - Part I. GENERAL INFORMATION

☐ Direct Connect Switch or CDRU (complete Options + A)   ☐ Remote CDRU (complete Options + C)   ☐ CAS or PSU (complete Options + B)

Options — Port Name _____ | Baud Rate _____

Protocol

A
Data Bits ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8
Parity ☐ Even ☐ Odd ☐ None ☐ Mark ☐ Space
Stop Bits ☐ 1 ☐ 2   Flow Control ☐ Xon/Xoff ☐ DTR ☐ RTS

B
Direct Connect ☐ yes (skip shaded areas) ☐ no (complete shaded areas)
Remote System — Phone Number _____ | UCT Difference _____
User ID _____ | Password _____
Local System — Phone Number _____ | UCT Difference _____
User ID _____ | Password _____

C
Phone Number _____
Parity ☐ Even ☐ Odd ☐ None ☐ Mark ☐ Space
Data Bits ☐ 4 ☐ 5 ☐ ☐ ☐
Stop Bits ☐ 1 ☐ 2 | UCT Difference _____ CDRU _____ PC _____

Format

☐ System 75/DEFINITY G1 TELESEER
☐ System 75 / DEFINITY G1/G3 LSU (____ -digit acct code)*
☐ DEFINITY G1/G3 ISDN 24-word unformatted standard ASCII
☐ DEFINITY G3 ISDN 24-word unformatted enhanced, wide band support
☐ System 85/DEFINITY G2 18-word ASCII unformatted + ____ -digit acct code*
☐ System 85/DEFINITY G2 ISDN 24-word unformatted
Dimension FP 8, 11, 12 (____ -digit acct code)*
☐ LSU 18-word ASCII
☐ LSU 18-word BCD
☐ SMDR DO 15-word ASCII
☐ System 25 or Merlin 18-word formatted
☐ Merlin LEGEND standard
☐ Merlin LEGEND ISDN

* Select account code length: __ 5-digit, __12-digit, __14-digit, or __15-digit

Save poll data for sending? ☐ no ☐ yes (See *Setting the Call Sender Interface* in chapter 4 for further requirements.)

CALL COLLECTION WORKSHEET - Part II. POLLING SCHEDULE

| *For reference (multi-site systems)* | Site ID | (from CUSTOM- IZATION WORK- SHEET - Part II) |
| | PORT USED | (from CALL COLLECTION WORKSHEET - Part I) |

Days (select one)	Start hour:min	End hour:min	Cycle (select one)
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals
☐ Weekday ☐ Weekend			☐ Single poll ☐ Periodic poll at____:____ *hour:min* intervals

TRUNKS & FACILITIES WORKSHEET Part I. Trunks

Trunks (list as they appear in a call record from the switch, grouped by facility)			Facility (from Part II)

TRUNKS & FACILITIES WORKSHEET Part II. Facilities

Facility	Carrier Service*		Target GOS	Number of Trunks
	Incoming	Outgoing		
* From the CARRIER SERVICES WORKSHEET				

ORGANIZATION WORKSHEET - Part I   LEVEL-1

Level-1	Personnel Name	Auth. Code	Fixed Charge	Mask Digits		Imm. Out.	Level-2
				Rpts.	Store		

ORGANIZATION WORKSHEET - Part II LEVEL-2

Level-2	Call Rating			Budget (If used)	Level-3 (If used, from Part III)
	Markup %	Surcharge	Min. charge		

ORGANIZATION WORKSHEET - Part III. HIGHER LEVELS

Level- ☐	Budget (If used)	Level- ☐ (Parent level, if used)

Sample Reports

B

This appendix provides samples of the following CAS for Windows reports:

- Organization Detail Report
- Organization Summary Report
- Cost Center Summary Report
- Department Summary Report
- Organization Trends Report
- Budget Report
- Selection Detail Report
- Selection Summary Report
- Account Code Detail Report
- Account Code Summary Report
- Call Type Report
- Date Report
- Cost and Duration Report
- Time of Day Report
- Call Distribution Report
- Incoming Traffic Analysis Report
- Rejected Call Summary Report
- Facility Report
- Facility Trends Report
- Facility Grade of Service Report
- Expensive Calls Report
- Longest Calls Report
- Frequently Called Numbers Report
- Telecom Manager's Report

```
                      Organization Detail Report
Date: Friday, October 09, 1992                              Page: 1
Time: 4:43:23 PM          MOSLEY Corporation
----------------------------------------------------------------------------

SELECTION CRITERIA  :
     DATE RANGE     : 9/01/92 to 9/30/92
     Department     : Marketing
     Cost Center    : 503 - Doc
     Extension      : 1041
     CALL TYPE      : All
     DIALED NUMBER  : All

     PAGE BREAK AFTER EACH Extension: Yes

Department       : Marketing
Cost Center      : 503 - Doc
Extension        : 1041
PERSONNEL NAME   : Sohn, Maria

                   DURATION                            CALL   COST
  DATE    TIME   HHHH:MM:SS  DIALED NUMBER   LOCATION   TYPE  (Dollars )
-------- ----- ---------- ------------------ ---------- ----- ----------
09/01/92 07:43   0:10:38                                INCOM       0.00
09/01/92 10:27   0:12:18                                INCOM       0.00
09/01/92 15:31   0:19:34                                INCOM       0.00
09/01/92 17:18   0:25:42                                INCOM       0.00
09/02/92 08:19   0:18:51 262-6547           ROCHESTER   LOCAL       0.43
09/03/92 07:04   0:17:51 1-415-903-5436     MT VIEW CA  OS-OL       2.59
09/03/92 08:17   0:03:41 01149899305593     WEST-GERMA  INTNL       3.69
09/03/92 09:01   0:19:26 1-374-5486         NAPLES      IS-IL       3.00
09/03/92 15:20   0:03:17 924-8695           VICTOR      LOCAL       0.10
09/04/92 08:50   0:00:57                                INCOM       0.00
09/04/92 11:00   0:00:32 555-1212           Local Info  SPCL        0.60
09/04/92 11:01   0:09:56                                INCOM       0.00
09/04/92 14:17   0:30:00 381-6000           EROCHESTER  LOCAL       0.67
09/04/92 16:20   0:15:38                                INCOM       0.00
09/05/92 09:35   0:24:52 383-7382           EROCHESTER  LOCAL       0.36
09/06/92 10:43   0:27:58                                INCOM       0.00
09/06/92 16:37   0:04:04 1-809-556-8342     LA ROMA DR  OS-OL       3.69
09/07/92 12:36   0:17:52 0113419874521      SPAIN       INTNL      16.20
09/07/92 13:14   0:20:57 1-309-555-1212     DIR ASS IL  PCL         0.65
09/07/92 13:57   0:27:06                                INCOM       0.00
09/07/92 16:34   0:27:03 911                Emergency   SPCL        0.00
09/08/92 11:20   0:06:24                                INCOM       0.00
09/08/92 17:28   0:15:10 1-201-835-4432     POMPTON NJ  OS-OL       2.29
09/09/92 09:39   0:26:40                                INCOM       0.00
09/09/92 11:19   0:25:27                                INCOM       0.00
09/09/92 16:11   0:16:58 1-604-985-3232     NOVANCO BC  OS-OL       8.39
09/09/92 18:46   0:21:44                                INCOM       0.00
09/10/92 07:57   0:22:34 383-7382           EROCHESTER  LOCAL       0.34
09/10/92 12:01   0:03:40 671-3345           W WEBSTER   LOCAL       0.10
09/10/92 13:17   0:07:27 1-401-454-6500     PROVIDE RI  OS-OL       1.44
09/10/92 14:36   0:11:09 383-7382           EROCHESTER  LOCAL       0.26
09/10/92 21:53   0:16:33 787-7534           W WEBSTER   LOCAL       0.25
09/11/92 12:45   0:10:38 01144713456714     UNITED-KIN  INTNL       8.29
09/11/92 15:45   0:11:47 1-315-654-7892     CAPEVIN NY  IS-OL       1.73
09/11/92 16:35   0:17:34                                INCOM       0.00
09/12/92 14:23   0:23:07                                INCOM       0.00
09/13/92 14:09   0:28:39                                INCOM       0.00
09/13/92 14:43   0:30:00 1-395-6010         BROCKPORT   IS-IL       2.85
09/13/92 15:24   0:17:57 1-709-454-6600     ST ANTH NF  OS-OL       5.57
09/14/92 13:20   0:08:43 1-214-435-6565     MAYPEAR TX  OS-OL       1.78
09/15/92 08:43   0:14:55                                INCOM       0.00
09/15/92 12:43   0:02:56                                INCOM       0.00
09/15/92 13:27   0:19:33 425-3849           FAIRPORT    LOCAL       0.45
09/16/92 10:27   0:04:25 1-415-903-5436     MT VIEW CA  OS-OL       0.88
```

B-2   Issue 1   May 1993

```
                          Organization Detail Report


Date: Friday, October 09, 1992                                    Page: 2
Time: 4:43:23 PM          MOSLEY Corporation
-----------------------------------------------------------------------------

Department    : Marketing
Cost Center   : 503 - Doc
Extension     : 1041
PERSONNEL NAME : Sohn, Maria


                DURATION                              CALL   COST
   DATE   TIME  HHHH:MM:SS  DIALED NUMBER   LOCATION  TYPE  (Dollars )
-------- ----- ---------- ---------------- ---------- ----- ----------
09/17/92 14:28  0:25:18 1-315-332-4539     NEWARK NY  IS-OL      3.09
09/17/92 15:58  0:06:16 425-3849           FAIRPORT   LOCAL      0.17
09/18/92 08:09  0:26:41 1-415-903-5436     MT VIEW CA OS-OL      5.54
09/18/92 08:45  0:26:12 1-416-568-9025     COOKSVI ON OS-OL      6.89
09/18/92 10:48  0:05:40 1-604-985-3232     NOVANCO BC OS-OL      2.78
09/18/92 13:09  0:25:39 1-201-835-4432     POMPTON NJ OS-OL      4.81
09/18/92 17:40  0:20:38 381-6000           EROCHESTER LOCAL      0.31
09/18/92 19:32  0:15:39                                INCOM      0.00
09/18/92 20:13  0:22:40 1-374-5486         NAPLES     IS-IL      2.57
09/19/92 13:01  0:25:57                                INCOM      0.00
09/19/92 13:37  0:20:12 1-212-875-4325     NEW YOR NY IS-OL      2.26
09/19/92 17:17  0:27:48 924-8695           VICTOR     LOCAL      0.41
09/19/92 18:32  0:21:01 729-9054           ROCHESTER  LOCAL      0.31
09/20/92 10:10  0:24:39                                INCOM      0.00
09/20/92 10:58  0:04:12                                INCOM      0.00
09/20/92 13:02  0:29:22 1-303-924-3345     BOULDER CO OS-OL      4.30
09/20/92 15:32  0:20:52                                INCOM      0.00
09/21/92 10:01  0:12:34                                INCOM      0.00
09/21/92 10:15  0:03:01 1-604-985-3232     NOVANCO BC OS-OL      1.44
09/21/92 12:10  0:19:32 1-617-665-3448     MELROSE MA OS-OL      3.86
09/21/92 12:48  0:24:19 1-293-4490         CHURCHVL   IS-IL      3.72
09/22/92 10:28  0:21:50 1-415-903-5436     MT VIEW CA OS-OL      4.52
09/24/92 07:26  0:11:50 1-415-903-5436     MT VIEW CA OS-OL      1.71
09/25/92 10:53  0:01:31 671-3345           W WEBSTER  LOCAL      0.08
09/25/92 13:32  0:05:04 1-212-773-2096     NEW YOR NY IS-OL      0.82
09/26/92 09:27  0:22:59 1-416-568-9025     COOKSVI ON OS-OL      4.28
09/26/92 13:47  0:10:14 01144713456714     UNITED-KIN INTNL      6.09
09/26/92 14:58  0:13:06                                INCOM      0.00
09/26/92 15:48  0:22:45 1-202-395-2309     WASHING DC OS-OL      3.00
09/27/92 08:38  0:13:38 1-315-654-7892     CAPEVIN NY IS-OL      1.52
09/27/92 11:14  0:03:44                                INCOM      0.00
09/27/92 13:48  0:07:13 1-407-830-3424     WINTERP FL OS-OL      1.03
09/28/92 08:05  0:03:29                                INCOM      0.00
09/28/92 08:44  0:01:03 1-809-556-8342     LA ROMA DR OS-OL      0.86
09/28/92 13:36  0:01:35 1-395-6010         BROCKPORT  IS-IL      0.40
09/28/92 17:32  0:07:21 0113315433345      FRANCE     INTNL      5.08
09/29/92 12:09  0:04:05 1-604-985-3232     NOVANCO BC OS-OL      1.99
09/29/92 13:22  0:01:57                                INCOM      0.00
09/30/92 08:45  0:14:32 1-604-985-3232     NOVANCO BC OS-OL      7.15
09/30/92 09:08  0:03:29                                INCOM      0.00
09/30/92 14:13  0:24:58 1-303-924-3345     BOULDER CO OS-OL      5.19

         85   21:46:48 DETAIL SUBTOTAL                         152.78
                       Federal                                   6.04
                       State                                     4.55
                       Local                                     4.55
                       FIXED CHARGE                              0.00
               ----------                                ----------
TOTALS:         21:46:48 NUMBER OF CALLS: 85                   167.92
```

```
                         Organization Detail Report
Date: Friday, October 09, 1992                               Page: 3
Time: 4:43:23 PM              MOSLEY Corporation
-----------------------------------------------------------------------------

Department     : Marketing
Cost Center    : 503 - Doc

                    ----- DURATION ----- -------------- COST --------------
                 TOTAL   TOTAL    PER CALL   TOTAL    PER CALL   PER MINUTE
Extension        CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- --------- -------- ---------- ---------- ----------
1041                85  21:46:48  0:15:22     167.92       1.97       0.12
                 ----- --------- -------- ---------- ---------- ----------
TOTALS:             85  21:46:48  0:15:22     167.92       1.97       0.12




                         Organization Detail Report
Date: Friday, October 09, 1992                               Page: 4
Time: 4:43:23 PM              MOSLEY Corporation
-----------------------------------------------------------------------------

Department TOTALS

Department     : Marketing

                    ----- DURATION ----- -------------- COST --------------
                 TOTAL   TOTAL    PER CALL   TOTAL    PER CALL   PER MINUTE
Cost Center      CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- --------- -------- ---------- ---------- ----------
503 - Doc           85  21:46:48  0:15:22     167.92       1.97       0.12
                 ----- --------- -------- ---------- ---------- ----------
TOTALS:             85  21:46:48  0:15:22     167.92       1.97       0.12




                         Organization Detail Report
Date: Friday, October 09, 1992                               Page: 5
Time: 4:43:23 PM              MOSLEY Corporation
-----------------------------------------------------------------------------

GRAND TOTALS

                    ----- DURATION ----- -------------- COST --------------
                 TOTAL   TOTAL    PER CALL   TOTAL    PER CALL   PER MINUTE
Department       CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- --------- -------- ---------- ---------- ----------
Marketing           85  21:46:48  0:15:22     167.92       1.97       0.12
                 ----- --------- -------- ---------- ---------- ----------
TOTALS:             85  21:46:48  0:15:22     167.92       1.97       0.12


End of Organization Detail Report
```

```
                        Organization Summary Report
Date: Friday, October 09, 1992                                      Page: 1
Time: 4:45:31 PM                    MOSLEY Corporation
--------------------------------------------------------------------------------
DATE RANGE: Tuesday, September 01, 1992  to  Tuesday, December 01, 1992

SELECTION CRITERIA :
    Department    : Marketing
    Cost Center   : All
    Extension     : All

    PAGE BREAK AFTER EACH Cost Center: No

    Cost Center TOTALS
    Department    : Marketing
    Cost Center   : 501 - PM
                                  ----- DURATION ---- ------- COST --------
                           TOTAL    TOTAL    PER CALL   TOTAL    PER CALL
    Extension      NAME    CALLS  HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars )
    ----------  -------------------- ------ ---------- -------- ---------- ----------
       1016     Greer, Thomas          76  19:52:57  0:15:41    139.00      1.84
       1017     Montevecchio, Doug     81  20:51:42  0:15:27    131.80      1.62
       1018     Robinson, Yves         87  22:45:17  0:15:41    204.40      2.34
       1019     Herbert, James         97  23:24:25  0:14:28    236.80      2.43
       1020     Claeys, Anne           81  19:40:09  0:14:34    181.30      2.23
       1021     Centanni, James        99  26:02:04  0:15:46    124.60      1.26
       1022     Ramage, Amy           100  24:26:49  0:14:40    126.50      1.26
       1023     Rizzo, Dave            94  22:01:50  0:14:03    127.40      1.35
       1033     Ross, Scott           105  27:22:08  0:15:38    198.60      1.88
       1043     Galanti, Allison       84  21:26:12  0:15:18    141.06      1.68
                                     ------ ---------- -------- ---------- ----------
       TOTALS:                         904 227:53:33  0:15:07  1,611.46      1.78

    Cost Center TOTALS
    Department    : Marketing
    Cost Center   : 503 - Doc
                                  ----- DURATION ---- ------- COST --------
                           TOTAL    TOTAL    PER CALL   TOTAL    PER CALL
    Extension      NAME    CALLS  HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars )
    ----------  -------------------- ------ ---------- -------- ---------- ----------
       1041     Sohn, Maria            85  21:46:48  0:15:22    152.78      1.79
       1042     Heyl, Sue              95  24:06:24  0:15:13    174.12      1.83
                                     ------ ---------- -------- ---------- ----------
       TOTALS:                         180  45:53:12  0:15:17    326.90      1.81

    Department TOTALS
    Department    : Marketing
                          ----- DURATION ---- ----------- COST --------------
                   TOTAL    TOTAL    PER CALL   TOTAL    PER CALL  PER MINUTE
    Cost Center    CALLS  HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
    -------------- ------ ---------- -------- ---------- ---------- ----------
    501 - PM          904 227:53:33  0:15:07  1,611.46      1.78       0.11
    503 - Doc         180  45:53:12  0:15:17    326.90      1.81       0.11
    -------------- ------ ---------- -------- ---------- ---------- ----------
       TOTALS:       1084 276:46:45  0:15:13  1,938.36      1.79       0.11

GRAND TOTALS
                      -------- DURATION -------- ----------- COST --------------
                   TOTAL    TOTAL    PER CALL   TOTAL    PER CALL  PER MINUTE
    Department     CALLS  HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
    -------------- ------ ---------- -------- ---------- ---------- ----------
    Marketing         1084 276:46:45  0:15:13  1,938.36      1.79       0.11
                    ----- ---------- -------- ---------- ---------- ----------
       TOTALS:       1084 276:46:45  0:15:13  1,938.36      1.79       0.11


End of Organization Summary Report
```

```
                      Cost Center Summary Report
Date: Friday, October 09, 1992                              Page: 1
Time: 4:47:37 PM              MOSLEY Corporation
---------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

SELECTION CRITERIA  :
      Department   : All

      PAGE BREAK AFTER EACH Department: No

Department: Accounting

                   ----- DURATION ---- ----------- COST --------------
                   TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Cost Center        CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- ---------- -------- ---------- ---------- ----------
201 - Acct         209  54:33:11  0:15:39    286.83      1.37       0.08
                   ----- ---------- -------- ---------- ---------- ----------
TOTALS:            209  54:33:11  0:15:39    286.83      1.37       0.08


Department: Customer Srvc

                   ----- DURATION ---- ----------- COST --------------
                   TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Cost Center        CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- ---------- -------- ---------- ---------- ----------
701 - CS           485 117:29:29  0:14:32    817.39      1.68       0.11
                   ----- ---------- -------- ---------- ---------- ----------
TOTALS:            485 117:29:29  0:14:32    817.39      1.68       0.11


Department: Engineering

                   ----- DURATION ---- ----------- COST --------------
                   TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Cost Center        CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- ---------- -------- ---------- ---------- ----------
401 - Software     572 142:53:50  0:14:59  1,099.73      1.92       0.12
402 - Hardware     295  72:31:11  0:14:44    528.56      1.79       0.12
                   ----- ---------- -------- ---------- ---------- ----------
TOTALS:            867 215:25:01  0:14:54  1,628.29      1.87       0.12


Department: Executive

                   ----- DURATION ---- ----------- COST --------------
                   TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Cost Center        CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- ---------- -------- ---------- ---------- ----------
101 - CEO           89  24:15:40  0:16:21    182.94      2.05       0.12
102 - Other        165  42:45:06  0:15:32    212.92      1.29       0.08
                   ----- ---------- -------- ---------- ---------- ----------
TOTALS:            254  67:00:46  0:15:49    395.86      1.55       0.09
```

```
                      Cost Center Summary Report
Date: Friday, October 09, 1992                          Page: 2
Time: 4:47:37 PM          MOSLEY Corporation
---------------------------------------------------------------------------

Department: Manufacturing

                   ----- DURATION ---- ----------- COST --------------
                TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Cost Center     CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
-------------- ----- ---------- -------- ---------- ---------- ----------
301 - Manuf      374  92:00:38  0:14:45     731.29       1.95       0.13
               ----- ---------- -------- ---------- ---------- ----------
TOTALS:          374  92:00:38  0:14:45     731.29       1.95       0.13


Department: Marketing

                   ----- DURATION ---- ----------- COST --------------
                TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Cost Center     CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
-------------- ----- ---------- -------- ---------- ---------- ----------
501 - PM         904 227:53:33  0:15:07   1,611.46       1.78       0.11
502 - PAT        460 117:52:09  0:15:22     922.72       2.00       0.13
503 - Doc        180  45:53:12  0:15:17     326.90       1.81       0.11
               ----- ---------- -------- ---------- ---------- ----------
TOTALS:         1544 391:38:54  0:15:13   2,861.08       1.85       0.12


Department: Sales

                   ----- DURATION ---- ----------- COST --------------
                TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Cost Center     CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
-------------- ----- ---------- -------- ---------- ---------- ----------
601 - US         545 135:23:39  0:14:54     957.21       1.75       0.11
602 - Intnl      405 100:31:14  0:14:53     722.23       1.78       0.11
               ----- ---------- -------- ---------- ---------- ----------
TOTALS:          950 235:54:53  0:14:53   1,679.44       1.76       0.11


COMPANY TOTALS: MOSLEY Corporation

                   ----- DURATION ---- ----------- COST --------------
                TOTAL    TOTAL   PER CALL    TOTAL    PER CALL PER MINUTE
Department      CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
-------------- ----- ---------- -------- ---------- ---------- ----------
Accounting       209  54:33:11  0:15:39     286.83       1.37       0.08
Customer Srvc    485 117:29:29  0:14:32     817.39       1.68       0.11
Engineering      867 215:25:01  0:14:54   1,628.29       1.87       0.12
Executive        254  67:00:46  0:15:49     395.86       1.55       0.09
Manufacturing    374  92:00:38  0:14:45     731.29       1.95       0.13
Marketing       1544 391:38:54  0:15:13   2,861.08       1.85       0.12
Sales            950 235:54:53  0:14:53   1,679.44       1.76       0.11
               ----- ---------- -------- ---------- ---------- ----------
TOTALS:         4683 1174:02:52 0:15:02   8,400.18       1.79       0.11


End of Cost Center Summary Report
```

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                    Department Summary Report
Date: Friday, October 09, 1992                          Page: 1
Time: 5:19:19 PM           MOSLEY Corporation
--------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

COMPANY TOTALS: MOSLEY Corporation

              -------- DURATION ------- ------------ COST --------------
              TOTAL    TOTAL   PER CALL   TOTAL    PER CALL  PER MINUTE
Department    CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
-------------- ----- ---------- -------- ---------- ---------- ----------
Accounting      209  54:33:11  0:15:39     286.83       1.37       0.08
Customer Srvc   485 117:29:29  0:14:32     817.39       1.68       0.11
Engineering     867 215:25:01  0:14:54   1,628.29       1.87       0.12
Executive       254  67:00:46  0:15:49     395.86       1.55       0.09
Manufacturing   374  92:00:38  0:14:45     731.29       1.95       0.13
Marketing      1544 391:38:54  0:15:13   2,861.08       1.85       0.12
Sales           950 235:54:53  0:14:53   1,679.44       1.76       0.11
               ----- ---------- -------- ---------- ---------- ----------
TOTALS:        4683 1174:02:52 0:15:02   8,400.18       1.79       0.11


End of Department Summary Report




                    Department Summary Report
Date: Friday, October 09, 1992                          Page: 2
Time: 5:19:19 PM           MOSLEY Corporation
--------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992
```
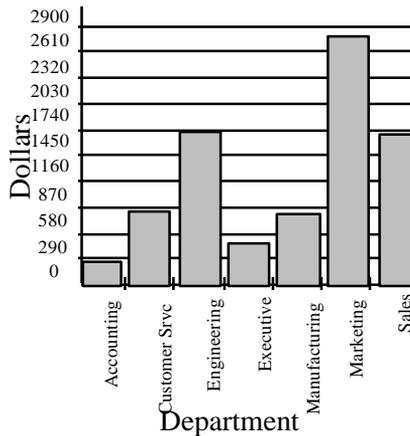
Department Cost Allocation

```
                         Organization Trends Report
Date: Friday, October 09, 1992                                Page: 1
Time: 5:30:40 PM             MOSLEY Corporation
-----------------------------------------------------------------------------

SELECTION CRITERIA  :
       Cost Center   : 503 - Doc

Cost Center: 503 - Doc

                  ----- DURATION -----  -------------- COST --------------
  START OF  TOTAL    TOTAL    PER CALL    TOTAL     PER CALL   PER MINUTE
  PERIOD    CALLS  HHHH:MM:SS HH:MM:SS  (Dollars ) (Dollars )  (Dollars )
  --------  ------ ---------- --------  ---------- ----------  ----------
  01/01/92    220   44:00:00  0:12:00       242.00       1.10        0.09
  02/01/92    363   90:45:00  0:15:00       471.90       1.30        0.09
  03/01/92    308   78:42:40  0:15:20       369.60       1.20        0.08
  04/01/92    290   67:40:00  0:14:00       275.50       0.95        0.07
  05/01/92    328   82:54:40  0:15:10       574.00       1.75        0.12
  06/01/92    230   38:39:10  0:10:05       414.00       1.80        0.10
  07/01/92    300   60:50:00  0:12:10       840.00       2.80        0.08
  08/01/92    360   98:30:00  0:16:25       360.00       1.00        0.06
  09/01/92    180   45:53:12  0:15:17       326.90       1.81        0.11
 *10/01/92     50   12:30:00  0:15:00        75.00       1.50        0.10
                  ------ ---------- --------  ---------- ----------  ----------
  TOTALS:   2,629  620:24:42  0:14:11     3,948.90       1.50        0.11


  *  This period is not complete.

  End of Organization Trends Report
```

```
                              Budget Report
Date: Friday, October 09, 1992                                  Page: 1
Time: 5:31:40 PM              MOSLEY Corporation
-----------------------------------------------------------------------------

SELECTION CRITERIA   :
      Cost Center   : 503 - Doc

CURRENT ACCOUNTING PERIOD:
      Thursday, October 01, 1992  to  Saturday, October 31, 1992

                      ACTUAL     BUDGET     VARIANCE
      COST CENTER    (Dollars ) (Dollars ) (Dollars )
      --------------- ---------- ---------- ----------
      503 - Doc           75.00     500.00   (425.00)
                         ---------- ---------- ----------
      TOTALS:             75.00     500.00   (425.00)


YEAR TO DATE PERIOD:
      Wednesday, January 1, 1992  to  Friday, September 30, 1992

                      ACTUAL     BUDGET     VARIANCE
      COST CENTER    (Dollars ) (Dollars ) (Dollars )
      --------------- ---------- ---------- ----------
      503 - Doc        3,948.90   4,500.00   (551.10)
                         ---------- ---------- ----------
      TOTALS:          3,948.90   4,500.00   (551.10)



                              Budget Report
Date: Friday, October 09, 1992                                  Page: 2
Time: 5:31:40 PM              MOSLEY Corporation
-----------------------------------------------------------------------------
```

503-Doc Budget Trends
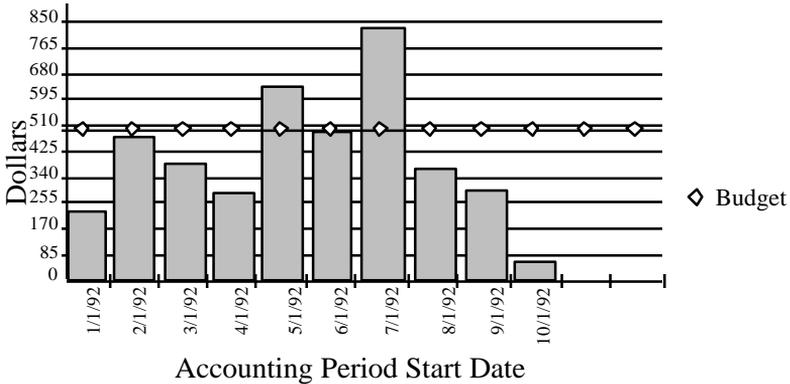
◇ Budget

Accounting Period Start Date

```
                              Selection Detail Report
Date: Friday, October 09, 1992                                               Page: 1
Time: 5:38:43 PM                    MOSLEY Corporation
----------------------------------------------------------------------------------------

SELECTION CRITERIA    :
     DATE RANGE       : 8/31/92 to 9/30/92
     TIME RANGE       : 12:00:00 AM to 11:59:59 PM
     MINIMUM COST     : $ 0.00
     MINIMUM DURATION : 0:00:00
     Department       : Marketing
     Cost Center      : 503 - Doc
     Extension        : 1041
     ACCOUNT CODES    : All
     Trunk            : All
     CALL TYPE        : IDDD
     DIALED NUMBER    : All

     SUMMARIZE NOTHING

               DURATION                                            CALL                      COST
   DATE   TIME HHHH:MM:SS  EXTENSION    DIALED NUMBER      LOCATION  TYPE  ACCOUNT CODE  (Dollars )
-------- ----- ---------- --------- ------------------- ---------- ----- --------------- ----------
09/03/92 08:17   0:03:41       1041 01149899305593      WEST-GERMA INTNL                       3.69
09/07/92 12:36   0:17:52       1041 0113419874521       SPAIN      INTNL 10018                16.20
09/11/92 12:45   0:10:38       1041 01144713456714      UNITED-KIN INTNL                       8.29
09/26/92 13:47   0:10:14       1041 01144713456714      UNITED-KIN INTNL 10019                 6.09
09/28/92 17:32   0:07:21       1041 0113315433345       FRANCE     INTNL                       5.08

           5     0:49:46      DETAIL SUBTOTAL                                                  39.35
                             Federal                                                           1.67
                             State                                                             1.18
                             Local                                                             1.18
         ----------                                                                        ----------
           0:49:46             NUMBER OF CALLS: 5                                              43.28


                      ----- DURATION -----  -------------- COST --------------
             TOTAL       TOTAL    PER CALL      TOTAL     PER CALL   PER MINUTE
     NUMBER OF CALLS  HHHH:MM:SS  HH:MM:SS    (Dollars )  (Dollars ) (Dollars )
     ---------------  ---------- --------    ---------- ---------- ----------
            5           0:49:46   0:09:57       43.28       8.65       0.86


End of Selection Detail Report




                        Selection Summary Report
Date: Friday, October 09, 1992                              Page: 1
Time: 5:38:43 PM               MOSLEY Corporation
----------------------------------------------------------------------------


SELECTION CRITERIA        :
     DATE RANGE           : 8/31/92 to 9/30/92
     TIME RANGE           : 12:00:00 AM to 11:59:59 PM
     MINIMUM COST         : $ 0.00
     MINIMUM DURATION     : 0:00:00
     Department           : Marketing
     Cost Center          : 503 - Doc
     Extension            : 1041
     ACCOUNT CODES        : All
     Trunk                : All
     CALL TYPE            : IDDD
     DIALED NUMBER        : All


              ----- DURATION -----   -------------- COST --------------
      TOTAL       TOTAL    PER CALL      TOTAL     PER CALL   PER MINUTE
NUMBER OF CALLS  HHHH:MM:SS HH:MM:SS   (Dollars )  (Dollars ) (Dollars )
---------------  ---------- --------   ---------- ---------- ----------
       5           0:49:46   0:09:57      43.28       8.65       0.86


End of Selection Summary Report
```

Sample Reports

```
                              Account Code Detail Report
Date: Friday, October 09, 1992                                              Page: 1
Time: 5:38:43 PM                       MOSLEY Corporation
-------------------------------------------------------------------------------------

SELECTION CRITERIA   :
     DATE RANGE      : 9/7/92 to 9/7/92
     ACCOUNT CODES   : 10018

     SUMMARIZE NOTHING

               DURATION                                          CALL   COST
     DATE   TIME HHHH:MM:SS  EXTENSION     DIALED NUMBER   LOCATION  TYPE (Dollars )
  -------- ----- ---------- --------------- -------------------- ---------- ----- ----------
  09/07/92 12:36  0:17:52         1041  0113419874521    SPAIN    INTNL   16.20
  09/07/92 13:26  0:05:15         1011                            INCOM    0.00
  09/07/92 18:05  0:06:58         1024                            INCOM    0.00

           3    0:30:05     DETAIL SUBTOTAL                               16.20
                           Federal                                        0.65
                           State                                          O.49
                           Local                                          0.49
         ----------                                             ----------
            0:30:05            NUMBER OF CALLS: 3                         17.83

              ----- DURATION -----  ------------- COST -------------
      TOTAL       TOTAL    PER CALL      TOTAL   PER CALL  PER MINUTE
  NUMBER OF CALLS HHHH:MM:SS HH:MM:SS  (Dollars ) (Dollars ) (Dollars )
  --------------- ---------- --------  ---------- ---------- ----------
        5         0:30:05  0:10:01      17.83      5.94       0.59


End of Account Code Detail Report




                         Account Code Summary Report
Date: Friday, October 09, 1992                                     Page: 1
Time: 5:19:19 PM             MOSLEY Corporation
--------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

SELECTION CRITERIA :
   ACCOUNT CODES   : All


              -------- DURATION ------- ------------ COST --------------
              TOTAL    TOTAL   PER CALL   TOTAL    PER CALL  PER MINUTE
  ACCOUNT CODE CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
  ------------- ----- ---------- -------- ---------- ---------- ----------
  10001         110  29:25:30  0:16:03     230.83     2.09       0.13
  10002         118  29:46:29  0:15:08     222.88     1.88       0.12
  10003         114  27:22:26  0:14:24     150.06     1.31       0.09
  10004         103  27:41:25  0:16:07     139.18     1.35       0.08
  10005         122  29:32:23  0:14:31     247.82     2.03       0.13
  10006         118  27:52:02  0:14:10     176.63     1.49       0.10
  10007         105  27:20:11  0:15:37     174.32     1.66       0.10
  10008         116  27:59:04  0:14:28     194.61     1.67       0.11
  10009         123  30:15:16  0:14:45     226.60     1.84       0.12
  10010         110  29:15:02  0:15:57     247.00     2.24       0.14
  10011         111  26:41:18  0:14:25     202.30     1.82       0.12
  10012         106  26:33:44  0:15:02     265.49     2.50       0.16
  10013         126  30:32:46  0:14:32     221.80     1.76       0.12
  10014         115  29:03:07  0:15:09     191.64     1.66       0.10
  10015         119  29:13:15  0:14:43     209.86     1.76       0.11
  10016         108  28:58:40  0:16:05     217.74     2.01       0.12
  10017          93  23:12:56  0:14:58     166.06     1.78       0.11
  10018         124  27:09:32  0:13:08     189.93     1.53       0.11
  10019         121  31:40:00  0:15:42     243.12     2.00       0.12
  10020         136  33:48:13  0:14:54     272.22     2.00       0.13
        ----- ---------- -------- ---------- ---------- ----------
  TOTALS:      2298  573:23:19  0:14:58   4,190.09     1.82       0.12


End of Account Code Summary Report
```

B-12   Issue 1   May 1993

```
                        Call Type Report
Date: Friday, October 09, 1992                              Page: 1
Time: 6:05:24 PM              MOSLEY Corporation
------------------------------------------------------------------------


DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

             -------- DURATION ------- ------------ COST --------------
  REPORTING   TOTAL     TOTAL   PER CALL    TOTAL    PER CALL  PER MINUTE
  CALL TYPE   CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------------- ----- ---------- -------- ---------- ---------- ----------
Other             0   0:00:00  0:00:00       0.00       0.00       0.00
INCOM          1710 437:19:18  0:15:20       0.00       0.00       0.00
LOCAL           932 230:56:20  0:14:52     282.95       0.30       0.02
OS-OL          1185 293:33:32  0:14:51   3,945.65       3.32       0.22
IS-OL           219  52:52:40  0:14:29     411.63       1.87       0.12
IS-IL           173  41:40:05  0:14:27     336.09       1.94       0.13
INTNL           295  71:19:31  0:14:30   3,351.06      11.35       0.78
SPCL            169  46:21:26  0:16:27      72.80       0.43       0.02
              ------ ---------- -------- ---------- ---------- ----------
TOTALS:        4683 1174:02:52  0:15:02   8,400.18       1.79       0.11



                        Call Type Report
Date: Friday, October 09, 1992                              Page: 2
Time: 6:05:24 PM              MOSLEY Corporation
------------------------------------------------------------------------
```

Call Type Call Distribution
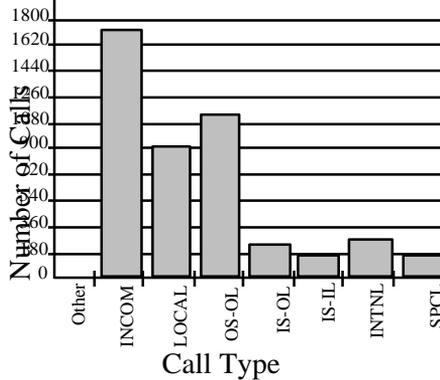

```
End of Call Type Report
```

```
                                    Date Report
Date: Thursday, November 12, 1992                              Page:     1
Time: 12:34:10 PM              MOSLEY Corporation
--------------------------------------------------------------------------

                       ----- DURATION -----  ------------- COST -------------
             TOTAL    TOTAL     PER CALL    TOTAL     PER CALL    PER MINUTE
     DATE    CALLS  HHHH:MM:SS  HH:MM:SS   (Dollars )  (Dollars )  (Dollars )
   --------  ------ ----------  --------   ----------  ----------  ----------
   09/01/92   141   32:59:52    0:14:02      291.71       2.06        0.14
   09/02/92   161   42:26:23    0:15:48      243.96       1.51        0.09
   09/03/92   171   42:38:32    0:14:57      294.75       1.72        0.11
   09/04/92   142   36:23:37    0:15:22      250.02       1.76        0.11
   09/05/92   153   36:38:32    0:14:22      282.87       1.84        0.12
   09/06/92   149   39:34:59    0:15:56      296.85       1.99        0.12
   09/07/92   170   44:42:42    0:15:46      311.04       1.82        0.11
   09/08/92   184   45:48:23    0:14:56      299.50       1.62        0.10
   09/09/92   152   38:06:52    0:15:02      287.56       1.89        0.12
   09/10/92   167   41:23:42    0:14:52      268.95       1.61        0.10
   09/11/92   172   41:20:51    0:14:25      290.40       1.68        0.11
   09/12/92   134   34:47:40    0:15:34      204.07       1.52        0.09
   09/13/92   147   35:26:50    0:14:28      228.93       1.55        0.10
   09/14/92   146   33:54:08    0:13:55      236.49       1.61        0.11
   09/15/92   122   32:08:47    0:15:48      334.49       2.74        0.17
   09/16/92   156   39:41:43    0:15:16      240.76       1.54        0.10
   09/17/92   139   33:41:08    0:14:32      247.99       1.78        0.12
   09/18/92   153   38:40:15    0:15:09      287.33       1.87        0.12
   09/19/92   183   45:39:31    0:14:58      300.56       1.64        0.10
   09/20/92   149   39:01:57    0:15:43      284.08       1.90        0.12
   09/21/92   160   42:01:49    0:15:45      342.46       2.14        0.13
   09/22/92   146   35:23:51    0:14:32      226.05       1.54        0.10
   09/23/92   153   38:32:43    0:15:06      286.60       1.87        0.12
   09/24/92   160   40:12:27    0:15:04      322.82       2.01        0.13
   09/25/92   177   42:42:40    0:14:28      255.47       1.44        0.09
   09/26/92   174   44:03:15    0:15:11      297.70       1.71        0.11
   09/27/92   157   38:37:30    0:14:45      303.47       1.93        0.13
   09/28/92   168   39:51:34    0:14:14      305.86       1.82        0.12
   09/29/92   136   35:20:04    0:15:35      264.89       1.94        0.12
   09/30/92   161   42:10:35    0:15:43      312.55       1.94        0.12
              ------ ----------  --------   ----------  ----------  ----------
   TOTALS:    4683 1174:02:52   0:15:02    8,400.18       1.79        0.11


End of Date Report
```

```
                    Cost and Duration Report
Date: Friday, October 09, 1992                        Page: 2
Time: 5:19:19 PM            MOSLEY Corporation
-----------------------------------------------------------------------------
```

Cost Distribution
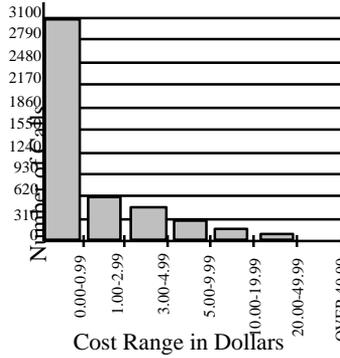

```
                    Cost and Duration Report
Date: Friday, October 09, 1992                        Page: 3
Time: 5:19:19 PM            MOSLEY Corporation
-----------------------------------------------------------------------------
```

Duration Distribution
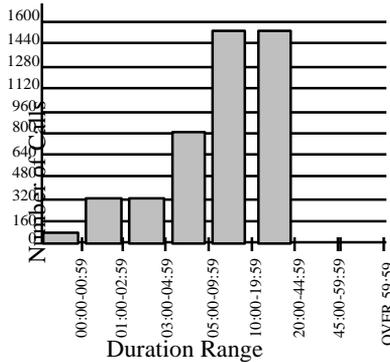

```
End of Cost and Duration Report
```

```
                        Time of Day Report
Date: Friday, October 09, 1992                            Page: 1
Time: 5:19:19 PM            MOSLEY Corporation
-----------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

SELECTION CRITERIA :

          INCLUDE OUTGOING CALLS: Yes
          INCLUDE INCOMING CALLS: No

                        ---- DURATION -----  ------------ COST --------------
                 TOTAL     TOTAL   PER CALL     TOTAL     PER CALL  PER MINUTE
  TIME OF DAY    CALLS  HHHH:MM:SS HH:MM:SS   (Dollars ) (Dollars ) (Dollars )
---------------  ------ ---------- --------   ---------- ---------- ----------
 00:00 - 00:59        0   0:00:00  0:00:00          0.00       0.00       0.00
 01:00 - 01:59        0   0:00:00  0:00:00          0.00       0.00       0.00
 02:00 - 02:59        0   0:00:00  0:00:00          0.00       0.00       0.00
 03:00 - 03:59        0   0:00:00  0:00:00          0.00       0.00       0.00
 04:00 - 04:59        0   0:00:00  0:00:00          0.00       0.00       0.00
 05:00 - 05:59        0   0:00:00  0:00:00          0.00       0.00       0.00
 06:00 - 06:59       60  14:08:56  0:14:08        200.53       3.34       0.23
 07:00 - 07:59       87  23:28:24  0:16:11        252.02       2.89       0.17
 08:00 - 08:59      207  48:39:12  0:14:06        539.60       2.60       0.18
 09:00 - 09:59      174  42:09:11  0:14:32        469.51       2.69       0.18
 10:00 - 10:59      322  86:09:52  0:16:03      1,214.40       3.77       0.23
 11:00 - 11:59      233  59:51:30  0:15:24        685.26       2.94       0.19
 12:00 - 12:59      130  30:20:02  0:14:00        311.50       2.39       0.17
 13:00 - 13:59      369  94:54:58  0:15:26      1,004.33       2.72       0.17
 14:00 - 14:59      369  91:55:42  0:14:56      1,049.74       2.84       0.19
 15:00 - 15:59      420 102:45:56  0:14:40      1,113.20       2.65       0.18
 16:00 - 16:59      246  60:13:55  0:14:41        678.34       2.75       0.18
 17:00 - 17:59      148  33:11:24  0:13:27        353.14       2.38       0.17
 18:00 - 18:59       87  19:29:56  0:13:26        188.85       2.17       0.16
 19:00 - 19:59       55  13:18:49  0:14:31        162.97       2.96       0.20
 20:00 - 20:59       30   7:51:45  0:15:43         76.06       2.53       0.16
 21:00 - 21:59       36   8:14:02  0:13:43        100.73       2.79       0.20
 22:00 - 22:59        0   0:00:00  0:00:00          0.00       0.00       0.00
 23:00 - 23:59        0   0:00:00  0:00:00          0.00       0.00       0.00
                 ------ ---------- --------   ---------- ---------- ----------
 TOTALS:           2973 736:43:34  0:14:52      8,400.18       2.82       0.19


 The heaviest traffic based on duration is between 15:00 and 15:59.
 This time period accounts for 13% of the total traffic.
```

```
                         Time of Day Report
Date: Friday, October 09, 1992                              Page: 2
Time: 5:19:19 PM              MOSLEY Corporation
-------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992
```

Time of Day Call Distribution
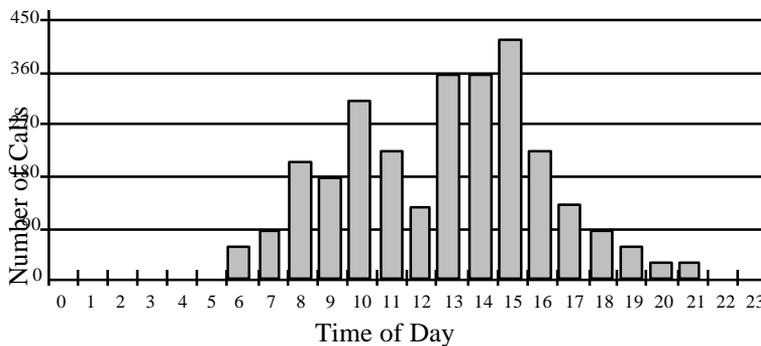

```
The heaviest traffic based on duration is between 15:00 and 15:59.
This time period accounts for 13% of the total traffic.



End of Time of Day Report
```

```
                          Call Distribution Report
Date: Wednesday, November 11, 1992                            Page:    1
Time: 6:12:44 PM                  MOSLEY Corporation
--------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

                       ---- DURATION ---- ------------ COST -------------
LOCATION            TOTAL    TOTAL   PER CALL    TOTAL    PER CALL  PER MINUTE
  CODE    LOCATION  CALLS  HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------  --------  ------ ---------- -------- ---------- ---------- ----------
201        NJ        125   29:56:04  0:14:22    295.72      2.36       0.16
202        DC         48   12:34:05  0:15:42    126.21      2.62       0.16
203        CT         56   14:23:26  0:15:25    141.27      2.52       0.16
204        MB          0    0:00:00  0:00:00      0.00      0.00       0.00
205        AL          0    0:00:00  0:00:00      0.00      0.00       0.00
206        WA          0    0:00:00  0:00:00      0.00      0.00       0.00
207        ME          0    0:00:00  0:00:00      0.00      0.00       0.00
208        ID          0    0:00:00  0:00:00      0.00      0.00       0.00
209        CA          0    0:00:00  0:00:00      0.00      0.00       0.00
212        NY         97   20:45:35  0:12:50    175.38      1.80       0.14
213        CA          0    0:00:00  0:00:00      0.00      0.00       0.00
214        TX         62   16:30:03  0:15:58    183.93      2.96       0.18
.
.
914        NY          0    0:00:00  0:00:00      0.00      0.00       0.00
915        TX          0    0:00:00  0:00:00      0.00      0.00       0.00
916        CA         63   15:06:31  0:14:23    163.94      2.60       0.18
918        OK          0    0:00:00  0:00:00      0.00      0.00       0.00
919        NC         59   15:27:19  0:15:43    159.17      2.69       0.17
LOCAL                932  230:56:20  0:14:52    282.95      0.30       0.02
INTERNATIONAL        295   71:19:31  0:14:30  3,351.06     11.35       0.78
OTHER                278   69:04:02  0:14:54    367.29      1.32       0.08
                     ------ ---------- -------- ---------- ---------- ----------
TOTALS:             2973  736:43:34  0:14:52  8,400.18      2.82       0.19


End of Call Distribution Report




                        ANI Call Distribution Report
Date: Monday, November 09, 1992                              Page:    1
Time: 6:16:28 PM                  MOSLEY Corporation
--------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

                       ----- DURATION ---- ------------ COST -------------
LOCATION            TOTAL   TOTAL   PER CALL    TOTAL    PER CALL  PER MINUTE
  CODE    LOCATION  CALLS HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
--------  --------  ------ ---------- -------- ---------- ---------- ----------
201        NJ          0    0:00:00  0:00:00      0.00      0.00       0.00
202        DC          0    0:00:00  0:00:00      0.00      0.00       0.00
203        CT          0    0:00:00  0:00:00      0.00      0.00       0.00
204        MB          0    0:00:00  0:00:00      0.00      0.00       0.00
205        AL          0    0:00:00  0:00:00      0.00      0.00       0.00
206        WA          0    0:00:00  0:00:00      0.00      0.00       0.00
207        ME          0    0:00:00  0:00:00      0.00      0.00       0.00
.
.
LOCAL                  0    0:00:00  0:00:00      0.00      0.00       0.00
INTERNATIONAL          0    0:00:00  0:00:00      0.00      0.00       0.00
OTHER               1710  437:19:18  0:15:20      0.00      0.00       0.00
                    ------ ---------- -------- ---------- ---------- ----------
TOTALS:             1710  437:19:18  0:15:20      0.00      0.00       0.00
```

```
End of ANI Call Distribution Report


                      Ring Time Analysis Report
Date: Monday, November 09, 1992                          Page:    1
Time: 6:17:36 PM              MOSLEY Corporation
--------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

            -- ALL CALLS ---    --- ANSWERED ----   -- UNANSWERED ---
  RING TIME            PERCENT             PERCENT             PERCENT
  (SECONDS)   NUMBER  OF TOTAL   NUMBER  OF NUMBER   NUMBER  OF NUMBER
 ---------   ------  --------   ------  ---------   ------  ---------
    0 -   5    3705     74.7      3678      99.3        27       0.7
    6 -  10     408      8.2       392      96.1        16       3.9
   11 -  15     319      6.4       279      87.5        40      12.5
   16 -  20     200      4.0       166      83.0        34      17.0
   21 -  25     129      2.6        97      75.2        32      24.8
   26 -  30      72      1.5        40      55.6        32      44.4
   31 -  45      34      0.7        17      50.0        17      50.0
   46 -  60      35      0.7        10      28.6        25      71.4
   61 - 120      37      0.7         3       8.1        34      91.9
  120 +         18      0.4         1       5.6        17      94.4
 ---------   ------  --------   ------  ---------   ------  ---------
  TOTALS:      4957    100.       4683      94.5       274       5.5


                      Ring Time Analysis Report
Date: Monday, November 09, 1992                          Page:    2
Time: 6:17:36 PM              MOSLEY Corporation
--------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992
```

Ring Time Analysis

Ring Time (Seconds)
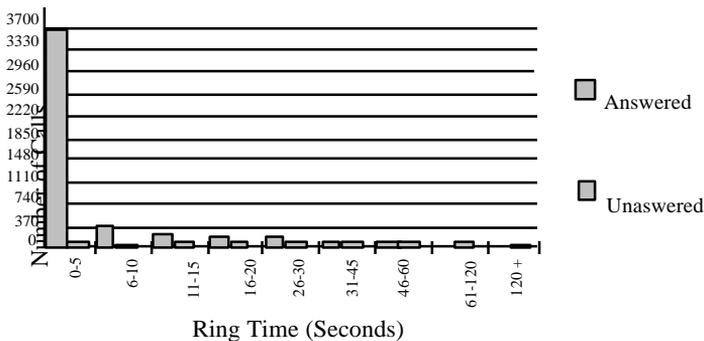
```
End of Ring Time Analysis Report
```

```
                          Incoming Traffic Analysis Report
Date: Monday, November 09, 1992                                        Page: 1
Time: 6:20:06 PM              MOSLEY Corporation
------------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

                        ------- ANSWERED ------- ------ UNANSWERED ------
                 TOTAL                 RING TIME                 RING TIME
    TIME OF DAY  CALLS   NUMBER    %   (SECONDS)  NUMBER    %    (SECONDS)
    -----------  ------  ------  -----  ---------  ------  -----  ---------
    00:00 - 00:59     0      0    0.0        0       0    0.0         0
    01:00 - 01:59     0      0    0.0        0       0    0.0         0
    02:00 - 02:59     0      0    0.0        0       0    0.0         0
    03:00 - 03:59     0      0    0.0        0       0    0.0         0
    04:00 - 04:59     0      0    0.0        0       0    0.0         0
    05:00 - 05:59     0      0    0.0        0       0    0.0         0
    06:00 - 06:59    31     28   90.3        4       3    9.7        87
    07:00 - 07:59    60     49   81.7        9      11   18.3        31
    08:00 - 08:59   146    129   88.4        4      17   11.6        81
    09:00 - 09:59   126    107   84.9        6      19   15.1        53
    10:00 - 10:59   213    183   85.9        4      30   14.1        53
    11:00 - 11:59   185    156   84.3        5      29   15.7        56
    12:00 - 12:59    75     67   89.3        6       8   10.7        59
    13:00 - 13:59   240    200   83.3        7      40   16.7        51
    14:00 - 14:59   259    227   87.6        6      32   12.4        62
    15:00 - 15:59   282    245   86.9        6      37   13.1        60
    16:00 - 16:59   142    126   88.7        5      16   11.3        79
    17:00 - 17:59    80     67   83.8        6      13   16.3        48
    18:00 - 18:59    61     51   83.6        8      10   16.4        39
    19:00 - 19:59    46     41   89.1        3       5   10.9        74
    20:00 - 20:59    20     18   90.0        1       2   10.0       137
    21:00 - 21:59    18     16   88.9        1       2   11.1        52
    22:00 - 22:59     0      0    0.0        0       0    0.0         0
    23:00 - 23:59     0      0    0.0        0       0    0.0         0
    -----------  ------  ------  -----  ---------  ------  -----  ---------
    TOTALS:        1984   1710   86.2        5     274   13.8        58

NOTE:   18.3% of the total number of incoming calls were unanswered
between 07:00 - 07:59.



                          Incoming Traffic Analysis Report
Date: Monday, November 09, 1992                                        Page: 2
Time: 6:20:06 PM              MOSLEY Corporation
------------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992
```

Incoming Traffic Analysis
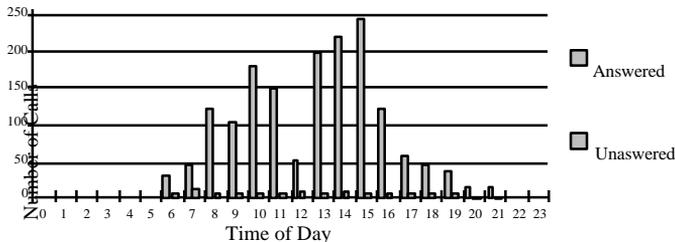

```
End of Incoming Traffic Analysis Report
```

```
                         Rejected Call Summary Report
Date: Monday, November 09, 1992                           Page:    1
Time: 6:21:59 PM            MOSLEY Corporation
----------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

                    ----- DURATION -----  ------------- COST -------------
    REPORTING   TOTAL     TOTAL    PER CALL    TOTAL    PER CALL   PER MINUTE
    CALL TYPE   CALLS   HHHH:MM:SS HH:MM:SS  (Dollars ) (Dollars ) (Dollars )
    ----------  ------  ---------- --------  ---------- ---------- ----------
        Other      0    0:00:00   0:00:00       0.00       0.00       0.00
        INCOM     15    0:05:31   0:00:22       0.00       0.00       0.00
        LOCAL      9    0:03:27   0:00:23       0.66       0.07       0.19
        OS-OL     11    0:04:06   0:00:22       1.62       0.14       0.39
        IS-OL      0    0:00:00   0:00:00       0.00       0.00       0.00
        IS-IL      2    0:00:38   0:00:19       0.16       0.08       0.25
        INTNL      2    0:00:53   0:00:26       1.81       0.90       2.04
        SPCL       1    0:00:23   0:00:23       0.00       0.00       0.00
                ------  ---------- --------  ---------- ---------- ----------
    TOTALS:       40    0:14:58   0:00:22       4.25       0.10       0.28


End of Rejected Call Summary Report
```

Sample Reports

```
                              Facility Report
Date: Monday, November 09, 1992                                   Page:    1
Time: 6:23:05 PM              MOSLEY Corporation
------------------------------------------------------------------------------

DATE RANGE: Tuesday, September 01, 1992  to  Wednesday, September 30, 1992

SELECTION CRITERIA   :
    FACILITIES       : Facility-1

FACILITY: Facility-1
                    ----- DURATION -----  --------------- COST ---------------
Trunk      TOTAL      TOTAL    PER CALL    TOTAL      PER CALL    PER MINUTE
NUMBER     CALLS    HHHH:MM:SS HH:MM:SS  (Dollars )  (Dollars )  (Dollars )
--------   ------   ---------- --------  ----------  ----------  ----------
    80       873    221:33:08  0:15:13    1,871.97      2.14        0.14
    81       976    245:52:38  0:15:06    2,256.89      2.31        0.15
    82       992    239:41:21  0:14:29    1,893.15      1.90        0.13
           ------   ---------- --------  ----------  ----------  ----------
TOTALS:      2841   707:07:07  0:14:56    6,022.01      2.11        0.14


GRAND TOTALS:
                    ----- DURATION -----  --------------- COST ---------------
           TOTAL      TOTAL    PER CALL    TOTAL      PER CALL    PER MINUTE
           CALLS    HHHH:MM:SS HH:MM:SS  (Dollars )  (Dollars )  (Dollars )
           ------   ---------- --------  ----------  ----------  ----------
            2841    707:07:07  0:14:56    6,022.01      2.11        0.14


End of Facility Report




                           Facility Trends Report
Date: Monday, November 09, 1992                                   Page:    1
Time: 6:24:19 PM              MOSLEY Corporation
------------------------------------------------------------------------------

SELECTION CRITERIA :
    FACILITIES    : Facility-3

FACILITY: Facility-3

              NUMBER ----- DURATION ---- -------------- COST --------------
START OF TOTAL   OF     TOTAL    PER CALL    TOTAL    PER CALL    PER MINUTE
 PERIOD  CALLS  Trunk HHHH:MM:SS HH:MM:SS (Dollars ) (Dollars ) (Dollars )
-------- ----- ------ ---------- -------- ---------- ---------- ----------
01/01/92  220    1    44:00:00  0:12:00     242.00     1.10       0.09
02/01/92  363    1    90:45:00  0:15:00     471.90     1.30       0.09
03/01/92  308    1    78:42:40  0:15:20     369.60     1.20       0.08
04/01/92  290    1    67:40:00  0:14:00     275.50     0.95       0.07
05/01/92  328    1    82:54:40  0:15:10     574.00     1.75       0.12
06/01/92  230    1    38:39:10  0:10:05     414.00     1.80       0.10
07/01/92  300    1    60:50:00  0:12:10     840.00     2.80       0.08
08/01/92  360    1    98:30:00  0:16:25     360.00     1.00       0.06
09/01/92  180    1    45:53:12  0:15:17     326.90     1.81       0.11
*10/01/92  50    1    12:30:00  0:15:00      75.00     1.50       0.10
         ------       ---------- -------- ---------- ---------- ----------
TOTALS:  2,629        620:24:42  0:14:11   3,948.90     1.50       0.11


* This period is not complete.


End of Facility Trends Report
```

B-22   Issue 1   May 1993

Specifications

C

This appendix provides some technical information about the hardware and software requirements for running CAS for Windows on your PC.

The information is organized into the following topics:

- Processor
- Modems
- Switch Interface
- Capacities

Processor

CAS for Windows recommends the following minimal PC configuration:

Processor*	Single-site system:	Multi-site system:
	• NCR 3315 PC (20 MHz 80386) • 6 Mb RAM • 80 Mb hard disk	• NCR 3332 PC (66 MHz 80486) • 16 Mb RAM • 340 Mb hard disk

* Processors should have an AT-type backplane. Processors with other backplanes (such as IBM PS/2's with Microchannel backplanes) require peripherals which have not been certified.

Software	MS-DOS 5.0 and Windows 3.1 (other DOS releases are not recommended)
Devices	• Bus mouse • VGA color monitor • Tape drive — 120 MB (single-site system); 525 Mb (multi-site system) • Parallel printer — Okidata Microline 184T (dot matrix) or OL830 Laser • Remote Maintenance Board (RMB) for remote hardware diagnostics

Communi-cations	Serial ports — 2-port built-in system (single-site) or a 4-port Equinox Mark-IV board (multi-site):
	
	  • Built-in ports — one DB9 (direct switch connection); one DB25 (other).
	  • Mark-IV board — four RJ45 (direct switch and other connections)
	
	The following CAS features use modems attached to serial ports:
	
	  • Polling (multi-site systems)
	  • Remote control (multi-site systems)
	  • Callback receiver (multi-site — to receive polled sites' callbacks)
	  • Call sender (any system — to be polled by a multi-site system)

Serial Port Pinouts*							
Signal	**DB9**	**DB25**	**RJ45**	**Signal**	**DB9**	**DB25**	**RJ45**
TD	#3	#2	#6	**DSR**	#6	#6	#10
RD	#2	#3	#4	**Gnd**	#5	#7	#5,7
RTS	#7	#4	#2	**DCD**	#1	#8	#8
CTS	#8	#5	#9	**RI**	#9	#22	#1
DTR	#4	#20	#3				

* CAS for Windows sends TD, RTS, and DTR signals; it expects RD; if supplied, CAS will act on DCD.

Modems

If used, CAS for Windows requires Hayes-compatible modems, such as the 3830 ComSphere 9600-baud modem (error-correcting modems are recommended).

Typically, default switch settings will work. Although switch settings may vary, you can emulate the following standards:

Baud rate	any — controlled by CAS
DTR	on — controlled by CAS
DCD and DSR	on
"AT" command set	on
Echo commands	off — set by CAS
Result codes	on — set by CAS
Autoanswer	off — set by CAS

Modems are cabled as follows:

(1) From the modem 25-pin RS232 port to either:

— the PC 25-pin built-in port.

— one of the RJ45 ports on the Equinox Mark-IV board in the PC. You must use a modular RJ45 cable and the DTE modem adapter provided by Equinox.

(2) From the modem RJ11 "line" jack to the RJ11 wall jack of a telephone line. You may use a standard telephone RJ11 cable for this connection.

Switch Interface

CAS for Windows requires additional components, cables, and connectors for interfacing with the supported switch. The table below lists cabling items in the order they are connected, starting at the switch.

⇒ If you are using the 9-pin port on the PC for your direct switch connection, it requires a DB9-to-modular adapter.

Switch	Item
System 75 R1V1, V2 or V3, DEFINITY Generic 3r	From: digital line circuit pack TN754 port* • 103A connecting block • 7400A, cable & power supply • DB25-to-modular adapter • RJ45 modular cable
* a DG3 also uses the data line pack TN726B and packet data board TN553 ports	
System 75XE, DEFINITY Generic1, 3i or 3s	From: DCE port on PPN cabinet • DB25-to-modular adapter • RJ45 modular cable
System 85 R2V4 DEFINITY Generic 2	From: PCC pack TN474B • 103A connecting block • D8W-87 cable • ADU w/EIA and aux power kit • DB25-to-modular adapter • RJ45 modular cable
System 85 R2V1, V2, V3, Dimension PBX	From: SMDR-DO (15-word formatted ASCII) or LSU-DO (18-word formatted ASCII) • DB25-to-modular adapter • RJ45 modular cable
System 25, MERLIN, MERLIN LEGEND, or Spirit 2448	From: SMDR port • RJ45 modular cable

Capacities

CAS databases have the following capacities:

Call Records	To disk capacity. Each call record = 75 bytes

Sites	Single-site system = 1 site
	
	Multi-site system options = up to 4 sites
	                      up to 25 sites
	                      up to 100 sites

Organization	2 to 5 levels. Level-1 ("extensions") = 10 digits long; other level entries = 15 characters long. See table.

Model	Level-1 Ext.	Level-2 Cost Ctr.	Level-3 Dept.	Level-4 Div.	Level-5 Branch
100	100	75	35	25	20
200	200	150	75	50	30
500	500	250	150	75	50
2000	2000	1000	500	250	150
5000	5000	1000	1000	500	250
10000	10000	1500	1500	750	350
20000	20000	1500	1500	1000	500
Personnel Names	20 chars long; one per extension.				
Auth. Codes	10 digits long; one per extension.				

Other	See table:			
	Model	**Facilities** [1]	**Trunks** [2]	**Accounts** [3]
	100	25	100	1000
	200	50	200	3000
	500	75	500	5000
	2000	100	1000	10000
	5000	200	2000	20000
	10000	200	2000	30000
	20000	200	2000	30000
	[1] Facility names = 15 characters long			
	[2] Trunks = 8 digits long			
	[3] Account codes = 16 characters long; names = 20 chararcters long			
Call Types	50 (names = up to 5 characters long). System defaults are:			
	IDDD	International Direct Distance Dial		
	INCOM	Incoming		
	IS-IL	In-State, In-LATA		
	IS-OL	In-State, Out-of-LATA		
	LOCAL	Local		
	OS-IL	Out-of-State, In-LATA		
	OS-OL	Out-of-State, Out-of-LATA		
	OTHER	Undefined, default-rated calls		
	SPCL	Special number		
	ZERO+	Operator assisted		

Carrier Services & Rate Methods	1000 rate methods from among these choices:

1000 rate methods from among these choices:

- Custom (fixed) rates*
- User-definedmarkup of installed fixed rates
- User-defined flat cost per call
- User-defined charge band

* Custom rates for most carriers are readily available, including:

AT&T		MCI	
Basic service	ATT	Basic service	MCI
Megacom	AMC	Prism 1	MPP
SDN switched off-off	ANL	Prism Plus	MVS
SDN switched off-on	ASN	Vision switched	MVD
Pro WATS	PWS	Vision dedicated	MCR
SDN dedicated on-off	ADS	Sprint	
SDN dedicated on-on	ASD	Basic service	SPR
Plan D service type 1	ATD	Clarity Custom switched	SCC
Megacom Plus ded UNIPLAN	MPD	Clarity Custome select	CSS
Megacom Plus switch.UNIPLAN	MPS	Advanced WATS 1	SAA

Region Table	5000 (names up to 10 characters long)
Holidays	100
Alert Numbers	250
Scheduled Reports	100 individual reports; 25 groups

Getting Assistance for Problems

D

If a problem arises when you are using CAS for Windows, first attempt to solve it using its Administration and Operations manual as reference. If the problem is caused by a peripheral system or device, consult the system or device documentation.

If you cannot correct the problem, contact one of the following support organizations:

Switch customers	Call (8 AM to 5 PM)
System 75, System 85, Dimension PBX, DEFINITY Generic 1, 2, or 3	1-800-422-6622 (TSC)
System 25, Merlin, Merlin LEGEND, Spirit	1-800-628-2888 (NSAC)

They will assist you by performing remote diagnostics. If it is necessary to replace a defective device or load a software maintenance diskette that corrects the problem, they will arrange for sending the software or a mail-in return of a device, as the case requires.

⇒ There is a service charge for AT&T involvement and dispatched maintenance if the system is out of warranty, not leased, or not covered by a maintenance contract.

Glossary

A

access code
> •A field in a call detail record that contains the numbers dialed to get an outside line; the numbers dialed to get an outside line.

account code
> A field in a call detail record that contains a user-defined identifier. Account codes are typically dialed when placing or receiving a call to identify the call subject matter, client account, and so on.

Account Code Reports
> Reports that provide call record summary or detail information based on the date range (detail report only) and named accounts.
>
> Details for each account are sorted in the order calls are received from the SMDR source; the Summary Report provides the number, duration, and cost for each account. Call costs include account code markups only.

ANI Call Distribution Report
> A report that provides summary information for each area code (U.S. or Canada) or location (international) originating the call. Information includes the number of calls, total and average duration, total cost, and average cost per minute and per call. Costs include active taxes only, without any type of markups.

answer supervision
> The capability to detect when a telephone call has been answered. Answer supervision is one of the many advantages provided by ISDN services.
>
> CAS for Windows allows a user-defined "correction time" for switches without answer supervision to subtract all non-chargeable, dial-to-answer time from the call duration reported by the switch.

area code
> A geographic area encompassing many CO exchanges. A telephone number, for example, 716-555-1212, identifies the area code (716) and CO exchange (555) used by the subscriber's line (1212).

authorization code
> A switch feature whereby users dial their assigned code, typically to identify the call origin and/or use limited-access facilities.
>
> Whenever authorization codes appear in call records, CAS for Windows substitutes their user's extension as call origin — even if the call was dialed from a different extension.

automatic number identification (ANI)
> The ability of ISDN equipment to pass to their subscribers (in digital form) the phone number of subscribers' callers. CAS for Windows supports ANI for switches that provide this feature.

B

backup
> The PC function which allows copying system data into diskettes.

bar chart
> A graphical representation of a report displaying vertical or horizontal bars against an X (horizontal) or a Y (vertical) scale of values.
>
> Vertical bars "sit" on the X-axis (which represents line entries such as hours in a Time of Day Traffic Report); the Y-axis displays a scale of values representing either the total number, cost, or usage (depending on the report). The bar's height corresponds to the value on the scale.
>
> For horizontal bars, the axis are reversed.

baud rate
> A measurement of digital transmission speed representing the number of signal events per second. If the signal event represents the presence or absence of one bit, then the baud is identical to bits per second.

bits per character
> The length (number of bits) of a single character transmission.

buffer
> A temporary storage area in your PC.

C

call collector
A device that collects and stores calls from a telephone switch, to transmit them later to a processor with a telecommunication management application such as the CAS for Windows.

Call Distribution Report
A report that summarizes activity for each dialed area code. Information includes the number of calls, duration, and costs. Costs include active taxes only, without any type of markup.

call type
The type of telephone service used by the call. Local, IDDD, WATS, etc. are call type examples used in CAS for Windows reports.

Call Type Report
A report that provides summaries for each call type in your system. Infor-mation includes the number of calls, total and average duration, total cost, and average cost per minute and per call. Costs include active taxes only, without any type of markups.

carrier
 1. A company that provides telephone services, such as AT&T Communications, MCI, and US SPRINT. 2. A field in a call record that contains the interexchange carrier (IXC) code for the carrier used by a call.

central office (CO)
The telephone company facility that routes and connects calls from a local area — also known as "public exchange" outside North America.

Centrex
A telco service providing direct inward and outward dialing for extensions. The subscriber is assigned a distinct CO identification number and made a part of the numbering plan. A number listed in the telephone directory will give access to the subscriber's operator. Centrex is an alternative to an in-house telephone switching system, currently not supported by CAS.

correction time
An estimate of how long it takes to make a telephone connection. This includes all non-chargeable time from dialing to answering a call.

Cost and Duration Report
A report that provides call summaries for several cost and duration ranges. Information includes the number of calls, total and average duration, total cost, and average cost per minute and per call. Costs include active taxes only, without any type of markups.

cost center
The level-2 default name in a company's organizational hierarchy. CAS for Windows allows call cost markups by cost center. Marked up charges will appear on Organization Reports.

D

database
A collection of data in your system — such as the set of all call records in an accounting period — structured and organized for easy access; also, the information in system tables that identifies its users' equipment, company organization, geographical area, etc.

Date Report
A report that provides summaries for each day in the current accounting period. Summary information includes the number of calls, total and average duration, total cost, and average cost per minute and per call. Costs include active taxes only, without any type of markups.

default
The value, option, or feature automatically supplied by the system, unless the user specifies otherwise.

department
The level-3 default name in a company's organizational hierarchy used to allocate telephone expenses.

dialed digit processing
A CAS for Windows feature whereby specific dialed number patterns can be identified for additional processing.

dialing pattern
The way a telephone number is dialed from a locality.

dialog box
    A working window of the CAS for Windows application used to perform a function
    (such as printing a report) or execute a database command (such as editing a file).

directory
    A type of file used to group and organize other files or directories.

diskette
    A thin, flexible platter (also called a floppy disk) coated with magnetic material and
    used as a storage medium.

E

equal access
    The ability to place long-distance calls over any carrier network. A customer's primary
    carrier is typically accessed by dialing 1 or 0 before the telephone number, any other
    carrier is accessed by its 10xxx dialed code.

error logs
    A utility file where system messages about significant events and errors are recorded.

Exception Reports
    Reports that provide summary information on calls or conditions that may require
    investigation. Call costs, if reported, include all Call Type and Cost Center markups
    and all active taxes.

exchange
    A geographic area within which calls are generally toll-free. A telephone number, for
    example, 716-555-1212, identifies the area code (716) and CO exchange (555) used
    by the subscriber's line (1212).

extension
    The level-1 default name in the company organization hierarchy corresponding to the
    number of a voice terminal; a field in a call record that contains the number of a voice
    terminal, indicating the origin of an outgoing call or the destination of an incoming call.

F

facility
> The system designation for a group of telephone lines programmed at the switch to carry calls requiring a specific telephone service.

Facility Reports
> Reports that provide summary information that includes the number of calls, total and average duration, total cost, and average cost per minute and per call. Costs include active taxes only, without any type of markups.

> — The Facility Summary summarizes call activity on each trunk, under the named facilities.

> — The Facility Trends summarizes call activity of the last 12 accounting periods, for each named facility.

> — The Facility Grade of Service analyzes facility busy hours: it lists the number of trunks, the average number of calls carried, their total and average duration, the facility's actual and target GOS, and the number of trunks required to meet the target GOS.

file
> A collection of program, instructions, or data records stored on a disk. Each file has a label, following the operating system naming conventions.

fixed rates diskette
> A floppy diskette containing a CAS for Windows site's call rating tables and other licensing information that is required for its installation.

flow control
> A mechanism — such as buffering or controls that turns a device on and off — used to prevent loss of data during transmission.

foreign exchange (FX)
> A line connecting a subscriber's switch to a remote CO.

format
> The arrangement or layout of data.

G

Grade of Service (GOS)
A way to measure outgoing service on a telephone facility on its worst case scenario. GOS represents the probability of receiving a busy signal on a call attempt on any given day, during the facility's busiest hour.

H

Hacker Tracker
An installable CAS option that helps stop fraudulent use of telephone switches. HackerTracker monitors phone activity and generates alarms whenever an excessive number of calls and/or charges trips specified alarm criteria.

hard disk
A rigid platter coated with magnetic material and used as a storage medium.

holidays
The holidays during which telephone discount rates apply.

I

immediate output/alert numbers
A feature whereby the system flags calls that match "alert" numbers or user-specified conditions — such as from specific extensions or over a minimum cost duration — and sends a copy of the call details to the Immediate Output file for later viewing.

Incoming Traffic Analysis Report
A report that provides hourly incoming call statistics: total number, answered and unanswered calls, percentages, and average ring times. The hour with the worst percentage of unanswered calls is flagged.

Integrated Services Digital Network (ISDN)
A network that provides end-to-end digital communications to support a wide range of services, including voice and data, to which users have access by a set of standard, multipurpose user network interfaces.

Some examples of ISDN services include calling number information (also known as ANI for "automatic number identification"), call waiting, credit card calling, network access, and simultaneous data calls.

interface
   A device or system forming a common boundary at which independent devices or systems interact.

International Direct Distance Dial (IDDD)
   The call type for calls to a foreign country dialed using the 011 toll prefix.

IS-IL
   The CAS for Windows call type for in-state, in-LATA calls; a toll call placed within its own state and LATA boundaries.

IS-OL
   The CAS for Windows call type for in-state, out-of-LATA calls; a toll call placed within its own state, but outside its LATA boundaries.

L

LATA
   Local Access Transport Area; a region covering adjacent COs. Calls within their LATA are serviced by the local telephone company, calls outside their LATA require the services of a long distance carrier.

login
   The process of gaining access to a computer system.

M

Megacom
   Megacom 800 and Megacom are two AT&T services similar to InWATS and OutWATS, except that the local lines from a subscriber's site and the AT&T service office are the responsibility of the subscriber (typically T1 lines).

memory
   The working storage area in a PC where programs and data are processed.

menu
> A list of selectable items on a screen.

minimum duration
> A threshold value specified by the user that tells CAS for Windows when to consider a call valid.

modem
> A device that converts digital data signals to analog signals for transmission over voice-terminal circuits. Analog signals are converted back to original digital data signals by another modem at the other end of the circuit. Also called a data set.

O

organization
> The user-specified structure of a company — the company name, the number and names of its hierarchical or corporate levels, and the level associated with budget tracking — as well as the set of individual entries (the "organization database").

> System defaults use five levels, named: Level-1 = Extension , Level-2 = Cost Center, Level-3 = Department, Level-4 = Division, and Level-5 = Branch. In multi-site systems, level-1 entries are unique for each site (entries for all other levels are system-wide).

Organization Reports
> Reports that provide summary or detail call record information, sorted by organization level.   Summaries provide the number, duration, and cost statistics for the current accounting period.   Call costs include cost center and call type markups.

OS-IL
> The CAS for Windows call type for out-of-state, in-LATA calls; a toll call that crossed its state boundaries, but stayed within its own home LATA.

OS-OL
> The CAS for Windows call type for out-of-state, out-of-LATA calls; a toll call that crossed both its state and LATA boundaries.

P

parity
  A method used by some devices to check that data was transmitted correctly. Parity can be "odd," "even," or not used at all.

password
  A unique string of characters that a user enters to access a program.

path name
  A sequence of directory names separated by a backslash (\) and ending with the name of a file or directory, used to define the connection between some directory and the named file.

pie chart
  A graphical representation of a summary report displaying pie slices as line entries (such as hours in a Time of Day Traffic Report). The size of the slice corresponds to the percent value of the line entry over the total value — number, cost, or usage (depending on the report).

polling
  Polling is the process of periodically accessing another system for its data — in our context, a call collector for its call detail records. Poller systems control and regulate data transfers from call collectors.

port
  The data transmission "outlet" on a device used for communicating with other devices.

Private Branch Exchange (PBX)
  A specialized computer system that provides voice and data communications services (including access to public and private networks) for voice and data terminals on a customer's premises. The switch itself consists of a digital computer, software, storage, and carriers with special hardware to perform the actual connections.

privacy
  A CAS for Windows feature, whereby called numbers from specific extensions or all calls in general, are partially or entirely hidden from view — either permanently and/or for reports only.

private line
A phone line between two points reserved for the use of a single customer.

privileges
Permission granted each user to read and/or change data shared by other users in a computer system.

protocol
A set of conventions or rules that describe how data is organized, transmitted, and received.

R

rate method
User-specified instructions for costing a call, whereby you associate dialing patterns with an existing call type and a costing schemes such as by charge band, by call, or by an existing tariff with/without markups.

record
The smallest piece of information that a database management system can retrieve from a file. Records may contain several items of information (fields) — for example, a call record contains the time of a call, its duration, city and state destination, account code dialed, and cost.

Rejected Call Summary Report
A report that summarizes calls rejected because they were under the minimum duration and/or cost set for that call type. Information includes the number, total and average duration, total cost, and average cost per minute and per call.   Costs include active taxes only, without markups.

restore
The function that allows you to copy back into storage system data previously backed up into diskettes.

Ring Time Analysis Report
A report that lists several ring time ranges. Each range shows totals and over-all percentages, as well as answered and unanswered call totals and range percentages.

RS232C interface
    An Electronic Industries Association (EIA) standard 25-pin interface between data terminal equipment (DTE) and data communication equipment (DCE) using serial binary interchange signals.

S

selection report
    A CAS for Windows report that lists summary or detailed call record information based on the selection of a time, date, cost, duration, extension, account code, number, etc.

SMDR
    Station Message Detail Recording. A switch capability with which the details concerning the path of a call from origination to termination are recorded in the form of an SMDR record.

Software Defined Network (SDN)
    A service for connecting subscriber's multiple sites in a network. A call over an SDN line first goes to a local service office which forwards the call via the public network. Off-net calls continue out of the SDN, on to the local central office servicing the called number. On-net calls go to the appropriate service office, then on to the called site over an SDN line. Substantial discounts apply to calls that stay on-net throughout.

SPCL
    The CAS for Windows call type for "special numbers," such as information, 911, 800 and 900 numbers.

stop bits
    The number of bits that trail after the transmission of a single character.

switch
    The software-controlled communications processor that interprets dialing pulses, tones, and keyboard characters, and makes the proper interconnections within and out of the system. The switch consists of a digital computer, software, storage, and carriers with special hardware to perform the actual connections. A switch provides voice and/or data communications services on a customer's premises.

T

T1

A digital facility that can carry multiple, simultaneous voice or data communications at high speeds on the same physical link. A T1 line is connected to a private switch using transmit/receive interface equipment that translates the voice or data streams into and out of a carrier's digital network.

tandem call

A connecting call in a telephone network, coming into a switch through one line and transferred out again through another.

threshold

A critical level which, when reached, produces a system response.

tie

A line that "ties" together two telephone switches. Extensions at either point, as well as the CO exchange, can be dialed locally.

Time of Day Report

A report that provides outgoing and/or incoming call summaries for the 24 hour-bands in a day, for the current accounting period. Summary information includes the number of calls, total and average duration, total cost, and average cost per minute and per call. Costs include active taxes only, without any type of markups. The busiest hour and the percentage of traffic it carried appears at the end.

traffic reports

A collection of CAS for Windows reports that focus on trends, telephone usage, productivity, etc.

trunk

1. A dedicated communication channel between two switches. 2. A field in a call detail record that contains the identifier for the specific route used by the call. Also known as "line," "circuit ID," and "used access code."

V

valid calls
Calls that have computable costs. That is, calls over the duration threshold, routed through defined trunks, and dialed using a pattern able to reach a destination. Invalid calls are discarded by CAS for Windows.

W

WATS
Wide Area Telephone Services; a type of long distance service provided by some telephone companies like MCI and AT&T, where bulk usage over a billing period determines the rates for calls within the same distance band.

wildcards
The characters "%" and "?" — used as follows:
? match a single character in that position
% match any number of trailing characters

window
A display format resembing a box, containing a menu listing, data entry fields, help text, etc.

worksheet
A printed form used to gather information from various sources and compile it into a final, complete form. CAS for Windows printed documentation contains blank worksheets to input information during system setup procedures.

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