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MEASUREMENTS AND DATA MANAGEMENT

NETWORK ADMINISTRATION

"DMS* "-10 DIGITAL SWITCHING SYSTEM

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1. GENERAL

1.01 This section describes the data management task of the network switching administrator (NSA) for the Digital Multiplex System-10 (DMS-10) switching system. This section includes information related to all current generics. Responsibility, data collection, report scheduling, data analysis, and data summarization and distribution are topics that are discussed.

1.02 This section is reissued to include the information for the 208, 209, and other generic programs, and the variations between the mechanized and nonmechanized data modes. Since this is a general revision, no arrows have been used to denote significant changes.

1.03 The title for each figure includes a number(s) in parentheses which identifies the paragraph(s) in which the figure is referenced.

1.04 For a detailed description of the measurements available in the DMS-10 switching system, refer to Northern Telecom Practice (NTP) 297-3001-456, Operational Measurements.

2. NETWORK DATA RESPONSIBILITIES—NONMECHANIZED

2.01 The NSAs are responsible for manually scheduling, collecting, validating, posting, and distributing data required to properly administer, evaluate, and engineer the DMS-10 switching system when the system is defined (via the generic conditions [GCON]) as nonmechanized. When the mechanized feature is purchased, defined in GCON as EDAS, and activated the structure of the measurements, scheduling, collection, etc, is drastically altered. These differences will be discussed in detail in later paragraphs.

2.02 In the nonmechanized mode, the NSA must identify and obtain the data required for the following:

(a) Network Administration

(b) Traffic Engineering

(c) Trunk Servicing and Forecasting

(d) Traffic Separations

(e) Business Services

(f) Special studies for interdepartmental coordinates

(g) Network Switching Performance Measurement Plan (NSPMP)

(h) Other reports as required by local and company practices.

2.03 The nonmechanized data are collected by data block content, referred to as Operational Measurements (OPM), and the proper distribution is de-

termined based on local and company practices. Prior to distribution, the raw data must be validated and then tested for reliability. Validation and reliability procedures generally consist of initial comparisons of the current data to a "historically" developed set of standards determined for each office. The standards are derived by comparison of initial data to those engineering standards that were applied to the provisioning of a switching entity. These derived historical standards are then applied to machine data outputs on an ongoing basis.

2.04 Discrepancies uncovered from any initially applied data reliability and validation technique may result in a coordinated effort with maintenance groups. This effort is necessary to resolve situations where data may not reflect actual equipment operation, or may reflect a defective data collection or storage device. The responsibility for data validation belongs to the NSA, although mutual interdepartmental responsibilities are shared. It is also the responsibility of the NSA to provide the valid data in a mutually acceptable format which is usable by the receiving department.

2.05 Data analysis is just one part of a total switching system analysis that incorporates a review of the measured load, service, and volume of traffic. The office and component, engineered and administrative capacities should be determined followed with a routine monitoring of load versus capacity. Inherent in this analysis is an evaluation of the future service capability of the office. Specific future service areas to be monitored are:

(a) Switching system capacities of lines, terminals, switching paths, and common control components required to evaluate the actual system performance.

(b) Data analysis and reliability checks on key items of office data and tests of actual or projected values. This is with continued evaluations of actual capacities and office characteristics to determine any change in the current office exhaust dates.

(c) Assessments of office growth and utilization versus the load and growth forecasted on the demand and facility (D&F) charts.

3. NETWORK DATA RESPONSIBILITIES—MECHANIZED

3.01 Effective with generic 209.10 and later a purchased feature (EDAS) is available for data collection into a mechanized system (eg, Engineering and Administration Data Acquisition System [EADAS]). (See Note.) When the EDAS feature is provided, it is defined to the DMS-10 switching system via the System Parameters (SYS) Configuration Record. In addition an input/output (I/O) port must be defined for data transmission from the EDAS feature to the data collection system under the Logical Unit (LOGU) section of the Configuration Record. With the definition of both the feature (EDAS) and the port (LOGU), the data is sent on a unidirectional interface whereby only output messages are sent from the DMS-10 switching system to the data collection system (eg, EADAS). This unidirectional interface precludes putting EADAS in the DMS-10 switching systems at this time.

Note: Throughout this practice, two terms are utilized. They are:

- EDAS—This is the nomenclature used by Northern Telecom to designate the feature formatting area in the I/O area for passing data to a data processing system. Whenever the term EDAS is used, it denotes the internal view as seen by the DMS-10 switching system in its processing of data for downstream processing.

- EADAS—A data processing system used in many area of the Bell Operating Companies.

3.02 The messages sent on the I/O port to the data collection system are limited to three. The three messages are:

(a) The 30-minute message (also called the A schedule)

(b) The 24-hour message (also called the D schedule)

(c) SYSLOAD messages.

3.03 An example of the A schedule output is shown in Fig. 1, and an example of the D schedule output is shown in Fig. 2.

3.04 The NSAs responsibilities, as stated in paragraph 2.01, under a mechanized environment are somewhat reduced. The scheduling task has been eliminated when the EDAS feature is defined in the DMS-10 switching system. The DMS-10 switching system will accumulate the data over a 30-minute interval for some measurements, and over a 1-hour interval for other measurements. The data is transferred to the holding registers from the accumulators then sent to the EDAS formatting section. These fixed accumulation intervals of 30-minute data are transferred out of the DMS-10 switching system at each hour and half-hour over the entire 24 period. The D-schedule data is transferred out of the DMS-10 switching system every hour on the hour each day.

3.04 The data collecting function has been eliminated by the fixed internal times of A and D schedules.

3.05 Some areas of validation are eliminated by the introduction of a set of validity (VAL) measurements in each of the two measurement schedules. These measurements are only in place to allow the data user to judge the reliability of the data. Further elementary validation is provided in downstream processing (eg, Central Office Equipment Reports [COER]). However, the final judgment of data validation still remains the responsibility of the NSA.

3.06 Distribution of mechanized data is further reduced if, eg, COER is used. This system will distribute the trunking data, and provide the NSA and engineers with summarized reports based on the extreme value (EV) concept. Historically, downstream processed data has been summarized by utilizing the time-consistent busy hour(s) for the office and its components. The EV concept application will report the peak data points for each reported day, and a time-stamp to indicate the hour in which the peak occurred.

3.07 The information contained in paragraphs 2.03, 2.04, and 2.05 is applicable to data responsibilities in the mechanized as well as the nonmechanized mode. Information contained in later paragraphs and figures illustrate and explain the differences in the mechanized and nonmechanized modes.

4. DATA COLLECTION—MECHANIZED AND NONMECHANIZED

A. Communications Link

4.01 The NSA's communication link with the DMS-10 switching system is the traffic TTY. The traffic TTY is one of a maximum of eight terminals that the DMS-10 switching system can support. This terminal can operate at 110, 300, 1200, 2400, or 4800 baud rates depending on the type of terminal chosen. A detailed description of all TTY ports and the input/output (I/O) system can be found in NTP 297-3001-300 or Section 241-120-030.

4.02 In the DMS-10 switching system, a number of programs are stored on tape rather than being kept resident. Upon request, these are loaded into resident memory, one at a time. There are two types of overlay programs: (1) interactive and (2) free-running. Interactive programs are structured in dialogue form and require an interchange of information between the program and the program user. The OPM output is typical of an interactive mode of overlay program. The free-running programs require no dialogue between the user and the programs. A typical free-running program is the maintenance program that surveys system integrity. The traffic TTY, in conjunction with the Operational Measurement Control (OMC) system, is the medium through which measurement reports are received.

4.03 The DMS-10 switching system has space in its resident memory for only one overlay program to be run at a time. Requests to run an overlay program can come from a terminal or from within the system. The system may request a program as a result of detecting a fault or because a scheduled program is due to be run. When a manual request is forwarded to the I/O system while the overlay area is in use, DMS-10 switching system sends a message to the requesting terminal indicating which program is being run and the user of that program. The receiver of the message can then elect to override the program in the overlay area by issuing an appropriate command. The user of the aborted program is notified that the program has been aborted.

4.04 The routing of output messages to specific terminals is controlled through the use of message classes. Typical output message classes are data modification, maintenance, and traffic. The maintenance class of terminal has priority on overlay areas.

Assignment of message classes can be found in NTP 297-3001-304 under the Logical Units (LOGU) Configuration Record 05.

4.05 Passwords are required to gain access to the DMS-10 switching system from a terminal. Attempts to access the system through the use of an unauthorized password will result in the user being blocked. Passwords are also used to control the classes of tasks that may be performed by users of the I/O system, ie, a password class of "Traffic" is allowed traffic measurement tasks. Passwords are assigned in translations under the Passwords (PSWD) Configuration Record.

4.06 To permit user verification of information entered through a terminal keyboard, the I/O system echoes all input characters with the exception of the password. The I/O system operates in either the input or output mode to prevent garbling. In the input mode, the system echoes input characters to the terminal for verification and stores output messages in a buffer for later output. In the output mode, the system ignores all inputs (except the octothorpe [#] and asterisk [*] which form part of two abort commands) and outputs any messages it may have accumulated in the output buffer. A user can enter the output mode from the input mode by depressing the carriage return key at the end of a line. Carriage return is indicated by <CR> in all examples of terminal sessions. Also, the system changes to the output mode when more than 60 seconds has elapsed since the last character had been input. A user can enter the input mode from the output mode by entering the abort command ####. Basic system prompts and typical user responses may be found in Section 241-120-030.

4.07 Special commands are used to abort an overlay program and to abort the current command. The abort commands can be used with the I/O system operating in either the input or output modes. If an overlay program is in use, the program can be aborted by typing four consecutive asterisks within a 10-second period. After the program is aborted, the I/O system enters the input mode in anticipation of further instructions. Another overlay program can be loaded by the system or by another user once the current overlay is aborted. A request to abort the current command is accomplished by inputting four consecutive octothorpe characters within 10 seconds. This causes the program to abort the command and enter the input mode in anticipation of further input. If no overlay program is loaded in the overlay area, the use of either command causes the I/O system to enter the input mode.

4.08 If an error is made while inputting data from a terminal, the DMS-10 switching system will respond with an error message. Consult the Output Message Manual for interpretation of the message.

B. Operational Measurements System (OPMS)

4.09 The DMS-10 switching system has programs resident in system memory which monitor system performance and level of service. The programs accumulate data associated with various system functions. The data is stored and transmitted based on the responses to the GCON definitions as stated in paragraph 2.01. Data is transferred to holding registers and configured in a set of measurement blocks called OPMS. A full description of the OPMS can be found in NTP 297-3001-456. See Table A for the types of OPMS data collected by the DMS-10 switching system.

4.10 The DMS-10 switching system uses a double-buffer arrangement for measurements. As OPMS data are collected, it is stored in accumulating registers. The contents of the accumulating registers are transferred to the holding registers at regular intervals according to an update schedule, if the system is in the nonmechanized node, or every 30 minutes if the system is in the mechanized mode. In transferring, the contents of the accumulating registers are either added to or copied over the contents of the holding registers, or placed in the holding registers after the previous contacts that were transferred to the EDAS formatting area were cleared, dependant on the GCON option responses. The update schedule and option are specified by using the OPMS control program when the DMS-10 switching system is nonmechanized. The update schedule and option are disabled when the EDAS feature is part of the system, and it is activated.

4.11 Stored OPMS data may be lost because of a system reload. A system reload can be invoked either automatically by the system as a recovery action from severe system faults or manually as a trouble clearing procedure. This causes all OPMS registers to be set to zero. Hence, all OPMS data collected since the last printout is lost. A system reload is indicated by printout SYS000 (on the traffic TTY) or in the VAL section of the EDAS output format

(the third register will contain a figure other than 00000).

4.12 The contents of the holding registers are printed out or sent to the EDAS formatter, at specified intervals according to the GCON option response. On specification, the value in the holding register is either set to zero or left intact, depending on the GCON option. The data are printed out on a particular class of TTY, according to a defined print class. The printout schedule, option, and print class are specified by using the OPMS control program or the GCON option response.

> ***Note:*** In the nonmechanized mode, if a holding register overflows, ie, value exceeds 65,536, the value printed out for the register is *****. The five asterisks indicate a value in excess of 65,536 for a particular OPMS data item. However, in the mechanized (ie, EDAS/Traffic Separations Measurement System [TSMS]) mode, the valid range is from 0 through 65525. The integers 65526 to 65536 are reserved as special codes for the special codes in a data collection system (eg, EADAS).

4.13 The OPMS data may also be printed out on demand. The user (eg, the traffic TTY) may obtain a printout of the data accumulated in the holding registers of all (or selected) measurement blocks since the last scheduled printout or data transferred to the EDAS formatter in the I/O system. On printing by request, the value in the holding registers is left intact.

4.14 The OPMS data are printed out as scheduled in the nonmechanized mode or on demand at the traffic TTY in the mechanized mode in the form of measurement blocks. Figure 3 shows the printout format for the first OPMS data block, and Fig. 4 shows the dataflow. The format is similar for all measurement blocks in the mechanized or nonmechanized mode.

4.15 Table B displays all of the measurement blocks that are currently available in the OPMS if the blocks were to be examined on a demand basis, either in the mechanized or nonmechanized mode. It shows all of the counts (mnemonics) that appear in each block and the registers that are printed for each one when the nonmechanized or mechanized mode of data collection is used. This table is designed for use as a quick reference. A detailed description of each count can be found in NTP 297-3001-456. The primary source for user interface using a TTY or cathode-ray tube (CRT) display may be found in NTP 297-3001-300, DMS-10 switching system output/output system and NTP 297-3001-456 (Addendum).

4.16 The major difference between the mechanized and nonmechanized data is the point at which the data is examined. As stated, the accumulators and holding registers contain data in OPMS format. In the mechanized mode, the data is transferred from holding registers into the I/O area where the data is arranged into a message format which is sent in ASCII encoded characters at the baud rate (generally 1200 baud) specified for the EDAS data link. The release of generic 209 included several "new" accumulators. However, some of these accumulators cannot be examined in the DMS-10 switching system.

4.17 The following is an example of data transfer and the effect it may have on data analysis from the point of view of the NSA. For example:

(a) At 10:00 am, the data accumulated between 9:30 am and 10:00 am is transferred to the holding registers. Any data residing in the holding registers is zeroed.

(b) As the data is placed in the holding registers it is also transferred to the I/O area for formatting via the EDAS interface.

(c) With 209 generic and later, the added accumulators do not have corresponding holding registers. The data is transferred directly to the I/O area and the data is sent on the channel marked for EDAS output.

(d) When downstream data reports (eg, exception reports from EADAS), are examined and the NSA wishes to examine the corresponding data in the DMS-10 switching system, those accumulators which do not have corresponding holding registers cannot be examined. Other methods will have to be employed to analyze the data (see Part 9. Data Analysis).

4.18 The DMS-10 switching system provides for user control of the OPMS. Various collect and printout options are available in the nonmechanized mode through a control block associated with each OPMS block. The options or control data items are

specified for a complete measurement block, not for individual measurements within a block. The control data items are:

(a) Update schedule

(b) Update option

(c) Printout schedule

(d) Printout option

(e) TTY class for printout.

The options or control data items associated with mechanized data mode are explained in and shown in Table C.

4.19 User control of the OPMS is provided by the Operational Measurements Control (OMC) program. The program is an overlay program (ie, held on magnetic tape) and is explicitly loaded into system memory by the user when required. The mechanism for inputting data via the program is interactive. The system prompts the user for the type of information to enter on the TTY. Of the following tasks listed, all are fully applicable to the DMS-10 switching system in the nonmechanized mode. Tasks (a) and (b) are partially applicable to the mechanized mode, and (c) and (d) are fully applicable. Overlay program OMC is used to perform the following tasks:

(a) ***Query*** control data items for measurement blocks (see Fig. 5)

(b) ***Change*** control data items for measurement blocks (see Fig. 7)

(c) ***Manipulate*** traffic study registers (see Fig. 9)

(d) ***Manipulate*** the OPMS for the purpose of obtaining measurements on hunt groups (see Fig. 11).

Figures 6, 8, and 10 are Recent Change Orders designed to be used as work sheets to prepare specific Data Modification Orders or TTY prompt-response sessions accessing the OMC overlay.

4.20 Office data are stored in system memory and on tape. The data are automatically entered into system memory following each Data Modification Order (DMO) when the carriage return is depressed. Making a change using the overlay OMC is considered DMO. The DMO overlay programs use two commands to control the storing of data on tape. (The tape is the back-up for the DMS-10 switching system.) These commands are **TAPE** (TP) and **NO TAPE** (NOTP). The **TP** command transfers data from system memory onto tape immediately following each DMO operation. To enter this mode, the user inputs the **TP** command in response to the first prompt following the loading of each overlay program. The user need not input the **TP** command. The **NOTP** command inhibits transfer of office data from system memory onto tape. The data are entered into system memory only. This is the default mode which exists when any DMO overlay program is loaded. The user need not input the **NOTP** command. This is the recommended mode where several DMO operations are being performed during one session in order to avoid excess time being taken up by tape operations.

4.21 Refer to Table C for the prompts and options available for changing the control data items using overlay OMC. Table C also includes an indicator to those prompts-responses that are not applicable to the mechanized option.

4.22 If the **NOTP** command is used, whether by input or default, the data ***must*** be transferred from the system memory onto the tape when all DMO operations are finished. The data are transferred by using the Equipment Data Dump (EDD) program. The user loads overlay program EDD into system memory and enters **DUMP** <CR> in response to the first prompt.

5. DATA MESSAGE OUTPUT—MECHANIZED

A. General Description

5.01 The introduction of an interface between the DMS-10 switching system and a data collection system, eg, EADAS, resulted in a "formatting" of the OPM data blocks into a different grouping of the data register message. Additional measurements were added in the accumulator area. Unlike the measurements in the OPM data blocks, some of the new measurements do not have corresponding holding registers, and the "new measurement" data is transferred to the I/O formatting area directly from the accumulators.

5.02 The DMS-10 switching system measurement data is formatted into American Standard Code for Information Interexchange (ASCII) encoded characters via the TTY I/O port from a Serial Data Interface (SDI) circuit, then across a data link defined in the GCON area of the DMS-10 switching system. As stated in paragraph 4.10, the update schedule and most options are disabled when the EDAS feature is activated (see Table C). The measurements are transferred according to an interval time table. The measurements are provided over a fixed interval of 30 minutes. At the conclusion of the fixed 30-minute periods, the values in the accumulators are transferred to the holding registers. The holding registers are zeroed (as in the case of the A schedule message) or added (on the half-hour as in the case of the D schedule message) as the current value data is inserted. Each half-hour interval the A-schedule data from the holding registers, along with the data which does not have holding registers, is transferred and placed in the format area of the I/O for transmission to the data collection system.

5.03 The data accumulation of the A schedule measurements starts on each hour and half-hour and is transferred to the holding registers and I/O 30 minutes later. The data accumulation for the D schedule measurements begin on the hour and are transferred from the holding registers and I/O 1 hour later. On each hour when both the A schedule message and the D schedule message results are transferred, the A schedule message is always sent out on the data link first, followed immediately by the D schedule message. Figure 4 shows a diagram of the data flow in the DMS-10 switching system with the EDAS feature applied and activated.

5.04 In addition to the OPM data provided by the DMS-10 switching system in a nonmechanized mode, several accumulators have been added to provide additional measurement capabilities. They are:

(a) Validity measurements

(b) Maintenance usage on a trunk group basis

(c) Maintenance usage on multifrequency (MF) and DGT (DIGITONE* signaling) receivers

(d) Maintenance usage on network and junctor loops

(e) Real-time usage measurement of the processor.

5.05 Mechanized DMS-10 switching system measurements are grouped into records, sections, and messages. When the EDAS feature is activated, the I/O format area arranges the OPM data into these groupings.

5.06 When there is a set of measurements relating to one item, such as a trunk group, they are defined as a record. Each record begins with a numeric code that identifies the items contained in the rest of the measurements in the record. For example, an outgoing trunk group would be arranged as follows:

(1) (2) (3) (4) (5)
00019 00123 01234 00001 00036

(1) = identifier of the trunk group number

(2) = peg count on the trunk group (includes any peg counts in (4) overflow) during the period

(3) = usage on the trunk group (including any usage appearing in (5) maintenance busy) during the period

(4) = peg count of the attempts to access a circuit in the group and all sensors were busy due to traffic maintenance outage

(5) = usage on those trunks that are placed in a maintenance status either due to faulty circuit, manually made-busy, or machine-made busy. This usage would not include a maintenance call from an incoming test desk trunk.

5.07 The EDAS format area compiles related individual measurements and records then groups them into sections. The individual measurements are in specific locations within a section and the record measurements are shown by their group identifier.

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The defined sections and their measurement types (individual or record) are:

(a) Validity (VAL = individual measurements)

(b) Office Totals (OFT = individual measurements)

(c) Features (FEA = individual measurements)

(d) Processor (PRO = individual measurements)

(e) Component (CMP = individual measurements)

(f) Service Network (SNW = record measurements)

(g) Conference Circuit (CON = record measurements)

(h) Network Circuit (PCK = record measurements)

(i) Junctor (JTR = record measurements)

(j) Customer Group (CGM = record measurements)

(k) Customer Line (CLM = record measurements)

(l) Outgoing Trunk Group (TKO = record measurements)

(m) Incoming Trunk Group (TKI = record measurements)

(n) Traffic Separations (DOR = record measurements)

(o) Auxiliary A (AXA = individual measurements) (see Note)

(p) Auxiliary B (AXB = individual measurements) (see Note)

Note: Only appears if the DMS-10 switching system is arranged as a Centralized Automatic Message Accounting (CAMA) office.

5.08 The length of time required for messages transmission to the data collection system (eg, EADAS) depends on three variables, the data transmission speed, the size of the message, and any intra-message pauses. The transmission of all messages scheduled to be sent to the data collection system during a given half hour, must be completed prior to the start of the next half-hour.

5.09 The speed of data transmission is variable as stated in paragraph 4.01. The interface provides one-way outgoing communications from the DMS-10 switching system to the data system. Any pauses in the data transmission caused by any messages (eg, maintenance and alarm messages) merely delay the remainder of the message transmission. These messages are allowed by the system.

B. A Schedule (30-Minute Message)

5.10 The A schedule (30-minute message) sent from the DMS-10 switching system will consist of all of the sections listed in paragraph 5.07, except the DOR section. The message content is organized into data lines of variable lengths. The lines are grouped into the sections, with some sections of a fixed number of data registers, and other sections of variable number of data registers. Each register is a fixed width of five numeric characters. The content of each register will consist of leading zeros, if the register field is not full, and will be right justified.

5.11 Each A schedule message contains a header line. This line consists of:

(a) The message type = MSG A

(b) The entity identifier (14 characters)

(c) The ending time of the 30 minute collection interval = hour: minute (for example, 09:30). The hour will be expressed as 00 to 23.

(d) The last field will consist of the month, day, and year (for example, 03/20/83).

5.12 The sections that make up the A schedule are identified by one of the three character identification (IDs) listed in paragraph 5.07. The last character of the ID is separated by two spaces prior to the beginning of the first register contents. It should be noted that the VAL section is always the first section to appear on the A schedule output to the data collection system. The OFT section is second, followed by the FEA, etc, until the AXA or AXB is completed.

Upon completion of the last line of the message, the A schedule will print END in the left of the message column vertically aligned under the section ID.

5.13 Each section of the A schedule, following the section ID, uses the first data register to indicate the quantity of individual registers to appear in the section. The initial register in a section that contains record measurements gives the number of measurement registers for each record. For example, the VAL section contains a 00005 in its first entry to indicate the presence of 5 individual measurements in the section in addition to the initial register. Also the CON section contains a 00005 in its first entry to indicate there are always 5 registers in the conference circuit record. An explanation of each section of the A schedule and the content of the individual section are shown in Fig. 12.

C. Data—Demand Basis

5.14 Data may be requested from a user at any time. The printout/display will contain data stored in the holding registers of all or those measurement blocks desired. The output will contain the data contained at the time of the last scheduled update of the holding registers. Whenever data is requested, the contents of the holding registers are not zeroed. Data will be printed/displayed in the OPM format shown in Fig. 1.

5.15 As stated, a demand of data from the DMS-10 switching system holding registers is output in the OPM format, and raw data from a request of the data collection system (eg, EADAS) will be as defined in the sectionalized format of paragraph 5.07. Examination of the two output formats will require a correlation for analysis. Figure 12 contains this correlation of OPM data block relationship and the entries within the sections of the EDAS format output.

6. BUSY HOUR DETERMINATION

A. General Description

6.01 Approximately 2 weeks after an office cutover, at a prescribed interval, a busy hour study should be completed. This 2-week interval is to allow the various factors that cause a new office to vary its data reporting to reach a relatively stable condition. Section 780-200-031 discusses general theories and procedures to be used for end office busy hour determination. Regardless of the data collection mode, mechanized or nonmechanized, the busy hour determination study should be exercised.

6.02 In addition to the data collection method, another factor for busy hour determination should be considered. It must be determined if the busy hours data are in the average busy season busy hour (ABSBH) or extreme value (EV) format. Data from the DMS-10 switching system will be in either the OPM or EDAS output format. The NT 8611, Equipment Questionnaire and Traffic Worksheets, are oriented into analog and digital shelves for circuit packs, load (expressed in hundred call second [CCS]) on analog and digital shelves, receivers and transmitters, and processor. These pages and calculations should be used for capacity statements in Section 241-120-060. The major impact of busy hour determination on the NSA work group will be based on selection of the data format and collection. Calculations and selection of the time consistent busy hour (TCBH) are still required for the office busy hour (OBH), and service busy hours (SBH) for the DMS-10 switching system NSPMP (see Section 241-140-005). This may be performed regardless of the collection made. Only the methodology will be slightly different.

6.03 Logically, the nonmechanized (OPM format) lends itself to manual data examination and use of the TCBH for all aspects of data reporting. The mechanized (EDAS format) will pass data through a data collection system (eg, EADAS) and the output will be in either an EV format (peak time frames only reprinted) or TCBH dependant on the methods used by the data collection system. If a data summarization system (eg, COER) is utilized the reports, monthly and machine load and service summary (MLSS), will consist of EVs.

B. Nonmechanized TCBH Determination

6.04 It is advisable to utilize half-hourly data for busy hour determination in the nonmechanized mode. However, hourly data may be used if there is a definite busy hour after the first 5 days of the study, but the start-stop times of the study period should not be limited to the "on-the-hour" time frame.

6.05 The office busy hour should be established using half-hour data (or hourly, if local procedures state) carrying the highest usage (CCS load) on the MUX loops. Using the output of OPM 006, total

the USE (usage) registers of the SNWK, CONF, and the PESH registers. These usage registers contain:

(a) PESH—The usage on all time slots on the MUX loops between the peripheral shelves and the network shelves.

(2) CONF—The usage on all time slots on the MUX loops controlling the access to the conference circuits. Locations on the common equipment (CE) bays are preset and assigned as required.

(3) SNWK—The usage of all time slots on the MUX loop controlling access to the tone sources and digital senders on the service network.

Note: These "dedicated" MUX loops are not available for talking path calls.

The Data Summarization Form in Fig. 13 (Sheet 13) may be utilized for data entry comparison of hour in half-hourly data.

6.06 The JCTR (junctor) measurements are not included as part of the busy hour determination requirements on the MUX loops as this information is contained in the PESH measurements. The JCTR data consists of that load for timeslot pairs which carriers information between the networks.

6.07 Service circuit TCBH is determined in much the same manner as the office busy hour, except the data block utilized is DPM 005. The USE entries on the data block for DIGITONE (DGT) signaling and multifrequency (MF) receiver should be examined to determine the busy hour for the components. The Data Summarization Forms in Fig. 13 (Sheets 7 and 8) may be utilized for the data entries comparison of hourly on half-hourly data.

6.08 Component busy hour ratios should be established for DIGITONE signaling and MF receivers if the busy hour is different from the office busy hour established in paragraph 6.06. For example, a DIGITONE signaling receiver busy hour is determined at 10:00 am with an average CCS of 150. During the office busy hour of 16:00 (4 pm), if DIGITONE signaling receivers averaged 100 CCS, the ratio would be:

150 CCS ÷ 100 CCS = 1.5 Component (Office Busy Hour) Busy Hour Ratio.

	"DIGITONE" BUSY HOUR	OFFICE BUSY HOUR
Time	10:00	16:00
Avg CCS	150	100
Component Busy Hour Ratio	(1.5)	(1.0)

These calculated component busy hours should be reported to the network switching engineer (NSE) for future use in office addition engineering.

6.09 ***It is normally not practical to print the data blocks 24 hours a day for manual operation.*** In order to print the data blocks for selected hours, the print (PRNT) option should be set to the desired days of the week (DOWK). When DOWK is utilized, start (STRT) and stop (STOP) are required. The response for STRT is a number from 0 to 23. In this case, printing access hourly on the hour specified. The response for STOP must be equal to or greater than STRT. The DMS-10 switching system provides no option that allows reports to start and stop more than once within the same 24-hour period.

6.10 Additionally, a TCBH CCS/line should be calculated. This may be accomplished by the following formula:

$$\frac{\text{Total PESH CCS} + \text{Total CONF CCS} + \text{Total SNWK CCS}}{\text{Total Customer Lines}} = \text{CCS/Line}$$

6.11 Service busy hours in the nonmechanized mode should be calculated for dial tone delay and matching loss per instructions given in Section 241-120-050.

C. A Schedule TCBH Determination

6.12 The usage registers in sections SNW (service network), CON (conference circuits), and PCK

(peripheral shelves) are the formatted equivalent of the PESH, CONF, and SNWK in OPM 006. Figure 1 illustrates a representative printout of the A schedule from the EDAS formatter of the DMS-10 switching system. Figure 12 makes a side-by-side comparison of the OPM data blocks and the formatted A schedule.

6.13 The current mechanized data collection (EADAS) does not contain a method of performing a BHD study, and the busy hour selection should be manually calculated until a summarization module is developed. The CCS content of the usage registers will need to be manually extracted and added to obtain the total office load.

6.14 Examination of Fig. 12, the SNW, CON, and PCK section will explain which registers to extract. As an example, the SNW section may be explained as:

(1) The first register always contains a 00005. It indicates that each SNW record in the section contains five registers.

(2) Registers 00001 to 00005 in both the A schedule format and the OPM format are given common numbers for easier interpopulation.

(3) The contents of register 00004, 00009, etc, are the usage registers for the 1st, 2nd, etc, service network MUX loops.

The same register pattern is followed in the CON and PCK sections of the A schedule output. The Data Summarization Form in Fig. 13 (Sheet 13) may also be utilized for data entry to total the register contents.

6.15 The output to the data collection system or device with the EDAS feature will be output every half-hour with no control over the number of hours. If a data collection system (eg, EADAS) is used that does not contain a data summarization module, the system will require interrogation at various intervals to print the A schedule contents. An alternative to interrogation would be the use of exception reporting (eg, NORGEN) with the thresholds for the usage registers set to a low level in order to collect the required usage data to determine to TCBH for the office.

6.16 Service circuit BHD may be done in a manner similar to that just described for the office busy hour, except the CMP (component) section of the A schedule output would be utilized. Figure 12 also compares the CMP registers to the content of OPM 005. The same register numbering utilized is utilized. For example:

(1) The first CMP register indicates that 46 (00046) registers are contained in the section.

(2) Registers 3 and 8 in OPM 005 and registers 00003 and 00008 in CMP are usage registers for DIGITONE signaling receivers and MF receivers,, respectively.

6.17 Data Summarization forms in Fig. 13 (Sheets 7 and 8) may also be used for data entry of half-hourly data to determine the TCBH for the various components. As stated in paragraph 6.16, the use of exception reporting techniques (eg, NORGEN) may also be utilized as an additional aid to determine the component TCBH.

6.18 If a significant difference is noticed between the OBH and the component BH, the ratios stated in paragraph 6.09 should be calculated. These results should be retained and the NSE should be notified.

6.19 The TCBH CCS/line may be accomplished by the following formula:

$$\frac{\text{Total PCK CCS} + \text{Total CON CCS} + \text{Total SNW CCS}}{\text{Total Customer Lines}} = \text{CCS/Line}$$

6.20 Service busy hour using register readings from the OFT section of the A schedule should be calculated for dial tone delay and matching loss using instructions given in Section 241-120-050.

7. TRAFFIC SEPARATIONS

A. Nonmechanized (OPM Format)

7.01 Traffic Separations utilizing the OPM data block format can use Fig. 13, Sheet 18, for recording one week of the total monthly peg count. All 24 hours do not have to be posted as long as the "ADD" option is used on the holding registers. For example, if the data blocks are scheduled to print to the terminal starting at 8:00 am and stopping at 10:00

pm, it will be necessary to manually add only the hourly registrations from 8:00 am to 10:00 pm. In addition, the first readings of each day must be added to this subtotal. This 8:00 am reading will provide all of the counts from 10:00 pm of the previous day until 8:00 am of the current day. The end result is a total 24-hour count from 10:00 pm to 10:00 pm. A full minutes-of-use study for Traffic Separations will require that OPM blocks 001, 002, 003, 004, and 005 be collected 24 hours a day, 7 days a week and forwarded to the Traffic Separations group for summarization.

B. Mechanized (D Schedule Format)

7.02 The Traffic Separations measurements are provided by the DMS-10 switching system with the Traffic Separation Measurements System (TSMS) feature, and reported to the data collection system via the EDAS feature. The contents of the D schedule consist of two sections, the VAL and DOR. The VAL section contains the same data as the VAL section of the A schedule, except the content of the last two registers will contain a higher peg count due to the longer collection internal.

7.03 The D-schedule information is transferred from the accumulators to the holding registers at the end of every 30-minute period. Unlike the A schedule, the D schedule data is held and two 30-minute periods are added together, then transferred to the I/O formatting area on the hour. The summarized data is passed to the terminal used by the data collection system.

7.04 Data from the D schedule is available on a demand basis from other terminals. Unlike A schedule data, the output from the TSMS in the holding registers will be in the same format as seen by the EDAS feature, not in the OPM format.

7.05 The DOR measurements are collected and reported in groups of five registers. Each TSMS register and its associated number (00000 through 00255) is assignable by the user to a combination of an originating source and a destination for a specific type of call (eg, 1+, 0+, or local). Three software registers are associated with each TSMS register. These registers are (1) the peg count register, (2) the set-up usage (reported at a call record [CS] rate), and (3) the connect usage (reported at a CCS rate). The fourth entry that appears is total usage, set-up usage plus connect usage, and is reported at a CCS rate.

7.06 The DOR TSMS registers are reported in blocks of 32. In an entity where for example, only 10 registers are assigned, the first 10 (00000 through 00009) would contain data for the events that took place on the group during the reporting period. The unassigned registers (00010 through 00031) in the block will contain the unimplemented value of 65530. Figure 2 contains a sample D schedule from the DMS-10 switching system EDAS/TSMS output.

8. DATA SUMMARIZATION

A. Nonmechanized

8.01 It is the responsibility of the NSA to provide valid data in a mutually acceptable format which is usable by the receiving departments.

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8.02 Figure 13 is a set of Data Summarization forms to be used for manual posting and distributing of data when the DMS-10 switching system is in the nonmechanized mode. One data month can be posted on each form. The forms include some calculations designed for surveillance purposes and are self-explanatory in that each calculation is described in the form. All components should be recorded for the office busy hour. The forms for DIGITONE signaling receivers (Sheet 7) and MF receivers (Sheet 8) have provision for multiplying the average monthly usage times their individual component ratio as covered in paragraph 6.08. After 12 months of data have been accumulated on the forms, a blank form can be utilized to summarize the busy season for each item.

8.03 Table D contains an index and the use of each form.

B. Mechanized

8.04 As stated, the introduction of the EDAS feature in the DMS-10 switching system provides the ability to send formatted data to a collection device (eg, EADAS). This formatted data may then be split-off into sections. One split-off section will generally consist of trunking data and be sent to a sum-

marization system (eg, Trunk Servicing System [TSS]). If EADAS is the data collection system utilized, from an administrative point of view, there will be a combination of "automatic" features provided and "non-automatic" features.

8.05 Nontrunking data (eg, administrative data) is reformatted by EADAS and an E schedule is compiled. This data is the sole source of data for downstream processing by a data summarization, such as COER. This data contains the daily peak traffic values computed from measured hourly quantities, along with a "time stamp" to indicate the end of the hour for the data it represents.

8.06 The data summarization from COER will provide monthly and MLSS reports based on the data. Only data on the DMS-10 switching system processor is unique, in that the peak half-hour is utilized instead of the hourly summary. The reports generated are broken into two logical categories. Those reports used basically for administrative purposes, which will provide general information on the office; and those which will be utilized for administrative and engineering purposes to provide information on the engineerable components. The 12 items contained in the DMS-10 switching system COER reports are:

(a) Administrative items:

- Office Information—Totals of network groups, lines (local and remote), modules, and main stations
- Office Totals—O&I calls (DP + DGT and Total: (MF and total incoming)
- Call Type Data—Total calls (peg counts and usage)
- Attempts—Originating (originating, false starts, permanent signal, etc)
- Attempts—Incoming (incoming, intercepted, blocked, etc).

(b) Administrative and engineering items:

- Conference Circuits
- DIGITONE Signaling Receivers
- MF Receivers
- Analog Shelves (network usage on analog [lines and trunks] shelves)
- Digital Shelves (digital lines and trunks usage or digital shelves)
- Processor—Occupancy (by call types)
- Processor—Delay (by call types).

8.07 Figure 14 contains a set of COER outputs. Except for the office information report, all reports are available as monthly, intermediate, or MLSS reports. Office information is available only as a monthly report.

8.08 In addition to the COER output, the sheets in Fig. 11 contain the calculations utilized by the system to derive the results, where required. Several calculations are shown utilizing an alphnumeric representation. For example, 6 PESH NU may be interpreted to mean:

6 = a measurement in OPM 006

PESH = the peripheral shelf

n = an individual circuit or circuit group

U = a usage count register

8.09 When this interpretation is applied, the output of the EDAS feature cannot be used. If an analysis of data is required, the QUE prompt must be used on the system data blocks and compare OPM output to the COER and/or EDAS output. See Part 9 for further information on data analysis.

8.10 If the data summarization utilized is COER, consult the COER lessons for complete information on management of the data within the system. The COER lessons are similar to other systems and are easily interpreted. In order to set up the COER output shown in sheet 13 of Fig. 14, an ODF (Office Description File) is required. Table E contains the information required to establish a COER ODF. Specific information for ODF establishment and validation are found in the COER lessons.

8.11 At the present time, neither the data collection system (eg, EADAS) nor the data summarization system (eg, COER) have the ability to summarize special study requests. Until a reporting

and summarization module is available, any special studies will need to be performed manually. A request from the data collection system (eg, EADAS) should be performed at regular intervals by checking the contents of the A schedule, in particular the CLM (for individual customer lines) and the CGM (for hunt group information) sections. As an alternative, OPM data blocks OPM 007 and OPM 010 may be queried from the DMS-10 switching system holding register area. The data from OPM 007 and/or CLM may be entered and summarized on Data Summarization Form, Sheet 14 of Fig. 13. The data from OPM 010 and/or CGM may be entered and summarized on Data Summarization Form, Sheet 16 of Fig. 13.

C. DMS-10 Switching System NSPMP Requirements

8.12 Section 241-140-005 contains the information required for the DMS-10 switching system NSPMP. This NSPMP, like the other NSPMPs, are performed on data based on the TCBH. The NSPMP section is written based on the OPM data. A comparison of the sections of the A schedule with the OPM output may be referenced in Fig. 15 of this section. For example, MF receiver overflows are taken from the OPM 005 "SVCE" printout (MFR OVFL), or CMP 00009 on the A schedule. These required measurements are based on the BHD study hours, and must be provided on a manual query of the office data.

9. DATA ANALYSIS

9.01 As stated earlier, the responsibility of the NSA includes the validation of data, or data analysis regardless of the method used to collect the data, mechanized or nonmechanized. Valid data may be defined as data which supplies an accurate record of the performance of a switching machine and the trunk groups that permit the machine to communicate with other switching entities. Therefore, validation and reliability assurance could be described as a process of determining that the collected data are reasonably relating the actual performance of the switching machine and the associated machine trunking.

9.02 The procedure for validation is to determine if the data measurements are within expected limits, ie, a comparison of machine data against theoretical and/or historical and therefore expected values. In addition, assurance of data reliability is done by comparing specific register groupings against other register groupings. These procedures may be done manually by making checks on selected items or groups of items. This procedure is based on past measurements, other measurements taken at the same time, knowledge of the equipment design and operation, experience, and judgment. Measurements which are within historical or theoretical limits may be accepted as reasonable. Those data which fall outside these limits should be considered questionable, and require further investigation.

9.03 When data reliability checks fail (ie, defined tolerances are exceeded), data validation techniques are applied to the individual registers within the register groupings to isolate specific areas of possible data problems. The possibility always exists that invalid data could be created by component malfunctions. Complete data analysis (validity checks and reliability tests) is the sure form of data evaluation.

9.04 The data for the DMS-10 switching system, like other electronic systems, is subject to some data distortion. Distortion can be caused by traffic skew or peakedness, skew caused by phases of a call, and the rounding effect of data calculations. Traffic skew is defined as a peak of traffic load offered to a switching system during a measurement period. It is possible that offered traffic load could increase dramatically in a given quarter-hour period. The data printout for that hour would indicate a load higher than a comparable hour where there is no peak traffic skew.

9.05 Skew caused by phases of a call occurs when registers are scored at various phases of a call. The data printout may not reflect all counts related to all of the calls in progress at the time of printing. This effect can cause peg and/or usage counts that cannot be accounted for when validation and reliability checks are applied to the data.

9.06 One of the first data analysis steps an NSA can take both on a regular ongoing basis and anytime the data is suspect is to look at a light load period. For example, a 4:00 am printout traditionally carries very little traffic, and data problems in individual registers are often easily detected.

9.07 Basic ongoing data validity checks include:

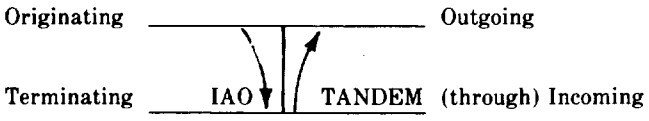
(a) ***Holding Times*** (Usage ÷ peg count × 100): Component or call holding times should be monitored on a constant basis and compared to

past data and to expected holding time values. For example, the expected holding time value for MF receivers must be greater than 0.6 and less than 12. In addition, if past data on an office showed an average MF receiver holding time of 2.38 seconds and the data showed a sudden increase to 8 seconds, the data would be suspect.

(b) ***Percentage of Occupancy*** (Usage ÷ maximum usage possible × 100): The maximum usage that any component can generate in an hour is 36 CCS. Therefore, total usage measured on a service circuit group or a trunk group should not exceed 36 times the number of circuits.

(c) ***CCS/MS and CALLS/MS:*** The CCS or calls per main station (MS) should approximate past history. A gradual increase or change can be expected, but a dramatic change for comparable business days might indicate a problem.

9.08 A data reliability tool that has historically proven useful is the traffic graphic. A basic traffic graphic is referred to as a "lazy H" pattern of call progression through a switching machine and is displayed as follows.



9.09 The pattern can be used by making various comparisons. For example:

(a) Originating traffic minus intraoffice should approximate outgoing minus tandem (through)

(b) Terminating traffic minus intraoffice should approximate incoming minus tandem (through).

9.10 A more detailed method of data reliability can be accomplished using data reliability formulas. A formula simply makes a logical comparison of registers (or groups of registers) to other registers (or groups of registers). Figure 15 provides a set of data reliability comparison work sheets and are designed so that actual DMS-10 switching system data can be entered and comparisons made. These comparisons only address "approximations" as more definitive tolerances will be developed later from actual data gathered from a number of DMS-10 switching system machines. The symbols used on the data reliability work sheets are as follows.

- The Sum of: Σ
- Approximately Equal To: $\approx$
- Greater Than: $>$
- Less Than: $<$

10. REFERENCES

10.01 The following Bell System Practices will aid the network administrator in accomplishing the required administrative functions. See Section 780-100-027 for a complete list of recommended documents.

SECTION	TITLE
241-120-010	Manual Office Records
241-120-011	Line and Number Administration
241-120-020	Translations
241-120-030	Data Modification Operations
241-120-050	Service Analysis
241-120-060	Machine Capacity Management
780-200-014	Determination of Line and Number Requirements
780-200-031	Busy Hour Determination—End Office

10.02 In addition, the following Northern Telecom Practices may be of use to the network administrators.

SECTION	TITLE
297-3001-060	Performance Oriented Practices User's Guide
297-3001-100	General Description
297-3001-105	Features and Services Description
297-3001-150	Equipment Identification

SECTION	TITLE	SECTION	TITLE
297-3001-181	Line Circuit Interface	297-3001-307	Line Load Control
297-3001-182	Trunk Circuit Interface		
297-3001-200	System Growth Practices	297-3001-311	Data Modification Manual
297-3001-300	Input/Output System		
297-3001-304	Data Modification—General	297-3001-456	Operational Measurements

TABLE A

OPERATIONAL MEASUREMENTS

DATA TYPE	MNEMONIC	EXPLANATION
Peg Count (Note 1)	PEG	A count of the number of times a particular event occurs.
Blockage	BLK	A count of the number of times call completion is unsuccessful due to the unavailability of some office resource.
Usage (Note 2)	USE	The length of time associated with particular events.
Request	REQ	A count of the number of requests for a particular resource.
All Resources Busy	OVFL	A count of the number of times a request for a particular resource is denied due to all all-items-busy condition.
Percent Service	%	The requests for a particular service that are delayed beyond a specified time interval. The delayed requests are expressed as a percentage (in units of 0.1 percent) of the total requests.
Maintenance Usage (Note 2)	MTCE	The amount of time circuits that have a maintenance usage counter are placed in a maintenance status. This status may be due to faults, man-made busy, machine-made busy. Usage associated with a test call or a component from an Incoming Test Trunk correction is excluded. Usage begins on activation of the maintenance status and ends when the circuit is returned to service.

Notes:

1. Many peg counts are for successful counts only and will not include overflow or blockage counts.

2. Usage data are collected by scanning resources or components every 10 or 100 seconds to determine their busy/idle status. The result is expressed in hundred call seconds (CCS) to 0.1 CCS precision for the 10-second scan interval and 1.0 CCS precision for the 100-second scan inteval.

TABLE B

"DMS"-10 SWITCHING SYSTEM MEASUREMENT BLOCKS

MNEMONIC	DESCRIPTION	REQ	PEG	BLK	OVFL	USE	MTCE
	OPM001 TRAFFIC DISTRIBUTION						
ORTM	ORIGINATING — TERMINATING		X	X		X	
OROG	ORIGINATING — OUTGOING		X	X		X	
ORNC	ORIGINATING — NONCOMPLETING		X				
RVRT	REVERTIVE		X			X	
INTM	INCOMING — TERMINATING		X	X		X	
INOG	INCOMING — OUTGOING		X	X		X	
INNC	INCOMING — NONCOMPLETING		X				
	OPM002 ORIGINATING SERVICE						
PSIG	PERMANENT SIGNAL		X				
PDTO	PARTIAL DIAL TIMEOUT		X				
PABN	PARTIAL DIAL ABANDON		X				
FSTR	FALSE START		X				
DGTC	DIGITONE CALLS		X				
DPC	DIAL PULSE CALLS		X				
TOTC	TOTAL CALLS		X				
DGTS	DIGITONE DIAL TONE SPEED %		X				
DPS	DIAL PULSE DIAL TONE SPEED %		X				
TOTS	TOTAL DIAL TONE SPEED %		X				
	OPM003 INCOMING SERVICE						
PSIG	PERMANENT SIGNAL		X				
PDTO	PARTIAL DIAL TIMEOUT		X				

TABLE B (Contd)

"DMS"-10 SWITCHING SYSTEM
MEASUREMENT BLOCKS

MNEMONIC	DESCRIPTION	REQ	PEG	BLK	OVFL	USE	MTCE
	OPM003 INCOMING SERVICE (Contd)						
PABN	PARTIAL DIAL ABANDON		X				
HITS	HITS		X				
MFRC	MF RECEIVER CALLS		X				
TOTC	TOTAL CALLS		X				
RDLY	RECEIVER ATTACHMENT DELAY %		X				
	OPM004 TRUNK GROUPS						
OGP#	OUTGOING TRUNK GROUP NO.		X		X	X	X
IGP#	INCOMING TRUNK GROUP NO.		X			X	X
	OPM005 SERVICE CIRCUITS						
DGTR	DIGITONE RECEIVER	X	X		X	X	X
MFR	MF RECEIVER	X	X		X	X	X
SNET	SERVICE (TOTAL OF ALL FOLLOWING)	X	X			X	
DSND	DIGIT SENDER	X	X			X	
BUSY	BUSY TONE	X	X			X	
RNGB	RING BACK TONE	X	X			X	
RORD	REORDER TONE	X	X			X	
DIAL	DIAL TONE	X	X			X	
HOWL	HOWLER TONE	X	X			X	
HIGH	HIGH TONE	X	X			X	
LOW	LOW TONE	X	X			X	
CWT	CALL WAITING TONE	X	X			X	
SPDT	SPECIAL DIAL TONE	X	X			X	

TABLE B (Contd)

"DMS"-10 SWITCHING SYSTEM
MEASUREMENT BLOCKS

MNEMONIC	DESCRIPTION	REQ	PEG	BLK	OVFL	USE	MTCE
	OPM005 SERVICE CIRCUITS (Contd)						
CFMT	CONFIRMATION TONE	X	X			X	
	OPM006 NETWORK						
NTLP — NETWORK LOOPS							
SNWK	SERVICE NETWORK		X	X		X	X
CONF	CONFERENCE		X	X		X	X
PESH	PERIPHERAL CIRCUIT		X	X		X	X
JCTR — JUNCTOR GROUPS							
GRP			X	X		X	X
	OPM007 STUDY REGISTERS						
DN	INDIVIDUAL LINE DIRECTORY NO.		X			X	
TG	INDIVIDUAL TRUNK GROUP TYPE		X			X	
	OPM008 MAINTENANCE						
CNTL — CONTROL EQUIPMENT							
CPU	CENTRAL PROCESSING UNIT		X			X	
MEM	MEMORY		X			X	
INI	INITIALIZATION		X				
NTWK — NETWORK EQUIPMENT							
NSPK	NETWORK SIGNALING PACKS		X			X	
NTLP	NETWORK LOOPS		X			X	
IGS	INTERGROUP SWITCH PACKS		X			X	
LPTS	LOOP TIME SLOTS		X			X	
JRTS	JUNCTOR TIME SLOT PAIRS		X			X	

TABLE B (Contd)

"DMS"-10 SWITCHING SYSTEM
MEASUREMENT BLOCKS

MNEMONIC	DESCRIPTION	REQ	PEG	BLK	OVFL	USE	MTCE
OPM008 MAINTENANCE (Contd)							
PEQP – PERIPHERAL EQUIPMENT							
SCM	SUBSCRIBER CARRIER MODULES		X			X	
PSHF	PERIPHERAL SHELF		X			X	
DCM	DIGITAL CARRIER MODULES		X			X	
TRK	TRUNKS		X			X	
LINE	LINES		X			X	
RCVR	RECEIVERS		X			X	
PEPR	PERIPHERAL PROCESSOR PACK		X			X	
OPM009 CAMA							
ANI	ANI CALLS		X				
ANFL	ANI FAILURE – LOCAL OFFICE		X				
ANFC	ANI FAILURE – CAMA OFFICE		X				
ONI	ONI CALLS		X				
PDIS	CAMA POSITION DISCONNECTS		X				
MCKF	MATCH CHECK FAILURES		X				
CLGF	CALLING CODE FAILURES		X				
OPM010 HUNT							
HTGP – HUNT GROUP							
XXX	HUNT GROUP NUMBER		X		X		

TABLE B (Contd)

"DMS"-10 SWITCHING SYSTEM
MEASUREMENT BLOCKS

MNEMONIC	DESCRIPTION	REQ	PEG	BLK	OVFL	USE	MTCE
	OPM011 CUSTOM CALLING FEATURES						
CWAT	CALL WAIT ATTEMPTS		X				
CWAA	CALL WAIT ATTEMPTS ANSWERED		X				
CFWA	CALL FORWARD ACTIVATIONS		X				
CFWD	CALLS FORWARDED		X			X	
SCLL	SPEED CALL LONG LIST CHANGES		X				
SCSL	SPEED CALL SHORT LIST CHANGES		X				
SPCL	SPEED CALLS LONG LIST		X			X	
SPCS	SPEED CALLS SHORT LIST		X			X	
3WC	THREE WAY CALLING		X	X		X	
	OPM012 CPU REAL TIME						
BKGD	BACKGROUND					X	
	OPM013 (WITH GENERIC 208)						
CFTF	STUCK COIN FIRST TRIAL FAILURE		X				

TABLE C

CONTROL DATA ITEMS
PROMPTS AND RESPONSES

ITEMS	PROMPT	OPTION RESPONSE
1	REG	CHG
2	TYPE	OMC
3	BLK	*TRAF (Traffic Distribution)
		*OSVC (Originating Service)
		*ISVC (Incoming Service)
		TRK (Trunk Groups) (Note 1)
		*SVCE (Service Circuits)
		NTWK (Network) (Note 1)
		SREG (Study Registers) (Note 1)
		*MTCE (Maintenance)
		CAMA (Centralized Automatic Message Accounting) (Note 2)
		HUNT (Hunt Groups) (Note 1)
		*CCF (Custom Calling Features)
		*CPU (CPU Real Time)
4	*UPDT	QRTR (Quarter Hour)
		HALF (Half Hour)
		HRHR (Hourly on the hour)
		HRHF (Hourly on the half hour)
		DALY (Daily)
		DOWK (Day of the week)
5	*UPDY	If UPDT = DOWK, the mnemonic for the day(s) of the week updating occurs. Valid entries are SUN, MON, TUES, WED, THUR, FRI, and SAT.
6	*UPHR	If UPHR = DALY or DOWK, a number from 0 through 23. This specifies the hour of the day at which updating occurs.
7	*UMOD	The mnemonic for the update mode. Valid entries are: ADD—The value in the accumulating register is added to the value in the holding register. REP—The value in the accumulating register replaces the value in the holding register.

Notes:

1 These blocks are variable, based on the quantities contained (eg, incoming trunk groups, study registers, etc).

2 CAMA (in non-mechanized)/AXB in mechanized, required ***only*** if the office is a CAMA office, ***not*** CAMA serving.

* When the DMS-10 switching system is equipped with the EDAS feature and it is activated, the prompts/option responses marked with an asterisk have no meaning, and are disabled.

TABLE C (Contd)

CONTROL DATA ITEMS
PROMPTS AND RESPONSES

ITEMS	PROMPT	OPTION RESPONSE
8	*PRNT	The mnemonic for the printout schedule. Valid entries are: QRTR (Quarter Hour) HALF (Half Hour) HRHR (Hourly on the hour) HRHF (Hourly on the half hour) DALY (Daily) DOWK (Day of the week) ONUP (Print on updating) NOPR (No print)
9	*PRDY	If PRNT = DOWK, the mnemonic for the day(s) of the week on which printing occurs. Valid entries are SUN, MON, TUES, WED, THUR, FRI, and SAT.
10	*STRT	If PRNT = DALY or DOWK, a number from 0 through 23.
11	*STOP	If PRNT = DALY or DOWK, a number greater than or equal to the number specified for STRT.
12	*PRCL	The mnemonic for TTY classes. This specifies what class of TTY is used for outgoing OPM data. Valid entries are: MTC (Maintenance) DMO (Data Modification) TRAF (Traffic)
13	*ZRPR	Yes or No. If Yes, the holding register is set to zero on printing. If No, the holding register value is left intact on printing.

* When the DMS-10 switching system is equipped with the EDAS feature and it is activated, the prompts/option responses marked with an asterisk have no meaning, and are disabled.

TABLE D

INDEX—DATA SUMMARIZATION FORMS

SHEET NUMBER	BLOCK MNEMONIC	USE
1	TRAF	Surveillance, Engineering
2	TRAF	Surveillance, Engineering
3	OSVC	Surveillance, Engineering
4	ISVC	Surveillance, Engineering
5	TRK	Surveillance, Trunk Servicing
6	TRK	Surveillance, Trunk Servicing
7	SVCE	Surveillance, Engineering
8	SVCE	Surveillance, Engineering
9	SVCE	Surveillance, Engineering
10	SVCE	Surveillance, Engineering
11	SVCE	Surveillance, Engineering
12	SVCE	Surveillance, Engineering
13	NTWK	Surveillance, Engineering
14	SREG	Special Studies
15	CAMA	Surveillance, Engineering
16	HUNT	Special Studies
17	CCF	Surveillance, Engineering
18	OSVC	Traffic Separations Monthly Peg Count

TABLE E

COER ODF CONTENTS REQUIREMENTS

HEADER
Office Name
Generic/Issue
CLLI-DCU Code
Company ID
Batch Start Date
Batch End Date
Service Month End Day
Weekend Data (included or excluded)
EADAS generic
TNDS release
OFFICE PARAMETERS
Total Network Groups
Line Concentration Ratio
Total Local (Analog) Lines
Total Remote (Digital) Lines
Number of Service Network Loops
Total DCMs
Total REMs
Total SCMs
Office Trunks
Digital Trunks
Analog Trunks
PBX Trunks
Dial Pulse (DP) Trunks

TABLE E (Contd)

COER ODF CONTENTS REQUIREMENTS

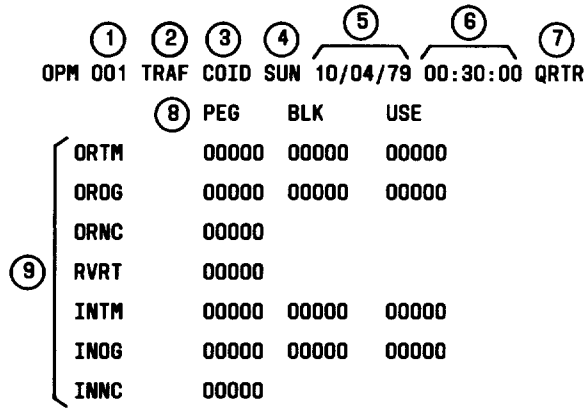
OFFICE PARAMETERS (Contd)
Office Main Stations (MS)
Digital MS
Analog MS
PBX MS
Coin MS
DP MS
"DIGITONE" SIGNALLING RECEIVERS
Number of DIGITONE Signalling MS
Number of DGT Receiver Circuits Installed
DIGITONE Signalling Receiver Engineered Capacity
MF RECEIVERS
Number of MF Trunks
Number of MF Receiver Circuits Installed
MF Receiver Engineered Capacity
CONFERENCE NETWORK
Number of Conference Circuit MS
Number of Conference Circuits Installed
Conference Circuit Engineered Capacity
NETWORK GROUP PARAMETERS (PER NETWORK GROUP)
Network Groups (1-3): Number of Peripheral Circuits (PCKT) in Group and is PCKT Digital or Analog
TRUNK GROUP PARAMETERS (PER INCOMING TRUNK GROUP/OUTGOING TRUNK GROUP):
Number of Incoming Trunk Groups, and is each ITG Digital or Analog
Number of Outgoing Trunk Groups, and is each OTG Digital or Analog

```
     MSG  A  SNANTXRRCG01T2 08:30  06/02/83<eol>
VAL  00005 00001 00002 00003 00004 00005<eol>
OFT  00033 00001 00002 00003 00004 00005 00006 00007 00008 00009<eol>
     00010 00011 00012 00013 00014 00015 00016 00017 00018 00019<eol>
     00020 00021 00022 00023 00024 00025 00026 00027 00028 00029<eol>
     00030 00031 00032 00033<eol>
FEA  00017 00001 00002 00003 00004 00005 00006 00007 00008 00009<eol>
     00010 00011 00012 00013 00014 00015 00016 00017<eol>
PRO  00003 00001 00002 00003<eol>
CMP  00046 00001 00002 00003 00004 00005 00006 00007 00008 00009<eol>
     00010 00011 00012 00013 00014 00015 00016 00017 00018 00019<eol>
     00020 00021 00022 00023 00024 00025 00026 00027 00028 00029<eol>
     00030 00031 00032 00033 00034 00035 00036 00037 00038 00039<eol>
     00040 00041 00042 00043 00044 00045 00046<eol>
SNW  00005 00001 00001 00002 00003 00004 00002 00001 00002 00003<eol>
     00004 00003 00001 00002 00003 00004 00002 00001 00002 00003<eol>
     00004<eol>
CON  00005 00001 00002 00003 00004 00005 65530 65530 65530 65530<eol>
     65530<eol>
PCK  00060 00001 00002 00003 00004 00005 00006 00007 00008 00009<eol>
     00010 00011 00012 00013 00014 00015 00016 00017 00018 00019<eol>
     00020 00021 00022 00023 00024 00025 00026 00027 00028 00029<eol>
     00030 00031 00032 00033 00034 00035 00036 00037 00038 00039<eol>
     00040 00041 00042 00043 00044 00045 00046 00047 00048 00049<eol>
     00050 00051 00052 00053 00054 00055 00056 00057 00058 00059<eol>
     00060<eol>
JTR  00005 00001 00002 00003 00004 00005<eol>
CGM  00003 00001 00002 00003 00006 00002 00003 00008 00002 00003<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530<eol>
CLM  00003 00001 00002 00003 00005 00002 00003 00006 00002 00003<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530 65530 65530 65530 65530 65530 65530 65530 65530 65530<eol>
     65530<eol>
TKO  00005 00043 00002 00003 00004 00005 00044 00002 00003 00003<eol>
     00004 00005<eol>
TKI  00004 00043 00002 00003 00004<eol>
AXA  00029 00001 00002 00003 00004 00005 00006 00007 00008 00009<eol>
     00010 00011 00012 00013 00014 00015 00016 00017 00018 00019<eol>
     00020 00021 00022 00023 00024 00025 00026 00027 00028 00029<eol>
AXB  00007 00001 00002 00003 00004 00005 00006 00007<eol>
END<eol>
```

Fig. 1—Sample A Schedule, DMS-10 Switching System EDAS Feature Output (3.03, 5.14, 6.12)

```
      MSG  D  SNANTXRRCG01T2 09:00  06/02/83<eol>
VAL   00005  00001  00002  00003  00004  00005<eol>
DOR   00005  00001  00002  00003  00004  00005   00001  00002  00003  00004<eol>
      00005  00001  00002  00003  00004  00005   00001  00002  00003  00004<eol>
      00005  00001  00002  00003  00004  00005   00001  00002  00003  00004<eol>
      00005  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530  65530  65530  65530  65530  65530  65530  65530  65530  65530<eol>
      65530<eol>
END<eol>
```

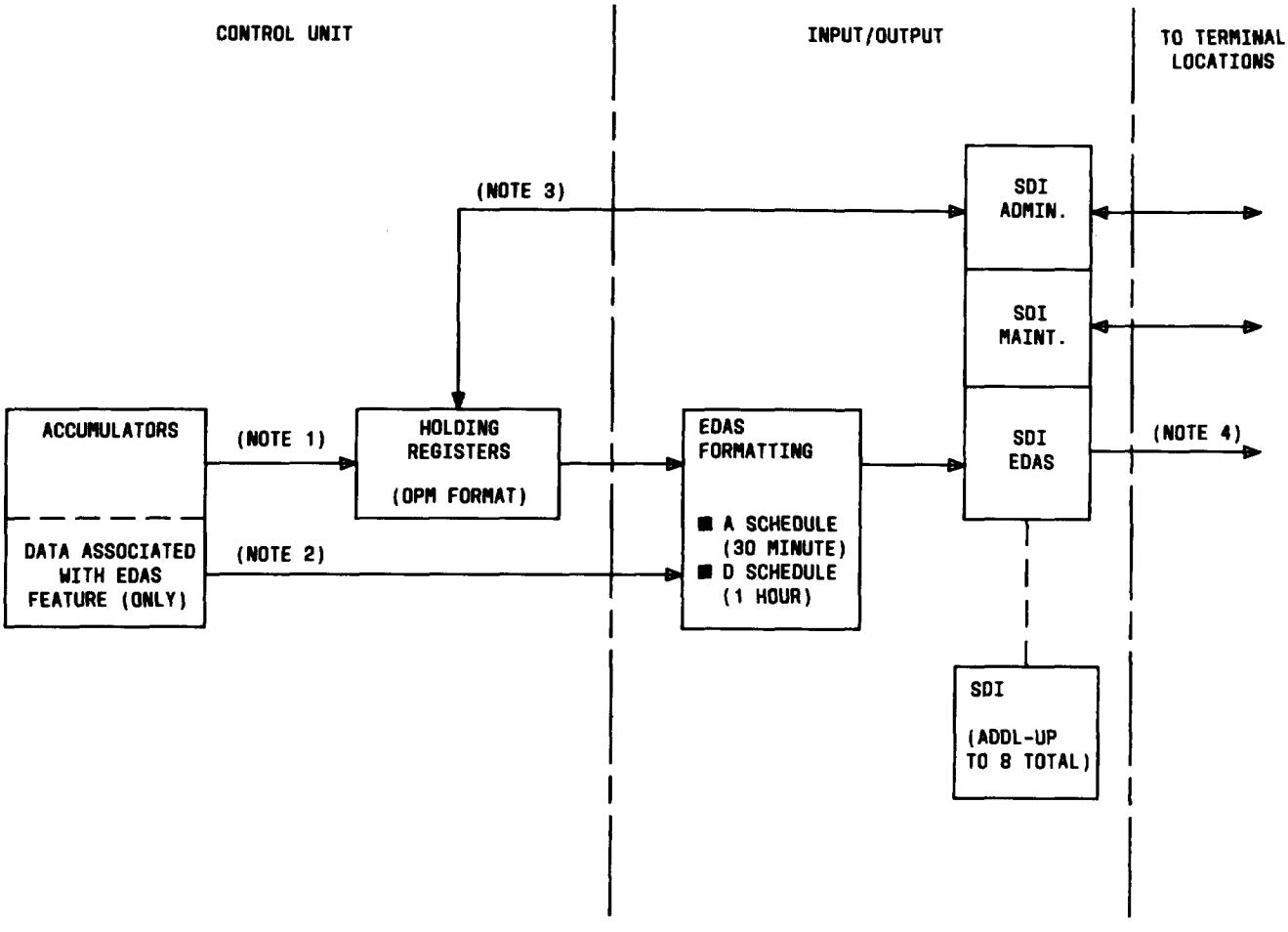
Fig. 2—Sample D Schedule, DMS-10 Switching System EDAS/TSMS Feature Output (3.03, 7.06)



LEGEND:

① MEASUREMENT BLOCK CODE
② BLOCK MNEMONIC
③ CENTRAL OFFICE IDENTIFICATION MNEMONIC
④ UPDATE DAY
⑤ UPDATE DATE
⑥ UPDATE TIME
⑦ UPDATE PERIOD
⑧ COLUMN HEADERS
⑨ LINE LABELS

Fig. 3—Operational Measurements Block Printout Format (4.14)



NOTES:
1. Data is transferred per NTP 297-3001-456, OPM format.
2. Data is transferred directly to I/O for EDAS formatting (no corresponding holding registers).
3. On demand, the data request accesses the holding registers and is output to the terminal in the OPM format.
4. Formatted data is output to the terminal in the A-schedule and D-schedule format on a unidirectional outgoing channel

Fig. 4—Operational Measurement Data Flow—Mechanized and/or Nonmechanized (4.14, 5.03)

SYSTEM PROMPT	USER ENTRY
!	LOGI <CR>
PASS?	XXXX (Password) <CR>
LOGI TRAF	
#	OVLY OMC <CR>
OMCOOO OMC	
REQ	QUE OMC <CR>
BLK TRAF	
UPDT QRTR	
UMOD ADD	
PRNT HRHR	
PRCL TRAF	
ZRPR YES	
REQ	****
#	LOGO <CR>
!	

Fig. 5—Example of TTY Session to Query Control Data Items for Measurement Blocks (4.19)

FORM: OMC
OVLY: OMC

DMS-10
OPERATIONAL MEASUREMENT CONTROL

DATE_____
ORDER NUMBER_____

OFFICE_____

RECENT CHANGE ORDER

SH _ OF _

REQ 01 – 03

TYP	BLK	UPDT	UPDY	UPHR	UMOD	PRNT	PRDY	STRT	STOP	PRCL	ZRPR	
05 07	09 12	14 17	19 22	24 27	29 32	34 37	39 42	44 47	49 52	54 57	59 61	

Fig. 6—Recent Change Order—Operational Measurement Control (4.19)

SYSTEM PROMPT	USER ENTRY
!	LOGI <CR>
PASS?	XXXX (Password) <CR>
LOGI TRAF	
±	OVLY OMC <CR>
OMCOOO OMC	
REQ	CHG <CR>
TYP	OMC <CR>
BLK	TRAF <CR>
UPDT	QRTR <CR>
UMOD	ADD <CR>
PRNT	HRHR <CR>
PRCL	TRAF <CR>
ZRPR	YES <CR>
REQ	****
±	LOGO <CR>
!	

Note: In the above session, all items were changed.

If an item is not changing, a response of CR will

leave it the way it was.

Fig. 7—Example of TTY Session to Change Control Data Items of Measurement Blocks (4.19)

FORM: SREG
OVLY: OMC

DMS-10
STUDY REGISTER

DATE_____
ORDER NUMBER_____

OFFICE_____

RECENT CHANGE ORDER

SH _ OF _

REQ			TYP				BSPU TYP			BAY			SHF			PACK			UNIT		BSP		NO		
01		03	05			08	10	11		13	14		16			18	19		21		23	24	26	27	
			S	R	E	G																			

Fig. 8—Recent Change Order—Study Register (4.19)

SYSTEM PROMPT	USER ENTRY
!	LOGI <CR>
PASS?	XXXX (Password) <CR>
LOGI TRAF	
#	OVLY OMC <CR>
OMCOO OMC	
REQ	ADD <CR>
TYP	SREG <CR>
BSPU	PE 08 2 03 01 <CR>
REQ	****
#	LOGO <CR>
!	

Fig. 9—Example of TTY Session to Add a Study Register (4.19)

FORM: OMPH
OVLY: OMC

DMS-10
OPERATIONAL MEASUREMENTS HUNT GROUP

DATE_____
ORDER NUMBER_____

OFFICE_____

RECENT CHANGE ORDER

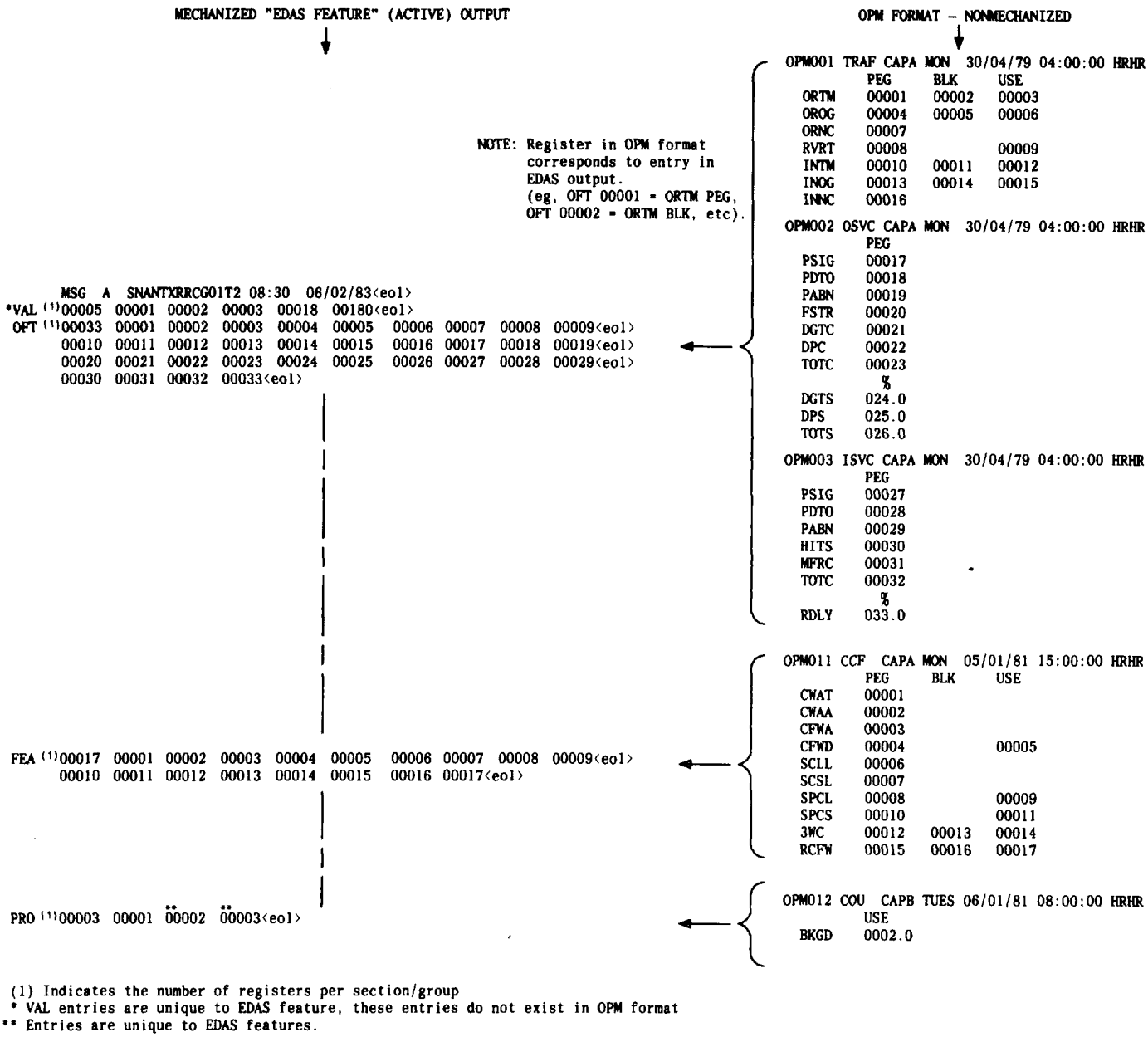
SH _ OF _

REQ				TYP				HTGP			
01			04	06			09	11			13

Fig. 10—Recent Change Order—Operational Measurements Hunt Group (4.19)

SYSTEM PROMPT	USER ENTRY
!	LOGI <CR>
PASS?	XXXX (Password) <CR>
LOGI TRAF	
#	OVLY OMC <CR>
OMCOOO OMC	
REQ	ACT <CR>
TYP	HUNT <CR>
HTGP	1 <CR>
REQ	****
#	LOGO <CR>
!	

Fig. 11—Example of a TTY Session to Activate a Hunt Group (4.19, 8.08)



(1) Indicates the number of registers per section/group
* VAL entries are unique to EDAS feature, these entries do not exist in OPM format
** Entries are unique to EDAS features.

Fig. 12—DMS-10 Switching System Data Output Formats (Sheet 1 of 4) (5.13, 5.15, 6.12, 6.14, 6.16, 8.12)

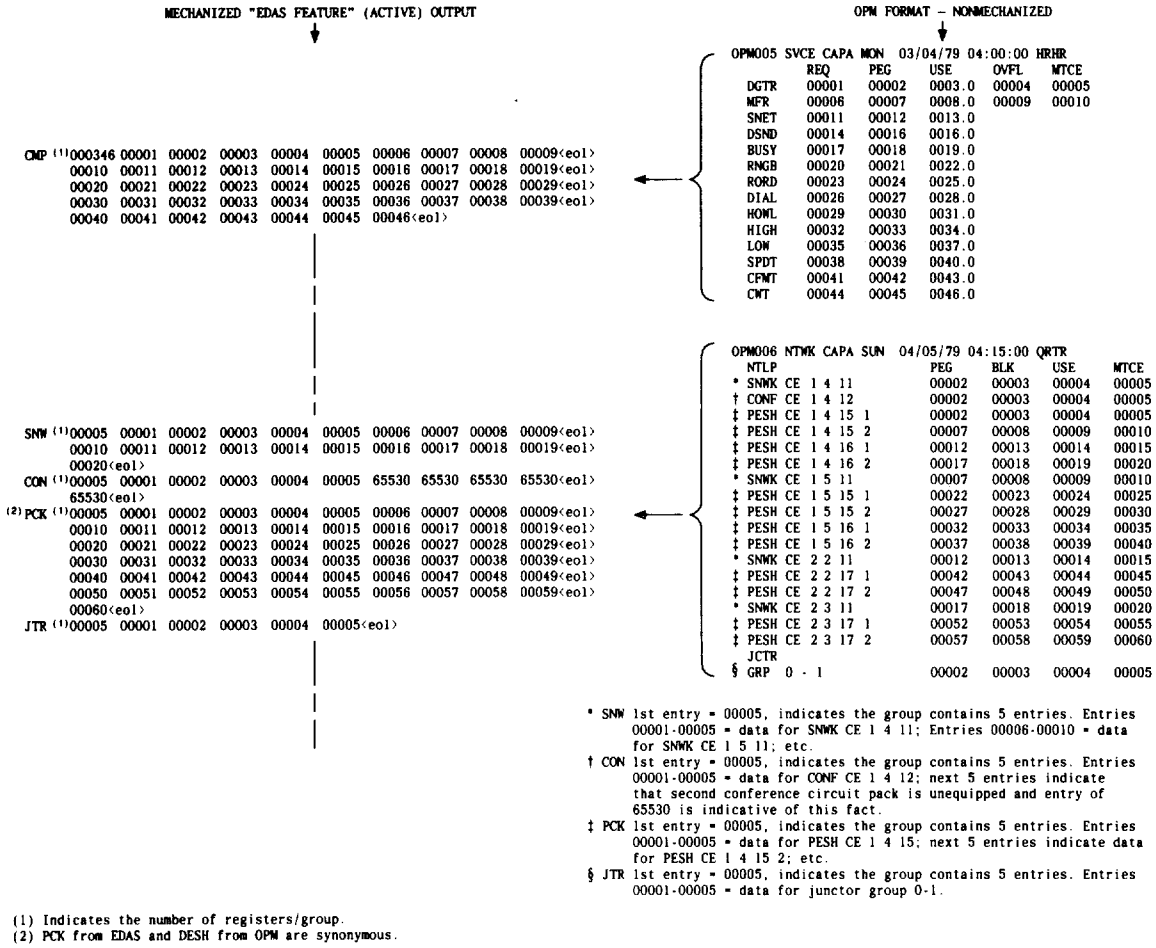
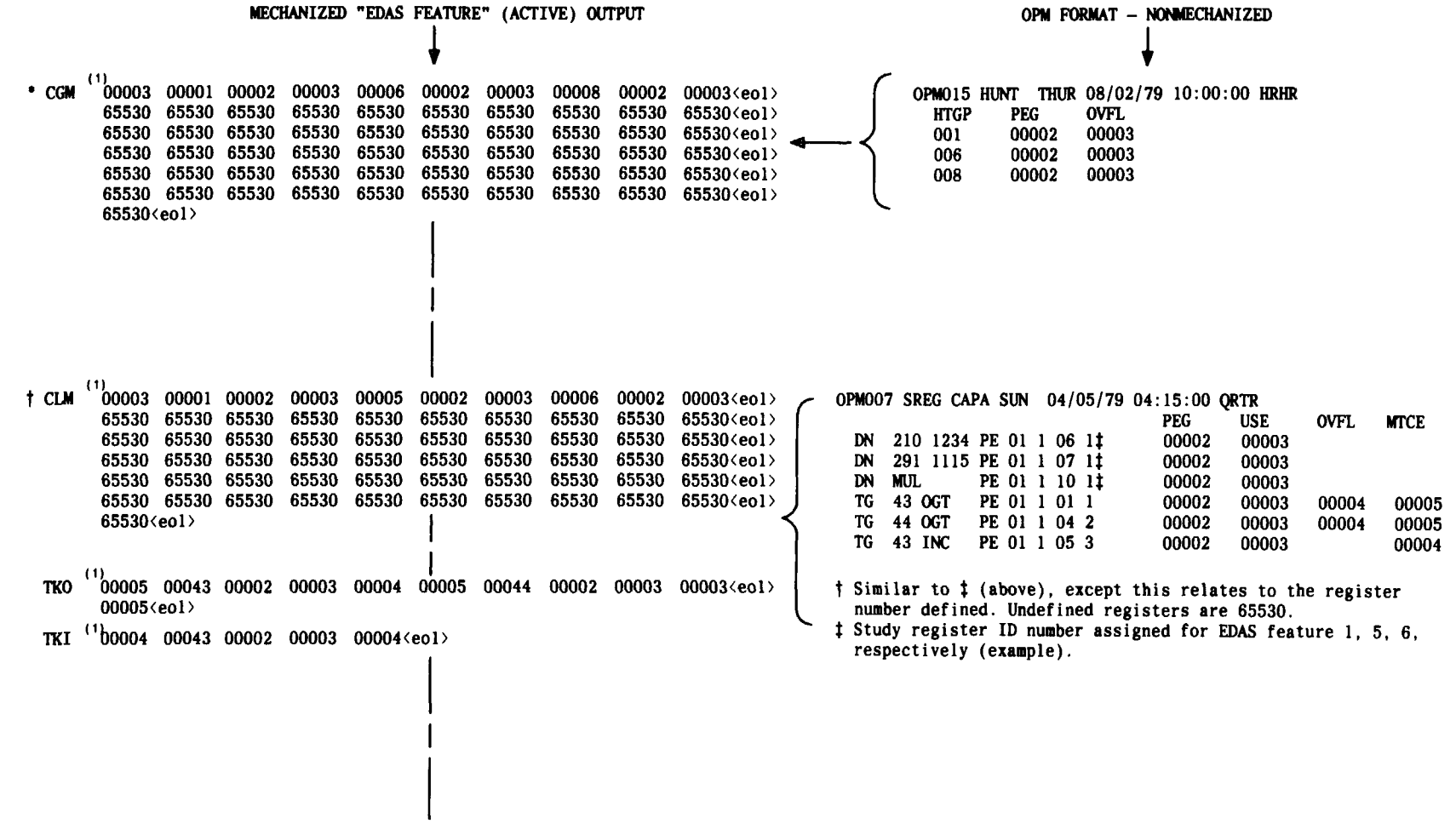


Fig. 12—DMS-10 Switching System Data Output Formats (Sheet 2 of 4) (5.13, 5.15, 6.12, 6.14, 6.16, 8.12)



(1) Indicates the number of entries per section/group.
* 1st entry = 00003, indicates 3 data items in each record. On OPM printout, 3 hunt groups are defined. EDAS feature outputs records in blocks of 20. Those hunt groups not defined contain and "unimplemented" value of 65530. If no hunt groups are defined, the CGM is not sent from the EDAS formatting area of the I/O.

Fig. 12—DMS-10 Switching System Data Output Formats (Sheet 3 of 4) (5.12, 5.15, 6.12, 6.14, 6.16, 8.12)

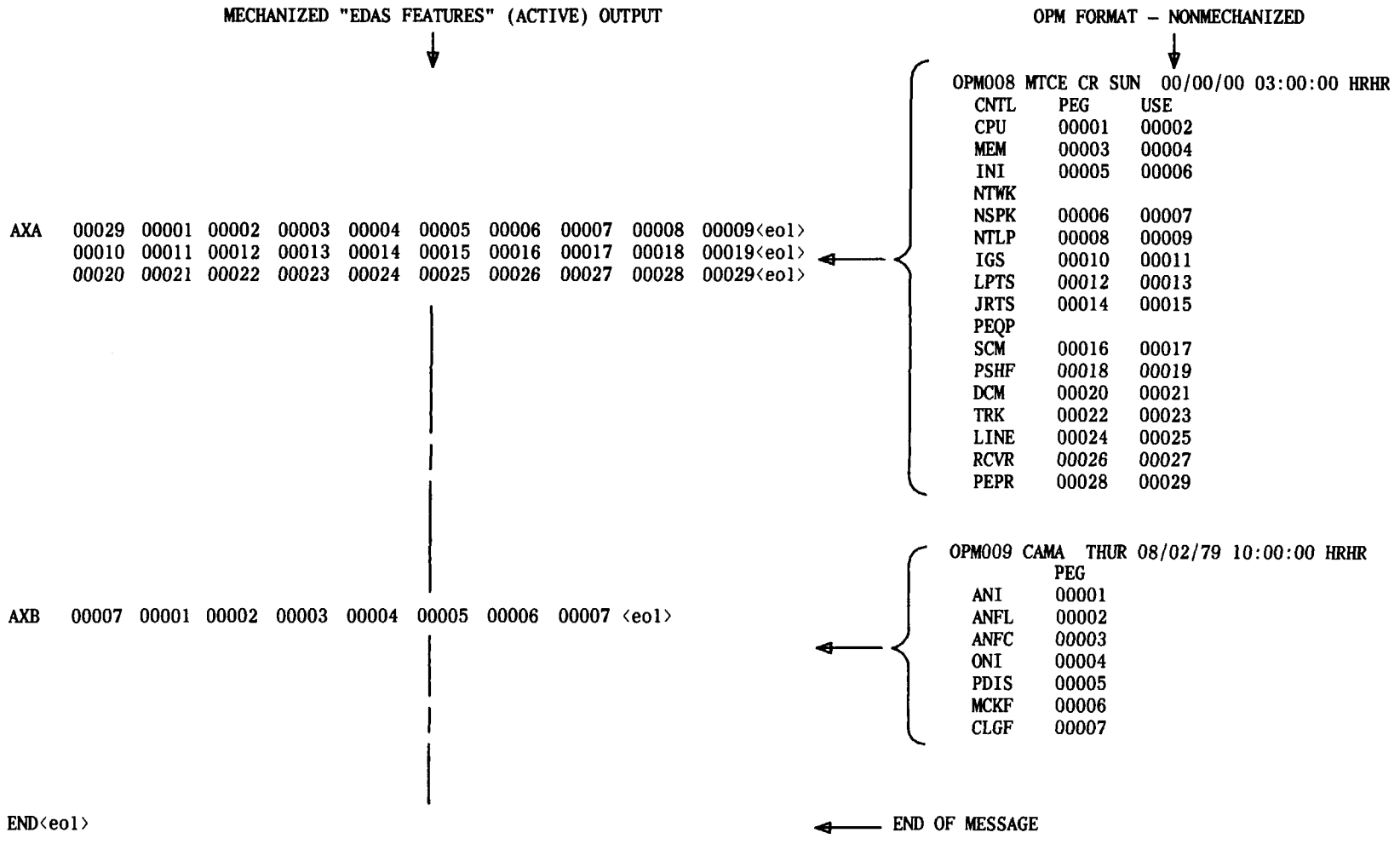


Fig. 12—DMS-10 Switching System Data Output Formats (Sheet 4 of 4) (5.12, 5.15, 6.12, 6.14, 6.16, 8.12)

DMS-10 DAILY DATA RECORD
TRAF
TRAFFIC DISTRIBUTION

ENTITY_____ BUSY/HOUR _____

MONTH & YEAR _____

OPM 001	ORTM			HT	OROG			HT	ORNC	INNC
	ORIGINATING-TERMINATING			USE ÷ PEG X 100	ORIGINATING-OUTGOING			USE ÷ PEG X 100	ORIG NON COMP	INC NON COMP
DATE	PEG	BLK	USE		PEG	BLK	USE		PEG	PEG
TOTAL										
AVERAGE										

NOTES: %BLK_____(BLK ÷ PEG + BLK X 100) %BLK_____

Fig. 13—Data Summarization Form (Sheet 1 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
TRAF
TRAFFIC DISTRIBUTION

ENTITY_____ BUSY HOUR _____

MONTH & YEAR _____

OPM 001	RVRT REVERTIVE		HT	INTM INCOMING-TERMINATING			HT	INOG INCOMING-OUTGOING			HT
DATE	PEG	USE	USE ÷ PEG X 100	PEG	BLK	USE	USE ÷ PEG X 100	PEG	BLK	USE	USE ÷ PEG X 100
TOTAL											
AVERAGE											

NOTES: %BLK_____(BLK ÷ PEG + BLK X 100) %BLK_____

Fig. 13—Data Summarization Form (Sheet 2 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
OSVC
ORIGINATING SERVICE

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

OPM 002	PSIG PERMANENT SIGNAL	PDTO PARTIAL DIAL TIMEOUT	PABN PARTIAL DIAL ABANDON	FSTR FALSE START	DGTC DIGITONE CALLS	DPC DIAL PULSE CALLS	TOTC TOTAL CALLS	DGTS DIGITONE DTS%	DPS DIAL PULSE DTS%	TOTS TOTAL DTS%
DATE	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG
TOTAL										
AVERAGE										

NOTES:

Fig. 13—Data Summarization Form (Sheet 3 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
ISVC
INCOMING SERVICE

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

OPM 003	PSIG PERMANENT SIGNAL	PDTO PARTIAL DIAL TIMEOUT	PABN PARTIAL DIAL ABANDON	HITS HITS	MFRC MF RECEIVER CALLS	TOTC TOTAL CALLS	RDLY RECEIVER ATTACHMENT DELAY %
DATE	PEG	PEG	PEG	PEG	PEG	PEG	PEG
TOTAL							
AVERAGE							

NOTES:

Fig. 13—Data Summarization Form (Sheet 4 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
TRK
TRUNK GROUPS

ENTITY _____ BUSY HOUR _____ MONTH & YEAR _____

OPM 004	OGP# _____ OGP NAME _____			HT USE ÷ PEG X 100	OGP# _____ OGP NAME _____			HT USE ÷ PEG X 100	OGP# _____ OGP NAME _____			HT USE ÷ PEG X 100
DATE	PEG	OVFL	USE		PEG	OVFL	USE		PEG	OVFL	USE	
TOTAL												
AVERAGE												
NOTES:												

Fig. 13—Data Summarization Form (Sheet 5 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
TRK
TRUNK GROUPS

ENTITY_____

BUSY HOUR _____

MONTH & YEAR _____

OPM 004	IGP# _____ IGP NAME _____		HT USE ÷ PEG X 100
DATE	PEG	USE	
TOTAL			
AVERAGE			
NOTES:			

IGP# _____ IGP NAME _____		HT USE ÷ PEG X 100
PEG	USE	

IGP# _____ IGP NAME _____		HT USE ÷ PEG X 100
PEG	USE	

Fig. 13—Data Summarization Form (Sheet 6 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
SVCE
SERVICE CIRCUITS

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

OPM 005	DGTR DIGITONE RECEIVER				HT USE ÷ PEG X 100
DATE	REQ	PEG	USE	OVFL	
			•		
			•		
			•		
			•		
			•		
			•		
			•		
			•		
			•		
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			•		
			•		
			•		
			•		
			•		
			•		
			•		
			•		
			•		
			•		
TOTAL			•		
AVERAGE			•		
NOTES:					

A. NUMBER OF CIRCUITS _____

B. CCS CAPACITY _____

C. WORKING LINES _____

D. COMPONENT BUSY HOUR RATIO (SEE PARAGRAPH 6.08) _____

E. USAGE AVERAGE (X COMPONENT RATIO) _____

F. CCS/LINE (E ÷ C) _____

G. % CAPACITY (E ÷ B X 100) _____

H. % OVERFLOW (TOTAL OVFL ÷ PEG + OVFL X 100) _____

Fig. 13—Data Summarization Form (Sheet 7 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
SVCE
SERVICE CIRCUITS

ENTITY_____ BUSY HOUR _____ MONTH & YEAR _____

OPM 005	MFR MF RECEIVER				HT USE ÷ PEG X 100
DATE	REQ	PEG	USE	OVFL	
TOTAL					
AVERAGE					
NOTES:					

A. NUMBER OF CIRCUITS _____

B. CCS CAPACITY _____

C. WORKING LINES _____

D. COMPONENT BUSY HOUR RATIO (SEE PARAGRAPH 6.08) _____

E. USAGE AVERAGE (X COMPONENT RATIO) _____

F. CCS/LINE (E ÷ C) _____

G. % CAPACITY (E ÷ B X 100) _____

H. % OVERFLOW (TOTAL OVFL ÷ PEG + OVFL X 100) _____

Fig. 13—Data Summarization Form (Sheet 8 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
SVCE
SERVICE CIRCUITS

ENTITY_____ BUSY HOUR _____

MONTH & YEAR _____

OPM 005	SNET SERVICE NETWORK			HT	DSND DIGIT SENDER			HT	BUSY BUSY TONE			HT
DATE	REG	PEG	USE	USE ÷ PEG X 100	REG	PEG	USE	USE ÷ PEG X 100	REG	PEG	USE	USE ÷ PEG X 100
			•				•				•	
			•				•				•	
			•				•				•	
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			•				•				•	
			•				•				•	
TOTAL			•				•				•	
AVERAGE			•				•				•	
NOTES:												

Fig. 13— Data Summarization Form (Sheet 9 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
SVCE
SERVICE CIRCUITS

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

OPM 005	RNGB RINGBACK TONE			HT USE ÷ PEG X 100	RORD REORDER TONE			HT USE ÷ PEG X 100	DIAL DIAL TONE			HT USE ÷ PEG X 100
DATE	REG	PEG	USE		REG	PEG	USE		REG	PEG	USE	
			•				•				•	
			•				•				•	
			•				•				•	
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			•				•				•	
			•				•				•	
			•				•				•	
			•				•				•	
TOTAL			•				•				•	
AVERAGE			•				•				•	
NOTES:												

Fig. 13—Data Summarization Form (Sheet 10 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
SVCE
SERVICE CIRCUITS

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

OPM 005	HOWL HOWLER			HT USE ÷ PEG X 100	HIGH HIGH TONE			HT USE ÷ PEG X 100	LOW LOW TONE			HT USE ÷ PEG X 100
DATE	REG	PEG	USE		REG	PEG	USE		REG	PEG	USE	
			•				•				•	
			•				•				•	
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			•				•				•	
			•				•				•	
TOTAL			•				•				•	
AVERAGE			•				•				•	
NOTES:												

Fig. 13—Data Summarization Form (Sheet 11 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
SVCE
SERVICE CIRCUITS

ENTITY_____ BUSY HOUR _____

MONTH & YEAR _____

OPM 005	CWT CALL WAITING TONE			HT USE ÷ PEG X 100	SPDT SPECIAL DIAL TONE			HT USE ÷ PEG X 100	CFMT CONFIGURATION TONE			HT USE ÷ PEG X 100
DATE	REG	PEG	USE		REG	PEG	USE		REG	PEG	USE	
			•				•				•	
			•				•				•	
			•				•				•	
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			•				•				•	
TOTAL			•				•				•	
AVERAGE			•				•				•	
NOTES:												

Fig. 13—Data Summarization Form (Sheet 12 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
NETWORK (NTWK)

ENTITY_____ BUSY HOUR _____

MONTH & YEAR _____

OPM 006	SNWK SERVICE NETWORK TOTAL			CONF CONFERENCE TOTAL			PESH PERIPHERAL CIRCUIT TOTAL			JCTR JUNCTOR GROUPS TOTAL		
DATE	PEG	BLK	USE	PEG	BLK	USE	PEG	BLK	USE	PEG	BLK	USE
TOTAL												
AVERAGE												

NOTES:

Fig. 13—Data Summarization Form (Sheet 13 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
SREG

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

OPM 007	SREG STUDY REGISTERS				
DATE	HOUR	DN/TG	PE LOCATION	PEG	USE
TOTAL					
AVERAGE					
NOTES:					

OPM 007	SREG STUDY REGISTERS				
DATE	HOUR	DN/TG	PE LOCATION	PEG	USE

Fig. 13—Data Summarization Form (Sheet 14 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD

CAMA

ENTITY_____ BUSY HOUR _____

MONTH & YEAR _____

OPM 009	ANI ANI CALLS	ANFL ANI FAILURE LOCAL OFC	ANFC ANI FAILURE CAMA OFC	ONI ONI CALLS	PDIS CAMA POS. DISCONNECTS	MCKF MATCH CHECK FAIL.	CLGF CALLING CODE FAIL.
DATE	PEG	PEG	PEG	PEG	PEG	PEG	PEG
TOTAL							
AVERAGE							
NOTES:							

Fig. 13—Data Summarization Form (Sheet 15 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
OPM 010
HUNT GROUPS (HUNT)

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

HTGP HUNT GROUP NUMBER _____				HTGP HUNT GROUP NUMBER _____				HTGP HUNT GROUP NUMBER _____			
DATE	HOUR	PEG	OVFL	DATE	HOUR	PEG	OVFL	DATE	HOUR	PEG	OVFL
TOTAL				TOTAL				TOTAL			
AVERAGE				AVERAGE				AVERAGE			
NOTES:											

Fig. 13—Data Summarization Form (Sheet 16 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD

CCF

CUSTOM CALLING FEATURES

ENTITY_____ BUSY HOUR _____

MONTH & YEAR _____

OPM 011	CALL WAIT ATTEMPS	CALL WAIT ATT ANS	CALL FWD ACT	CALLS FORWARDED		SC LONG L CHANGES	SC SHORT L CHANGES	SPEED CALLS LONG LIST		SPEED CALLS SHORT LIST		THREE WAY CALLING		
	CWAT	CWAA	CFWA	CFWD		SCLL	SCSL	SPCL		SPCS		3WC		
DATE	PEG	PEG	PEG	PEG	USE	PEG	PEG	PEG	USE	PEG	USE	PEG	BLK	USE
TOTAL														
AVERAGE														
NOTES:														

Fig. 13—Data Summarization Form (Sheet 17 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

DMS-10 DAILY DATA RECORD
DIVISION OF REVENUE MONTHLY
PEG COUNT

ENTITY_____ BUSY HOUR _____
MONTH & YEAR _____

OPM 002	TOTAL ORIGINATING CALLS TOTC - PEG					PERMANENT SIGNAL PSIG - PEG					FALSE START FSTR - PEG				
HOUR	MON	TUES	WED	THUR	FRI	MON	TUES	WED	THUR	FRI	MON	TUES	WED	THUR	FRI
0000															
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
TOTAL															
TOTAL	TOTC _____					PSIG _____					FSTR _____				

TOTAL WEEK ORIGINATING CALLS _____ (TOTC MINUS [PSIG PLUS FSTR])

Fig. 13—Data Summarization Form (Sheet 18 of 18) (6.05, 6.07, 6.14, 6.17, 7.01, 8.02, 8.11)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

Monthly Report for mm/yyyy

DMS10 Office Information
as of mm/dd/yy

TOTAL NTWG	TOTAL REMOTE LINES	TOTAL LOCAL LINES	TOTAL DCM	TOTAL REM	TOTAL SCM
x	xxxx	xxxx	xxx	xxx	xxx

OFFICE TRKS	DIG TRKS	ANA TRKS	PBX TRKS	MF TRKS	DP TRKS
xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

OFFICE MS	REMOTE MS	LOCAL MS	PBX MS	COIN MS	DP MS	DGT MS
xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

Notes:
TOTAL NTWG = number of network groups (max 3)
TOTAL REMOTE LINES = total number of remote lines
(this includes all lines connected to the office using a digital interface)
TOTAL LOCAL LINES = total number of local analog lines (max ~6000)
TOTAL DCM = number of digital carrier modules
TOTAL REM = number of remote equipment modules
TOTAL SCM = number of subscriber carrier modules
OFFICE TRKS = number of trunks in the entire office
= (DIG TRKS + ANA TRKS)
= (MF TRKS + DP TRKS)
DIG TRKS = number of digital trunks
ANA TRKS = number of analog trunks
PBX TRKS = number of PBX trunks
MF TRKS = number of MF trunks
DP TRKS = number of DP trunks
OFFICE MS = number of main stations in the entire office
= (DP MS + DGT MS)
= (REMOTE MS + LOCAL MS + PBX MS + COIN MS)
REMOTE MS = number of remote MS
(this includes all MS connected to the office using a digital interface)
LOCAL MS = number of local MS
PBX MS = number of PBX MS
COIN MS = number of coin MS
DP MS = number of Dial Pulse MS
DGT MS = number of Digitone MS

Fig. 14—COER Output (Sheet 1 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Office Totals
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	O+I CALLS	ORIG REQ DP	ORIG REQ DGT	ORIG REQ TOTAL	ORIG CALLS	INC REQ MF	INC CALLS
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
AVERAGE#		xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Average stored in MLSS high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
O+I CALLS       = ORIG CALLS + INC CALLS
ORIG REQ DP     = ORIG REQ TOTAL - ORIG REQ DGT
ORIG REQ DGT    = 5DGTRR
ORIG REQ TOTAL  = 5DIALR
ORIG CALLS      = 1ORTMP + 1RVRTP + 1OROGP + 1ORNCP + 2PABNP
INC REQ MF      = 5MFRR
INC CALLS       = 1INTMP + 1INOGP + 1INNCP + 3PABNP
```

Fig. 14—COER Output (Sheet 2 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Call Type Data
Monthly Report for mm/yyyy
Officewide Values

			TOTAL CALLS -- PC						USAGE	
DATE	HOUR	O+I CALLS	ORIG	OUTGO	IAO	TANDEM	INC	TERM	ORIG	INC
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
AVERAGE#		xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Average stored in MLSS high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
O+I CALLS              = ORIG CALLS + INC CALLS
ORIG CALLS             = 1ORTMP + 1RVRTP + 1OROGP + 1ORNCP + 2PABNP
INC CALLS              = 1INTMP + 1INOGP + 1INNCP + 3PABNP
TOTAL CALLS PC ORIG    = 1ORTMP + 1RVRTP + 1OROGP + 1ORNCP + 2PABNP
TOTAL CALLS PC OUTGO   = 1OROG(P+B) + 1INOG(P+B)
TOTAL CALLS PC IAO     = 1ORTM(P+B) + 1RVRTP
TOTAL CALLS PC TANDEM  = 1INOG(P+B)
TOTAL CALLS PC INC     = 1INTMP + 1INOGP + 1INNCP + 3PABNP
TOTAL CALLS PC TERM    = 1ORTM(P+B) + 1INTM(P+B) + 1RVRTP
USAGE ORIG             = 1ORTMU + 1OROGU + 1RVRTU
USAGE INC              = 1INOGU + 1INTMU
```

Fig. 14—COER Output (Sheet 3 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Attempts -- Originating
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	O+I CALLS	ORIG CALLS	INTCEP CALLS	FALSE STARTS	PERM SIGNAL	PARTIAL DIAL ABANDON	PARTIAL DIAL TIMEOUT	BLKED CALLS
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
AVERAGE#		xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Average stored in MLSS high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
O+I CALLS              = ORIG CALLS + INC CALLS
ORIG CALLS             = 1ORTMP + 1RVRTP + 1OROGP + 1ORNCP + 2PABNP
INC CALLS              = 1INTMP + 1INOGP + 1INNCP + 3PABNP
INTCEP CALLS           = 1ORNCP - 2PDTOP - 1ORTMB - 1OROGB
FALSE STARTS           = 2FSTRP
PERM SIGNAL            = 2PSIGP
PARTIAL DIAL ABANDON = 2PABNP
PARTIAL DIAL TIMEOUT = 2PDTOP
BLKED CALLS            = 1ORTMB + 1OROGB
```

Fig. 14—COER Output (Sheet 4 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Attempts -- Incoming
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	O+I CALLS	INC CALLS	INTCEP CALLS	HITS	PERM SIGNAL	PARTIAL DIAL ABANDON	PARTIAL DIAL TIMEOUT	BLKED CALLS
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
AVERAGE#		xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Average stored in MLSS high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
O+I CALLS             = ORIG CALLS + INC CALLS
ORIG CALLS            = 1ORTMP + 1RVRTP + 1OROGP + 1ORNCP + 2PABNP
INC CALLS             = 1INTMP + 1INOGP + 1INNCP + 3PABNP
INTCEP CALLS          = 1INNCP - 3PDTOP - 1INTMB - 1INOGB
HITS                  = 3HITSP
PERM SIGNAL           = 3PSIGP
PARTIAL DIAL ABANDON  = 3PABNP
PARTIAL DIAL TIMEOUT  = 3PDTOP
BLKED CALLS           = 1INTMB + 1INOGB
```

Fig. 14—COER Output (Sheet 5 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Conference Network
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	PK-TRF USAGE	CCS /MS	MS	PEG CNT	HT SEC	BLK %	NCI	OCC %
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xx.x	xx	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xx.x	xx	xx.x
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xx.x	xx	xx.x

EVHD Calculations:

DM	EVHD CCS	EVHD CCS/MS	ADP CCS	ADP CCS/MS	CURR MS	CAP CCS	CAP %
dd#	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x

EVHD values are stored in MLSS as high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
PK-TRF USAGE = SUM(6CONFnU) over all conference loops
CCS/MS       = PK-TRF USAGE / MS
MS           = ODF(Conference Circuits MS) at the time of data entry
PEG CNT      = SUM(6CONFnP) over all conference loops
HT SEC       = 100 * PK-TRF USAGE / SUM(6CONFn(P-B)) over all conference loops
BLK %        = 100 * SUM(6CONFnB) over all conference loops / PEG CNT
NCI          = ODF(Conference Circuits installed) at the time of data entry
OCC %        = 100 * PK-TRF USAGE / (36 * NCI)
```

EVHD Calculations

```
EVHD CCS    = ADP CCS + 2.6 * standard deviation over month of
                        daily PK-TRF USAGE values
EVHD CCS/MS = EVHD CCS / CURR MS
ADP CCS     = AVERAGE(PK-TRF USAGE)
ADP CCS/MS  = ADP CCS / CURR MS
CURR MS     = ODF(Conference Circuits MS) at the time of report
CAP CCS     = ODF(Conference Circuits engineered capacity CCS) at time of report
CAP %       = 100 * EVHD CCS / CAP CCS
```

Fig. 14—COER Output (Sheet 6 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Digitone Receivers
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	PK-TRF USAGE	CCS /MS	MS	DELAY %	DGT CALLS	DGTR PC	HT SEC	OVF %	L-L ML %	SRVC NTWK CCS /LOOP	DIAL TONE BLK %
		=====										
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x

EVHD Calculations:

DM	EVHD CCS	EVHD CCS/MS	ADP CCS	ADP CCS/MS	CURR MS	CAP CCS	CAP %	NCI
dd#	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx

EVHD values stored in MLSS as high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
PK-TRF USAGE        = 5DGTRU
CCS/MS              = PK-TRF USAGE / MS
MS                  = ODF (number of Digitone Receiver MS) at time of data entry
DELAY %             = 2DGTS%
DGT CALLS           = 2DGTCP
DGTR PC             = 5DGTRP
HT SEC              = 100 * PK-TRF USAGE / 5DGTRP
OVF %               = 100 * 5DGTRO / 5DGTR(P+O)
L-L ML %            = 100 * 1ORTMB / 1ORTM(P+B)
SRVC NTWK CCS/LOOP  = 5SNETU / ODF(number of service network loops)
DIAL TONE BLK %     = 100 * (5DIALR - 5DIALP) / 5DIALR
```

EVHD Calculations

```
EVHD CCS     = ADP CCS + 2.6 * standard deviation over month of
                                   daily PK-TRF USAGE values
EVHD CCS/MS  = EVHD CCS / CURR MS
ADP CCS      = AVERAGE(PK-TRF USAGE)
ADP CCS/MS   = ADP CCS / CURR MS
CURR MS      = ODF(number of Digitone MS ) at the time of report
CAP CCS      = ODF(Digitone Receiver engineered capacity CCS) at time of report
CAP %        = 100 * EVHD CCS / CAP CCS
NCI          = ODF (Digitone Receiver circuits installed) at time of report
```

Fig. 14—COER Output (Sheet 7 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 MF Receivers
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	PK-TRF USAGE	CCS /MF TRK	MF TRKS	DELAY %	MFR CALLS	MFR PC	HT SEC	OVF %	AVG CCS /VOICE LOOP	T-L ML %
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x

EVHD Calculations :

DM	EVHD CCS	EVHD CCS/MF TRK	ADP CCS	ADP CCS/MF TRK	ADP CCS /VOICE LOOP	CURR MF TRKS	CAP CCS	CAP %	NCI
dd#	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx

EVHD values stored in MLSS as high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
PK-TRF USAGE        = 5MFRU
CCS/MF TRK          = PK-TRF USAGE / MF TRKS
MF TRKS             = ODF(number of MF trunks) at the time of data entry
DELAY %             = 3RDLY%
MFR CALLS           = 3MFRCP
MFR PC              = 5MFRP
HT SEC              = 100 * PK-TRF USAGE / 5MFRP
OVF %               = 100 * 5MFRO / 5MFR(P+O)
AVG CCS/VOICE LOOP  = SUM(6PCKTnU) over all voice loops
                        / ODF(number of voice MUX loops)
T-L ML %            = 100 * 1INTMB / 1INTM(P+B)
```

EVHD Calculations

```
EVHD CCS            = ADP CCS + 2.6 * standard deviation over month of
                                      daily PK-TRF USAGE values
EVHD CCS/MF TRK     = EVHD CCS / CURR MF TRKS
ADP CCS             = AVERAGE(PK-TRF USAGE)
ADP CCS/MF TRK      = ADP CCS / CURR MF TRKS
ADP CCS/VOICE LOOP  = AVERAGE(AVG CCS/VOICE LOOP)
CURR MF TRKS        = ODF (number of MF trunks) at the time of report
CAP CCS             = ODF(MF Receiver engineered capacity CCS) at time of report
CAP %               = 100 * EVHD CCS / CAP CCS
NCI          = ODF(number of MF Receiver circuits installed) at time of report
```

Fig. 14—COER Output (Sheet 8 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Analog Shelves
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	PK-TRF NTWK USAGE	CCS /AMS	CCS /ATRK	PEG CNT AMS	PEG CNT ATRK	HT SEC AMS	HT SEC ATRK	% ML ORIG	% ML INC	% ML ANA
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x

EVHD Calculations:

DM	EVHD NTWK CCS	EVHD NTWK CCS/ELT	CURR ELT	EST SLAVE CCS/AMS	EST SLAVE CCS/ATRK	ADP CCS /AMS	ADP CCS /ATRK	ANA MUX LOOPS
dd#	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

EVHD values stored in MLSS as high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
PK-TRF NTWK USAGE = SUM(6PCKTnU) over all voice loops
CCS/AMS           = AMS USAGE /ODF(local MS) at the time of data entry
AMS USAGE         = SUM(6PCKTnU) over all analog shelves - ATRK USAGE
CCS/ATRK          = ATRK USAGE / ODF(number of Analog Trunks) at time of data entry
ATRK USAGE        = SUM(4IGPiU + 4OGPiU) over all analog trunks
PEG CNT AMS       = SUM(6PCKTnP) over all analog shelves - PEG CNT ATRK
PEG CNT ATRK      = SUM(4IGPiP + 4OGPiP) over all analog trunks only
HT SEC AMS        = 100 * AMS USAGE / PEG CNT AMS
HT SEC ATRK       = 100 * ATRK USAGE / PEG CNT ATRK
% ML INC          = 100 * (1INTMB + 1INOGB) / (1INTM(P+B) + 1INOG(P+B))
% ML ORIG         = 100 * (1ORTMB + 1OROGB) / (1ORTM(P+B) + 1OROG(P+B))
% ML ANA          = 100 * (SUM(6PCKTnB) over all analog shelves)
                        / (SUM(6PCKTn(P+B)) over all analog shelves)
```

EVHD Calculations

```
EVHD NTWK CCS       = AVERAGE(PK-TRF NTWK USAGE) + 2.6 * standard deviation
                      over month of daily PK-TRF NTWK USAGE values
EVHD NTWK CCS/ELT   = EVHD NTWK CCS / CURR ELT
CURR ELT            = (ODF(local MS) + ODF(analog TRK) * r1 + ODF(remote MS) * r2
                              + ODF(digital TRK) * r3) at time of report
EST SLAVE CCS/AMS   = ADP CCS/AMS  * r
EST SLAVE CCS/ATRK  = ADP CCS/ATRK * r
ADP CCS/AMS         = AVERAGE(CCS/AMS)
ADP CCS/ATRK        = AVERAGE(CCS/ATRK)
ANA MUX LOOPS       = ODF(number of analog mux loops) at time of report
r    = EVHD NTWK CCS / AVERAGE(PK-TRF NTWK USAGE)
r1   = (EST SLAVE CCS/ATRK) / (EST SLAVE CCS/AMS)
r2   = (EST SLAVE CCS/DMS)  / (EST SLAVE CCS/AMS)
r3   = (EST SLAVE CCS/DTRK) / (EST SLAVE CCS/AMS)
```

Fig. 14—COER Output (Sheet 9 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Digital Shelves
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	PK-TRF NTWK USAGE	CCS /DMS	CCS /DTRK	PEG CNT DMS	PEG CNT DTRK	HT SEC DMS	HT SEC DTRK	% ML INC	% ML ORIG	% ML DIG
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x

EVHD Calculations:

DM	EVHD NTWK CCS	EVHD NTWK CCS/ELT	CURR ELT	EST SLAVE CCS/DMS	EST SLAVE CCS/DTRK	ADP CCS /DMS	ADP CCS /DTRK	DIG MUX LOOPS
dd#	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

EVHD values stored in MLSS as high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Daily Calculations

```
PK-TRF NTWK USAGE = SUM(6PCKTnU) over all n voice loops
CCS/DMS           = DMS USAGE / ODF(remote MS) at the time of data entry
DMS USAGE         = SUM(6PCKTnU) over all digital shelves - DTRK USAGE
CCS/DTRK          = DTRK USAGE / ODF(number of Digital trunks) at time of data entry
DTRK USAGE        = SUM(4IGPiU + 4OGPiU) over all digital trunks
PEG CNT DMS       = SUM(6PCKTnP) over all digital shelves - PEG CNT DTRK
PEG CNT DTRK      = SUM(4IGPiP + 4OGPiP) over all digital trunks only
HT SEC DMS        = 100 * DMS USAGE / PEG CNT DMS
HT SEC DTRK       = 100 * DTRK USAGE / PEG CNT DTRK
% ML INC          = 100 * (1INTMB + 1INOGB) / (1INTM(P+B) + 1INOG(P+B))
% ML ORIG         = 100 * (1ORTMB + 1OROGB) / (1ORTM(P+B) + 1OROG(P+B))
% ML DIG          = 100 * (SUM(6PCKTnB) over all digital shelves)
                         / (SUM(6PCKTn(P+B)) over all digital shelves)
```

EVHD Calculations

```
EVHD NTWK CCS       = AVERAGE(PK-TRF NTWK USAGE) + 2.6 * standard deviation
                      over month of daily PK-TRF NTWK USAGE values
EVHD NTWK CCS/ELT   = EVHD NTWK CCS / CURR ELT
CURR ELT            = see calculation in B-9
EST SLAVE CCS/DMS   = ADP CCS/DMS * r
EST SLAVE CCS/DTRK  = ADP CCS/DTRK * r
ADP CCS/DMS         = AVERAGE(CCS/DMS)
ADP CCS/DTRK        = AVERAGE(CCS/DTRK)
DIG MUX LOOPS       = ODF(number of digital mux loops) at time of report
r = EVHD NTWK CCS / AVERAGE(PK-TRF NTWK USAGE)
```

Fig. 14—COER Output (Sheet 10 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Processor -- Occupancy and Delay
Peak Half-Hourly Data
Monthly Report for mm/yyyy
Officewide Values

DATE	HOUR	PEAK CPU %OCC	O+I CALLS	MS DP	MS DGT	TRK MF	CALLS -- PC DP	CALLS -- PC DGT	CALLS -- PC MF	% DELAY DP	% DELAY DGT	% DELAY MF
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy*	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x

EVHD Calculations:

DM	AVG CPU %OCC	EVHD CPU %OCC	CURR MS	CURR ELT	EVHD O+I CALLS	EVHD CPU USAGE (ms) per CURR MS	EVHD CPU USAGE (ms) per CURR ELT	EVHD CPU USAGE (ms) per EVHD O+I CALLS
dd#	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx

EVHD values stored in MLSS as high-month results.

Notes: The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

```
PEAK CPU % OCC   = 100 * (1 - (12BKGD/18))
O+I CALLS        = ORIG CALLS + INC CALLS
ORIG CALLS       = 1ORTMP + 1RVRTP + 1OROGP + 1ORNCP + 2PABNP
INC CALLS        = 1INTMP + 1INOGP + 1INNCP + 3PABNP
MS DP            = ODF(DP MS) at the time of data entry.
MS DGT           = ODF(DGT MS) at the time of data entry.
TRK MF           = ODF(MF trunks) at the time of data entry.
CALLS PC DP      = 2DPCP
CALLS PC DGT     = 2DGTCP
CALLS PC MF      = 3MFRCP
% DELAY DP       = 2DPS%
% DELAY DGT      = 2DGTS%
% DELAY MF       = 3RDLY%
```

EVHD Calculations

```
AVG CPU % OCC        = AVERAGE(PEAK CPU % OCC)
EVHD CPU % OCC       = AVERAGE(PEAK CPU % OCC) + 2.6 * standard deviation
                       over month of daily CPU % OCC values
CURR MS              = ODF(office MS) at time of report
CURR ELT             = value from B-9
EVHD O+I CALLS       = AVERAGE(O+I CALLS) + 2.6 * standard deviation
                       over month of daily O+I CALLS values
EVHD CPU USAGE       = EVHD CPU %OCC * 18000
EVHD CPU USAGE (ms) per CURR MS        =  EVHD CPU USAGE / CURR MS
EVHD CPU USAGE (ms) per CURR ELT       =  EVHD CPU USAGE / CURR ELT
EVHD CPU USAGE (ms) per EVHD O+I CALLS =  EVHD CPU USAGE / EVHD O+I CALLS
```

Fig. 14—COER Output (Sheet 11 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Office Totals
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	O+I CALLS	ORIG REQ DP	ORIG REQ DGT	ORIG REQ TOTAL	ORIG CALLS	INC REQ MF	INC CALLS
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Avgs:

MONTH	DM	O+I CALLS	ORIG REQ DP	ORIG REQ DGT	ORIG REQ TOTAL	ORIG CALLS	INC REQ MF	INC CALLS
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
OFFICE	3HM	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Notes: Ordering based on "O+I Calls."
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 12 of 21) (8.07, 8.10)

```
nnnnnD10        CLLIcode        G.Issue        Company Id: nnn

                DMS10 Processor -- Occupancy and Delay
                        Peak Half-Hourly Data
                     Monthly Report for mm/yyyy
                          Officewide Values
                          -----------------

                 PEAK              MS                CALLS -- PC        % DELAY
                  CPU   O+I   ---------   TRK   -----------------   --------------
  DATE      HOUR  %OCC  CALLS   DP    DGT   MF    DP     DGT    MF     DP    DGT   MF
--------- -----  ====  -----  ----  ----  ----  -----  -----  -----  ----  ----  ----
mm/dd/yy  hh:mm  xx.x  xxxxx  xxxx  xxxx  xxxx  xxxxx  xxxxx  xxxxx  xx.x  xx.x  xx.x
mm/dd/yy* hh:mm  xx.x  xxxxx  xxxx  xxxx  xxxx  xxxxx  xxxxx  xxxxx  xx.x  xx.x  xx.x
    .       .     .     .     .     .     .     .     .     .     .     .     .
    .       .     .     .     .     .     .     .     .     .     .     .     .
    .       .     .     .     .     .     .     .     .     .     .     .     .
mm/dd/yy  hh:mm  xx.x  xxxxx  xxxx  xxxx  xxxx  xxxxx  xxxxx  xxxxx  xx.x  xx.x  xx.x

EVHD Calculations:
                                                      EVHD CPU USAGE (ms) per
                AVG    EVHD                    EVHD   ----------------------
                CPU     CPU    CURR   CURR     O+I    CURR     CURR     EVHD
        DM      %OCC   %OCC     MS     ELT    CALLS    MS       ELT   O+I CALLS
        --      ----   -----   ----   ----    -----   -----    -----   -----
        dd#     xx.x   xxx.x   xxxx   xxxx    xxxxx   xxxxx    xxxxx   xxxxx

EVHD values stored in MLSS as high-month results.
------
Notes: The "*" flag indicates unreasonable or outlier data.
       The "#" flag marks a month with less than 15 unflagged days of data.
       The peak value column is underlined double ("===").
-----------------------------------------------------------------------------

PEAK CPU % OCC  = 100 * (1 - (12BKGD/18))
O+I CALLS       = ORIG CALLS + INC CALLS
ORIG CALLS      = 1ORTMP + 1RVRTP + 1OROGP + 1ORNCP + 2PABNP
INC CALLS       = 1INTMP + 1INOGP + 1INNCP + 3PABNP
MS DP           = ODF(DP MS) at the time of data entry.
MS DGT          = ODF(DGT MS) at the time of data entry.
TRK MF          = ODF(MF trunks) at the time of data entry.
CALLS PC DP     = 2DPCP
CALLS PC DGT    = 2DGTCP
CALLS PC MF     = 3MFRCP
% DELAY DP      = 2DPS%
% DELAY DGT     = 2DGTS%
% DELAY MF      = 3RDLY%

                        EVHD Calculations

AVG CPU % OCC       = AVERAGE(PEAK CPU % OCC)
EVHD CPU % OCC      = AVERAGE(PEAK CPU % OCC) + 2.6 * standard deviation
                        over month of daily CPU % OCC values
CURR MS             = ODF(office MS) at time of report
CURR ELT            = value from B-9
EVHD O+I CALLS      = AVERAGE(O+I CALLS) + 2.6 * standard deviation
                        over month of daily O+I CALLS values
EVHD CPU USAGE      = EVHD CPU %OCC * 18000
EVHD CPU USAGE (ms) per CURR MS        =  EVHD CPU USAGE / CURR MS
EVHD CPU USAGE (ms) per CURR ELT       =  EVHD CPU USAGE / CURR ELT
EVHD CPU USAGE (ms) per EVHD O+I CALLS =  EVHD CPU USAGE / EVHD O+I CALLS
```

Fig. 14—COER Output (Sheet 11 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Office Totals
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	O+I CALLS	ORIG REQ DP	ORIG REQ DGT	ORIG REQ TOTAL	INC REQ ORIG CALLS	INC REQ MF	INC CALLS
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Avgs:

MONTH	DM	O+I CALLS	ORIG REQ DP	ORIG REQ DGT	ORIG REQ TOTAL	INC REQ ORIG CALLS	INC REQ MF	INC CALLS
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
OFFICE	3HM	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Notes: Ordering based on "O+I Calls."
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 12 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Call Type Data
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

			TOTAL CALLS -- PC						USAGE	
DATE	HOUR	O+I CALLS	ORIG	OUTGO	IAO	TANDEM	INC	TERM	ORIG	INC
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Avgs:

			TOTAL CALLS -- PC						USAGE	
MONTH	DM	O+I CALLS	ORIG	OUTGO	IAO	TANDEM	INC	TERM	ORIG	INC
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
		xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
OFFICE 3HM		xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

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Notes: Ordering based on "O+I Calls."
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 13 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Attempts -- Originating
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	O+I CALLS	ORIG CALLS	INTCEP CALLS	FALSE STARTS	PERM SIGNAL	PARTIAL DIAL		BLKED CALLS
							ABANDON	TIMEOUT	
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Avgs:

MONTH	DM	O+I CALLS	ORIG CALLS	INTCEP CALLS	FALSE STARTS	PERM SIGNAL	PARTIAL DIAL		BLKED CALLS
							ABANDON	TIMEOUT	
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
OFFICE	3HM	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Notes: Ordering based on "O+I Calls."
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 14 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Attempts -- Incoming
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

DATE	HOUR	O+I CALLS	INC CALLS	INTCEP CALLS	HITS	PERM SIGNAL	PARTIAL DIAL ABANDON	PARTIAL DIAL TIMEOUT	BLKED CALLS
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Monthly Avgs:

MONTH	DM	O+I CALLS	ORIG CALLS	INTCEP CALLS	HITS	PERM SIGNAL	PARTIAL DIAL ABANDON	PARTIAL DIAL TIMEOUT	BLKED CALLS
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
		-----	-----	-----	-----	-----	-----	-----	-----
OFFICE	3HM	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Notes: Ordering based on "O+I Calls."
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 15 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Conference Network
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	PK-TRF USAGE	CCS /MS	MS	PEG CNT	HT SEC	BLK %	NCI	OCC %
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xx	xx.x

Monthly EVHD's:

MONTH	DM	EVHD CCS	EVHD CCS/MS	ADP CCS	ADP CCS/MS	CURR MS	CAP CCS	CAP %
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
OFFICE	3HM	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xx.x

Notes: Ordering based on "PK-TRF USAGE" for high days,
"EVHD CCS/MS" for monthly EVHD's.
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 16 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Digitone Receivers
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	PK-TRF USAGE	CCS /MS	MS	DELAY %	DGT CALLS	DGTR PC	HT SEC	OV %	L-L ML %	SRVC NTWK CCS /LOOP	DIAL TONE BLK %
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xxxxx	xx.x

Monthly EVHD's:

MONTH	DM	EVHD CCS	EVHD CCS/MS	ADP CCS	ADP CCS/MS	CURR MS	CAP CCS	CAP %	NCI
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
OFFICE	3HM	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxx

Notes: Ordering based on "PK-TRF USAGE" for high days,
"EVHD CCS/MS" for monthly EVHD's.
The "*" flag indicates unreasonable ot outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The Peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 17 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 MF Receivers
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	PK-TRF USAGE	CCS /MF TRK	MF TRKS	DELAY %	MFR CALLS	MFR PC	HT SEC	OVF %	AVG CCS /VOICE LOOP	T-L ML %
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxx	xx.x	xxxxx	xxxxx	xxxxx	xx.x	xxxxx	xx.x

Monthly EVHD's:

MONTH	DM	EVHD CCS	EVHD CCS/MF TRKS	ADP CCS	ADP CCS/MF TRK	ADP CCS /VOICE LOOP	CURR MF TRKS	CAP CCS	CAP %	NCI
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
OFFICE	3HM	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxx	xxxxx	xx.x	xxxxx

Notes: Ordering based on "PK-TRF USAGE" for high days,
"EVHD CCS/MS" for monthly EVHD's.
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 18 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Analog Shelves
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	PK-TRF NTWK USAGE	CCS /AMS	CCS /ATRK	PEG CNT AMS	PEG CNT ATRK	HT SEC AMS	HT SEC ATRK	% ML ORIG	% ML INC	% ML ANA
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x

Monthly EVHD's:

MONTH	DM	EVHD NTWK CCS	EVHD NTWK CCS/ELT	CURR ELT	EST SLAVE CCS/AMS	EST SLAVE CCS/ATRK	ADP CCS /AMS	ADP CCS /ATRK	ANA MUX LOOPS
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
OFFICE	3HM	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Notes: Ordering based on "PK-TRF NTWK USAGE" for high days,
"EVHD NTWK CCS/ELT" for monthly EVHD's.
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 19 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Digital Shelves
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	PK-TRF NTWK USAGE	CCS /DMS	CCS /DTRK	PEG CNT DMS	PEG CNT DTRK	HT SEC DMS	HT SEC DTRK	% ML INC	% ML ORIG	% ML DIG
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy*	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x

Monthly EVHD's:

MONTH	DM	EVHD NTWK CCS	EVHD NTWK CCS/ELT	CURR ELT	EST SLAVE CCS/DMS	EST SLAVE CCS/DTRK	ADP CCS /DMS	ADP CCS /DTRK	DIG MUX LOOPS
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
OFFICE	3HM	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Notes: Ordering based on "PK-TRF NTWK USAGE" for high days,
"EVHD NTWK CCS/ELT" for monthly EVHD's.
The "*" flag indicates unreasonable or outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 20 of 21) (8.07, 8.10)

nnnnnD10 CLLIcode G.Issue Company Id: nnn

DMS10 Processor -- Occupancy and Delay
Peak Half-Hourly Data
Traffic Machine Load and Service Summary
Data Year Ending mm/dd/yyyy Data Reported Through mm/dd/yyyy
Officewide Values

High Days:

DATE	HOUR	PEAK CPU %OCC	O+I CALLS	MS DP	MS DGT	TRK MF	CALLS -- PC DP	CALLS -- PC DGT	CALLS -- PC MF	% DELAY DP	% DELAY DGT	% DELAY MF
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy*	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy*	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x
mm/dd/yy	hh:mm	xx.x	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xx.x	xx.x	xx.x

Monthly EVHD's:

MONTH	DM	AVG CPU %OCC	EVHD CPU %OCC	CURR MS	CURR ELT	EVHD O+I CALLS	EVHD CPU USAGE (ms) per CURR MS	EVHD CPU USAGE (ms) per CURR ELT	EVHD CPU USAGE (ms) per EVHD O+I CALLS
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
OFFICE	3HM	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy#	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx
mm/yy	dd	xx.x	xxx.x	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx

Notes: Ordering based on "PEAK CPU % OCC" for high days,
"EVHD CPU USAGE per CURR MS" for monthly EVHD's.
The "*" flag indicates unreasonable and outlier data.
The "#" flag marks a month with less than 15 unflagged days of data.
The peak value column is underlined double ("===").

Fig. 14—COER Output (Sheet 21 of 21) (8.07, 8.10)

ORIGINATING PEG COUNT RELIABILITY COMPARISONS

1. TOTAL ORIGINATING CALLS ≃ DIAL TONE PEG COUNT

OPM002 TOTC		OPM005 DIAL
☐	≃	☐

2. DIGITONE CALLS ≃ DIGITONE RECEIVER PEG

OPM002 DGTC		OPM005 DGTR
☐	≃	☐

3. ORIGINATING TERMINATING + ORIGINATING OUTGOING + ORIGINATING NONCOMPLETING + REVERTING > TOTAL CALLS - PERMANENT SIGNAL - PARTIAL DIAL ABANDON - FALSE STARTS.

OPM001			OPM002	
ORTM _____			TOTC _____	
+			-	
OROG _____			PSIG _____	
+			-	
ORNC _____			PABN _____	
+			-	
RVRT _____			FSTR _____	
= ☐		>	= ☐	

Fig. 15—Data Reliability Comparison Worksheet (Sheet 1 of 3) (9.10)

OUTGOING CALL PEG COUNT RELIABILITY COMPARISONS

1. ORIGINATING OUTGOING ≲ SUM OF OUTGOING TRUNK GROUPS - INCOMING OUTGOING ≲ DIGIT SENDER

OPM001	OPM004	OPM005
OROG _____	S OGP	DSND
+		
INOG _____		
=		
☐ ≲	☐ ≲	☐

SERVICE CIRCUIT PEG COUNT COMPARISONS

1. SERVICE ≲ SUM OF INDIVIDUAL SERVICE CIRCUITS ≲ SUM OF SERVICE NETWORK

OPM005	OPM005	OPM006
SNET	DSDN _____	Σ SNWK
	BUSY + _____	
	RNGB + _____	
	RORD + _____	
	DIAL + _____	
	HOWL + _____	
	HIGH + _____	
	LOW + _____	
	CWT + _____	
	SPDT + _____	
	CFMT + _____	
☐ ≲	= ☐ ≲	☐

Fig. 15—Data Reliability Comparison Worksheet (Sheet 2 of 3) (9.10)

INCOMING PEG COUNT RELIABILITY COMPARISONS

1. MF RECEIVER CALLS ≳ MF RECEIVER ≳ SUM OF MF INCOMING TRUNKS GROUPS.

OPM003 MFRC		OPM005 MFR		OPM004 Σ MF IGP
☐	≳	☐	≳	☐

2. INCOMING TERMINATING + INCOMING OUTGOING + INCOMING NONCOMPLETING ≳ TOTAL INCOMING CALLS - PARTIAL DIAL ABANDON ≳ SUM OF INCOMING TRUNK GROUPS - PARTIAL ABANDON

OPM001		OPM003		OPM004	
INTM	_____	TOTC	_____	Σ IGP	_____
+		-		-	
INOG	_____	PABN	_____	OPM003 PABN	_____
+		=		=	
INNC	_____				
=					
☐	≳	☐	≳	☐	

Fig. 15—Data Reliability Comparison Worksheet (Sheet 3 of 3) (9.10)