

**MECHANIZED AIDS TO MANAGEMENT
INEFFECTIVE MACHINE ATTEMPTS (IMA)
INSTRUCTIONS FOR OPERATING
IMA DATA MANAGEMENT SYSTEM**

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1. GENERAL

1.01 Ineffective Machine Attempts (IMA) is a data management system to produce various ineffective machine attempt reports for crossbar tandem (XBT), No. 4 crossbar, and No. 1 Electronic Switching System (ESS). IMA uses the man-machine interactive capability of time-shared computers in its rapid data entry, data checking, data correcting, and report generating system with status facilities.

1.02 The rapid collection of complete and correct IMA basic data with a minimum of effort on the part of the Operating Companies and AT&T is an objective of this reporting technique. Time-consuming calculations which are part of manual reports are eliminated.

1.03 An easy-to-use "conversational" data entry and checking system, programmed on a centrally located, time-shared computer and accessed by DATA-PHONE® teletypewriter (TTY), is the tool used to accomplish the objective. The system allows the operating areas not only to transmit the requested data directly to a central data file, but also to correct any inconsistencies the computer uncovers. A correct and complete set of data is thus ensured by this man-machine interplay. The system allows the user to obtain a summary of the completed data and the status of data entered for all machines within the company. In addition, during a specified interval of each month, users in one company can obtain reports on machines in other companies, System averages, and the rank of their machines within the System.

2. STEPS IN USING IMA

2.01 Report data are entered on worksheets. Fig. 1 is a worksheet for XBT offices, Fig. 2 is a worksheet for No. 4T machines, and the worksheet for No. 1 ESS machines is not available at this time. A TTY paper tape of this data is prepared. For preparation of this tape, see Part 3.

2.02 After the paper tape is prepared, a connection with the system must be established as indicated in Part 4. Then the data must be transmitted to the computer as shown in Part 5. The data are automatically checked for any data inconsistencies. (See Fig. 3, 4, and 5).

2.03 If any data inconsistencies are detected, it is advisable to request a listing of the worksheet data as stored in the computer.

2.04 To correct data inconsistencies, *only the data items in error need be reentered.* See Part 5 for details on data entering.

2.05 A check for data inconsistencies can be requested at any time as described in Part 6.

2.06 Once the data are correct and complete, various reports may be requested as described in Part 6. However, tentative reports may be obtained at any time.

2.07 The status (not started, started, or completed) of each machine within a company may be obtained as described in Part 6.

3. PREPARATION OF IMA DATA TAPE

General

3.01 Paper tapes are generated with the TTY in the LOCAL mode. Use of paper tape is recommended to reduce costs when entering a sizable amount of data. A small amount of data can be entered "on-line," as described in Part 5. An IMA data tape may contain information for all machines, only one machine, or part of one or more machines. It may contain information for only those machines belonging to the company.

3.02 An **Ⓔ** is used in these instructions to indicate the end of a TTY line. It is obtained by depressing the RETURN and LINE FEED keys one at a time.

3.03 An error on the data tape may be corrected before the line is ended by back-spacing the tape to the error and inserting "rubouts" over all entries to be erased. Following this, continue with the correct data.

1. NO END STATEMENT ENCOUNTERED IN YOUR TAPE.
2. AN INVALID TAPE IDENTIFIER IS GIVEN.
3. AN ILLEGAL COMPANY ABBREVIATION IS GIVEN IN YOUR TAPE IDENTIFIER.
4. AN ILLEGAL REPORT NAME IS GIVEN ON LINE XXXX.
5. INVALID ITEM LIST ON LINE XXXX.
6. TOO MANY ITEM ELEMENTS ON LINE XXXX.
7. INVALID MACHINE STATEMENT ON LINE XXXX.
8. ON LINE XXXX THE MACHINE XXXX XX XX XXX IS NOT A XXX TYPE WHICH YOU SPECIFIED IN YOUR REPORT STATEMENT.
9. ON LINE XXXX THE MACHINE XXXX XX XX XXX DOES NOT BELONG TO YOUR COMPANY.
10. ON LINE XXXX THE MACHINE XXXX XX XX XXX IS MARKED COMPLETED NO FURTHER DATA CAN BE ENTERED.
11. INVALID DAYS (OR HOURS) GIVEN ON LINE XXXX.
12. NO CORRESPONDING VALUE STATEMENT HAS BEEN GIVEN FOR MACHINE XXXX XX XX XXX BEFORE YOU GAVE ANOTHER MACHINE STATEMENT ON LINE XXXX.
13. NO REPORT OR ITEM STATEMENT HAS BEEN GIVEN. BEFORE THE FIRST VALUES STATEMENT ON LINE XXXX.
14. TWO CONSECUTIVE VALUES STATEMENTS WITHOUT A MACHINE STATEMENT IN BETWEEN. THE SECOND VALUE STATEMENT ON LINE XXXX IS IGNORED.
15. AN ILLEGAL NEGATIVE VALUE IS DETECTED ON LINE XXXX.
16. TOO MANY VALUE ELEMENTS FOR MACHINE XXXX XX XX XXX ON LINE XXXX.
17. AN ILLEGAL NAV, NAP, OR NMS VALUE(S) IS GIVEN ON LINE XXXX.
18. THE NUMBER OF ITEMS SPECIFIED IN THE ITEMS STATEMENT DOES NOT EQUAL THE NUMBER OF VALUES ELEMENTS OF THE VALUES STATEMENT ON LINE XXXX ICOUNT=XXXX VCOUNT=XXXX.

Fig. 3—Error Comments for Improperly Prepared Data Tape

Preparation of Tape Header

3.04 Simultaneously depress the SHIFT, CTRL, P, and REPT keys. Hold the REPT key down until approximately 2 inches of tape is produced.

3.05 Simultaneously depress the RUBOUT and REPT keys. Hold the REPT key down until approximately 1 inch of tape is produced.

Preparation of Tape Identifier

3.06 Enter on tape, immediately following the TAPE HEADER, the following characters:

IMA-aaa (E)

The "aaa" represents the company abbreviation. Fig. 6 lists valid company abbreviations. For example, the tape identifier for New York Telephone Company is: IMA-NYT.

- I. SERIOUS ERROR MESSAGES FOR XBT MACHINES
 1. TOTAL MARKER ATTEMPTS = 0
 2. TRANSVERTER ATTEMPTS = 0
 3. TRANSVERTER ONI ATTEMPTS = 0
 4. IN REGISTER ATTEMPTS = 0
 5. TRANSVERTER ATTEMPTS .GT. TOTAL MARKER ATTEMPTS
 6. TRANSVERTER ONI ATTEMPTS .GT. TRANSVERTER ATTEMPTS
- II. SERIOUS ERROR MESSAGES FOR #4T MACHINES
 1. TLF PEG COUNT = 0
 2. TRANSVERTER ATTEMPTS = 0
 3. TRANSVERTER ONI ATTEMPTS = 0
 4. CALCULATED %FRA IS LESS THAN ZERO
 5. IN DP REGISTER .LE. SVC CODE SEIZURES
 6. ROA OVERFLOW .GT. ROA
 7. VCA OVERFLOW .GT. VCA
 8. SOA OVERFLOW .GT. SOA
 9. NCA OVERFLOW .GT. NCA
 10. FRA OVERFLOW .GT. FRA
 11. TRANSVERTER ATTEMPTS .GT. TLF PEG COUNT
 12. MCA OVERFLOW .GT. MCA
 13. UCA OVERFLOW .GT. UCA
 14. TRANSVERTER ONI ATTEMPTS .GT. TRANSVERTER ATTEMPTS

Fig. 4—Serious Error Messages From Check Data Command

Preparation of IMA Data

3.07 IMA DATA immediately follow the TAPE IDENTIFIER on the data tape.

Definitions

3.08 The following terms are defined with respect to their use with IMA data:

(a) Item—the specific item number or numbers to be entered from the worksheet. If all items are to be inserted at one time, the word ALL may be used instead of listing all item numbers. If specified item numbers are to be entered, separate all item numbers from each other with commas.

(b) Machine name—the common language location identification (CLLI) code of the machine associated with the data values on the worksheet. CLLI codes may be obtained from BSP Section 795-100-100.

(c) Value—a register result. *No* values are to be left blank. Individual entries are always separated by commas. Legal values are:

- (1) A register result. Never use a comma to indicate the thousands place within a number, eg, *always* type 1024; *never* type 1,024.
- (2) 0 if a particular item *is* zero.
- (3) NAP if a particular item is “not applicable” (not a function of this switching system).
- (4) NAV if a particular item is “not available” (normally reported, but not at this time).
- (5) NMS if a particular data item is “not measured” (register not provided).
- (6) A number followed by at least one blank, followed by either NAP, NAV, or NMS. For example: If items 14 through 17 are not

- I. ADVISORY DIAGNOSES FOR XBT MACHINES
 1. ROA .GT. 5% OF TOTAL MARKER ATTEMPTS
 2. VCA .GT. 5% OF TOTAL MARKER ATTEMPTS
 3. SOA .GT. 5% OF TOTAL MARKER ATTEMPTS
 4. NCIT .GT. 3% OF TOTAL MARKER ATTEMPTS
 5. NCTC .GT. 5% OF TOTAL MARKER ATTEMPTS
 6. HI & DRY .GT. 3% OF TOTAL MARKER ATTEMPTS
 7. MCA .GT. 9% OF TRANSVERTER ATTEMPTS
 8. WRONG CALL CODE .GT. 4% OF TRANSVERTER ONI ATTEMPTS
 9. NO. POS. ATTACH. .GT. 4% OF TRANSVERTER ONI ATTEMPTS
 10. CAMA POSITION DISC. .GT. 9% OF TRANSVERTER ONI ATTEMPTS
 11. IN REG-P.S. .GT. 5% OF IN REGISTER ATTEMPTS
 12. IN REG-P.D. .GT. 5% OF IN REGISTER ATTEMPTS
 13. IN REG-NO SDR .GT. 5% OF IN REGISTER ATTEMPTS
 14. IN REGISTER ATTEMPTS .GT. TOTAL MARKER ATTEMPTS

- II. ADVISORY DIAGNOSES FOR #4T MACHINES
 1. ROA .GT. 5% OF TLF PEG COUNT
 2. VCA .GT. 3% OF TLF PEG COUNT
 3. SOA .GT. 5% OF TLF PEG COUNT
 4. NCA .GT. 3% OF TLF PEG COUNT
 5. FRA .GT. 3% OF TLF PEG COUNT
 6. MCA .GT. 5% OF TRANSVERTER ATTEMPTS
 7. UCA .GT. 5% OF TRANSVERTER ATTEMPTS
 8. MATCH CHECK .GT. 2% OF TRANSVERTER ONI ATTEMPTS
 9. WRONG CALLING CODE .GT. 2% OF TRANSVERTER ONI ATTEMPTS
 10. POSITION DISC. .GT. 9% OF TRANSVERTER ONI ATTEMPTS
 11. INCOMING DP REGISTER .GT. 1000000
 12. INCOMING PERM SIGNAL .GT. 10% OF INCOMING DP REG
 13. IN PARTIAL DIGITS .GT. 10% OF INCOMING DP REG

Fig. 5—Advisory Diagnoses From Check Data Command

VALID REPORT NAMES

AVERAGE BUSY HOUR:	XBT-ABH
	#4T-ABH
	#1E-ABH
MOTHER'S DAY TOTAL DAY:	XBT-MDTD
	#4T-MDTD
	#1E-MDTD
CHRISTMAS DAY TOTAL DAY:	XBT-XMTD
	#4T-XMTD
	#1E-XMTD

VALID REPORT TYPES

INEFF	CAMA	BOTH
COMPANY ABBREVIATIONS		
NEW ENGLAND TEL. & TEL.		NET
NEW YORK TEL. CO.		NYT
NEW JERSEY BELL TEL. CO.		NJB
BELL TEL. CO. OF PENNA		PEN
CHESAPEAKE & POTOMAC TEL. CO's.		C&P
SOUTHERN BELL TEL. & TEL. CO.		SOU
SOUTH CENTRAL BELL TEL. CO.		SCB
OHIO BELL TEL. CO.		OBT
MICHIGAN BELL TEL. CO.		MBT
INDIANA BELL TEL. CO. INC.		IND
WISCONSIN TEL. CO.		WIS
ILLINOIS BELL TEL. CO.		ILL
NORTHWESTERN BELL TEL. CO.		NWB
SOUTHWESTERN BELL TEL. CO.		SWB
MOUNTAIN BELL		MTN
PACIFIC NORTHWEST BELL TEL. CO.		PNB
PACIFIC TEL. & TEL. CO.		PAC
SOUTHERN NEW ENGLAND TEL. CO.		SNE
CINCINNATI BELL INC.		CIN
BELL CANADA		CAN
LONG LINES DEPARTMENT		LLL
SPECIAL (NONSYSYEM)		NBS

Fig. 6—List of Valid Report Names, Valid Report Types, and Valid Company Abbreviations

applicable, it could be given as 4 NAP. This is a "shorthand" notation for NAP, NAP, NAP, NAP.

Correct Entering of IMA Data

3.09 In order to correctly enter IMA data, the following information must be provided in the IMA DATA section of the data tape:

(a) **Which report** is to be entered and is specified in a report declaration. The declaration has the form:

REPORT=report name (E)

(eg, REPORT=XBT-ABH)

Fig. 6 lists all valid report names.

(b) **Which item(s)** is to be entered and is specified in an item declaration. The declaration has the form:

ITEMS=items(s) (E)

(eg, ITEMS=1, ITEMS=2,8,9, or ITEMS=ALL)

(c) **The CLLI and number of days (or hours) for the machine report** are specified in a machine declaration. The number of days or hours **must** be the same for each item of a machine's report. The machine declaration has the form:

MACHINE=CLLI, days (or hours) (E)

(d) **The Values** are to be entered as specified in a **value declaration**. The value declaration has the form:

VALUES=value(s) (E)

For example, suppose that items 1, 2, 3, and 4 are to be entered for the machine SNAN TX CA 4AT. Data is for 15 hours.

ITEMS=1,2,3,4, (E)

MACHINE=SNAN TX CA 4AT,15 (E)

VALUES=510263,16823,73,2062 (E)

(These are actual lines as typed by the user.)

3.10 In order to enter the values correctly, it is necessary to associate them with the items, the machine, and the report name. The association is accomplished as follows:

(a) The report name specified in the report declaration indicates with **which** report the values are associated.

(b) The item numbers specified in the item declaration indicate **which** values from the worksheet are going to be entered.

(c) The CLLI specified in the machine declaration indicates with **which** machine the values are associated. A CLLI consists of four parts (town, state, building, and machine) separated by blanks.



Blank separation is required; it cannot be given as 11 contiguous characters.

(d) The values listed in the value declaration must appear in the same **order** as their associated item numbers. When ALL items are entered together, they are entered in the order 1, 2, 3, etc.

3.11 The end of the data tape must be indicated by the word END typed on a separate TTY line after the last value on the data tape. The following is a sample data tape for Mountain Bell:

IMA-MTN (E)

REPORT=XBT-ABH (E)

ITEMS=5,12 (E)

MACHINE=TCSN AZ MA 01T,19 (E)

VALUES=3251, NMS (E)

MACHINE=BOIS ID MA 01T,21 (E)

VALUES=100,504 (E)

REPORT=#4T-XMTD (E)

ITEM=1,2,6, (E)

MACHINE=CLSP CO MA 01T,18 (E)

VALUES=3 NAV (E)

END (E)

3.12 Since the entry of a list of items or a sequence of values can require more than one TTY line, the following rules must be observed:

- (a) A value or item number may *never* be split between two TTY lines.
- (b) The only place to split a line is *after* a comma (.). The words ITEMS and VALUES *are not* repeated on succeeding lines.

Preparation of Tape Trailer

3.13 At the end of the last data items to be entered, type END on a single line followed by carriage return and line feed. Then simultaneously depress the RUBOUT and REPT keys. Hold the REPT key down until approximately 2 inches of tape is produced. Tear off tape.

Error Comments Resulting From Improperly Prepared Data Tape

3.14 There are 18 possible error comments printed as the result of an improperly prepared data tape. These comments concern tape preparation and/or transmission and should not be confused with the advisory diagnostics described in 3.15. In each applicable case, the TTY line number where the error is found and the type of error is printed. (The TAPE IDENTIFIER is considered Line 1.) The ENTER transaction ignores the data associated with an error condition and continues analyzing the data tape. The error comments are listed in Fig. 3.

Diagnostic Messages Resulting From Improper Data Values

3.15 The computer will automatically check the data items of every VALUES statement before they are entered into the IMA data base. There are two kinds of diagnostic messages, serious and advisory. When a serious error is detected the computer will print out the serious diagnostic message, and *all the data items in the VALUES statement for that particular machine will be totally discarded*. However, when a nonserious diagnosis is detected, only an advisory message will be printed, but the data values for that

particular machine *will be* entered into the data base. In this situation, it is advisable to obtain a printout of the worksheet values as they appear on the computer using PRINT DATA request (see Part 6).

3.16 The serious and advisory data checking diagnosis messages are listed in Fig. 4 and 5, respectively.

4. COMMUNICATION WITH IMA PROGRAM

4.01 Logon Procedure From TTY Terminal:

- (a) Gain access to the AT&T VM/370 computer by dialing the proper telephone number.
- (b) Wait until the K button of the TTY lights up, then type the letter *S* (if the TTY operates at 10 Hz) or the letter *O* (for 30 Hz), followed by the RETURN key.
- (c) The computer will respond with the following lines:

VM/370 ONLINE

•

- (d) After the period (.) appears, on the same line type in:

LOGON *IMA REPORT aaaaaaaa (CR)

The "aaaaaaaa" denotes the user id and (CR) denotes depressing the RETURN key.

- (e) The computer will respond with the following line:

LOGON AT hh:mm:ss NYT weekday mm/dd/yy

CMS VER x.y MM/DD/YY

IMA DATA MANAGEMENT SYSTEM ENTERED

REQUEST

•

In the first line, hh:mm:ss is the time of day; NYT denotes the New York City time; weekday is the day of the week; and mm/dd/yy is the date.

The second and third lines can be ignored. The fourth line (REQUEST) and the period (.) on the fifth line are the prompts for an IMA REQUEST to be entered. At this point enter data, obtain reports, or access the news. Details on these procedures are contained in Parts 5 and 6.

4.02 *Terminating Communication With IMA:*

When each request is completed, the computer again responds with REQUEST. If there is no further request, type LOGOUT. The computer will respond with:

```
CONNECT=HH:MM:SS
```

```
VIRTCPU=xxx:xx.xx
```

```
TOTCPU=xxx:xx.xx
```

```
IOS=xxxxxxxx
```

```
LOGOFF AT hh=mm=ss NYT Weekday  
MM/DD/YY
```

Fig. 7 shows a sample session of accessing and terminating IMA.

```
S
VM/37Ø ONLINE SYS D

.LOGON *IMA REPORT XXXXXXXX
LOGON AT 11:Ø1:54 NYT FRIDAY 1Ø/25/74
CMS VERSION 2.6.1 1Ø/11/74
B DISK ACCESSED (192).
```

```
IMA DATA MANAGEMENT SYSTEM ENTERED
```

```
REQUEST
.LOGOUT
CONNECT= ØØ:ØØ:36 VIRTCPU= ØØØ:ØØ.75 TOTCPU= ØØØ:Ø2.33 IOS = ØØØØØ139
LOGOFF AT 11:Ø2:3Ø NYT FRIDAY 1Ø/25/74
```

5. ENTERING DATA

5.01 There are two methods for entering data, from paper tape or directly from the keyboard. Paper tape should be used for the bulk of the data. This keeps costs low. Entering directly from the keyboard is a convenience when correcting a few data items.

5.02 *Entering Tape Data:* Fig. 8 shows the method for entering data from tape. After the tape is completely read, wait for about 30 seconds until the computer responds with data-checking diagnostics.

5.03 *Entering Terminal Data:* Entering data from the keyboard is done on a line-by-line basis as in Fig. 9. Note that after the request ENTER TERMINAL DATA:GO, the computer prints LINE= for each line. The computer will check the data after each VALUES line is typed in. Then, if no serious error is detected, that line's data is entered into the IMA data base. The computer then again types LINE= to request another line. It will continue to accept input lines until a line with the single word END is entered. If the computer detects a mistyped or improper input line, it will give a diagnosis message, discard that input line, and ask that that line be reentered.

Fig. 7—Sample Session of Accessing and Terminating IMA

```
REQUEST
. ENTER TAPE DATA:GO
DASD 191 DEFINED 001 CYL
```

.....

```
TURN TAPE READER ON NOW.
AFTER TAPE IS READ, WAIT FOR AROUND 30 SECONDS .
BEFORE YOU WILL GET THE RESPONSE FROM COMPUTER
```

```
. IMA-IND
REPORT=XBT-ABH
ITEMS=ALL
MACHINE=EVVL IN 01 01T,22
VALUES=373722,2054,3033,32,497,74,4,112505,1341,16402,106,23,16,166269,
1673,197,273,0,0,1,0
MACHINE=SBND IN 01 01T,22
VALUES=534601,2669,3860,0,499,53,0,89443,375,8323,23,14,26,97295,784,
133,80,0,1,1,0
END
```

```
DATA CHECK FOR MACHINE=EVVL IN 01 01T
TOTAL NUMBER OF ADVISORY DIAGNOSTICS= 0
DATA HAVE BEEN ENTERED INTO MACHINE=EVVL IN 01 01T
```

```
DATA CHECK FOR MACHINE=SBND IN 01 01T
TOTAL NUMBER OF ADVISORY DIAGNOSTICS= 0
DATA HAVE BEEN ENTERED INTO MACHINE=SBND IN 01 01T
```

2 MACHINES DATA HAVE BEEN ENTERED FROM YOUR TAPE,
USE PRINT DATA COMMAND TO GET A COPY OF YOUR DATA FROM THE
COMPUTER, AND MAKE SURE THOSE ARE WHAT YOU WANT THEM TO BE

Fig. 8—Method for Entering Data From Tape

6. METHOD OF SPECIFYING A REQUEST

GENERAL

6.01 IMA requests are "English-like" sentences.

A colon (:) instead of a comma is used to separate phrases. (Sometimes a phrase is called a statement.) The first phrase of every request will always be a VERB statement. Most of the requests

end with the keyword GO. If the system uncovers an error in a request, the system will give a diagnostic and request the user to reenter only the phrase (or statement) in error, whenever possible. The correct phrases of the request are preserved.

6.02 Some requests will be too long for one TTY line. In such cases, as much of the request

REQUEST
 .ENTER TERMINAL DATA:GO

.....

LINE=
 .IMA-IND
 LINE=
 .REPORT=XBT-ABH
 LINE=
 .ITEMS=ALL
 LINE=
 .MACHINE=EVVL IN Ø1 Ø1T,22
 LINE=
 .VALUES=373722,2Ø54,3Ø22,32,497,74,4,1125Ø5,1341,164Ø2,1Ø6,23,16,166269,
 LINE=
 .1673,197,273,Ø,Ø,1,Ø

DATA CHECK FOR MACHINE=EVVL IN Ø1 Ø1T
 TOTAL NUMBER OF ADVISORY DIAGNOSTICS= Ø
 DATA HAS BEEN ENTERED INTO MACHINE=EVVL IN Ø1 Ø1T
 LINE=
 .END

END OF YOUR ENTER TERMINAL DATA SESSION, PLEASE USE
 THE PRINT DATA COMMAND TO GET A COPY OF YOUR DATA AND MAKE
 SURE THOSE DATA ARE WHAT YOU WANT TO BE

REQUEST

.

Fig. 9—Method for Entering Data From Terminal

as will fit conveniently on one TTY line should be typed, ending with a carriage return. Wait for the computer to type "MORE" before continuing to type the request.

6.03 There is no limit to the number of TTY lines which can be used to specify a request. However, two conventions must be adhered to

when splitting a request over more than one TTY line:

- (1) Never split a word over two lines.
- (2) Never end a TTY line with a colon (:).

6.04 An error in typing when communicating with the computer (but not when entering a tape)

may be corrected by typing the character "@".
Each @ will delete one previously typed character.
For example, if you type

PRIMT DATA

and at this point wish to correct it to

PRINT DATA

it is done by operating @ seven times to delete all seven characters back to and including the M, and then resume typing, ie,

PRIMT DATA@@@@@NT DATA

6.05 An entire line of typing may be deleted by typing the character "!" (exclamation mark) anytime before operation of the carriage return.

VALID REQUEST SPECIFICATIONS

The valid requests and their uses are discussed in 6.06 through 6.29.

ENTER Request

6.06 The ENTER request is used to enter data from paper tape or from the keyboard (terminal). Entered data is automatically checked. Data can be entered only for the user's own company. A typical transaction is given in Part 5 and Fig. 8 and 9. The form of the ENTER requests are:

ENTER TAPE DATA:GO

or ENTER TERMINAL DATA:GO

CHECK Request

6.07 At any time, the check request can be initiated, eg, suppose the check comments received on an earlier transaction were forgotten. It will check the data associated with all machines given in the request. A typical transaction is given in Fig. 10. The form of the CHECK request is:

CHECK DATA report-name:FOR co abbr:GO

or CHECK DATA report-name:FOR list of CLLI:GO

The "co abbr" denotes a company abbreviation (see Fig. 6).

Note: For all requests, the CLLIs in the list must be separated by commas. Each CLLI is a 14-character string (include the three imbedded blanks, xxxx xx xx xxx). For example, the request

CHECK DATA #4T-XMTD:FOR SNAN TX CA
4AT,HSTN TX HI 4AT:GO

checks the #4T type Christmas Day Total Day data for two machines, while

CHECK DATA #4T-XMTD:FOR SWB:GO

checks the data for all machines in Southwestern Bell.

PRINT REPORT Request

6.08 The PRINT REPORT request is used to obtain summaries of the basic data. The *report types* are:

- INEFF (Fig. 11)
- CAMA (Fig 12)
- BOTH (print both Fig. 11 and 12).

The form of the request is:

PRINT report-type report-name:FOR co or group
abbr:GO

or PRINT report-type report-name:FOR list of
CLLI:GO

For example,

PRINT INEFF XBT-ABH:FOR SNAN TX CA
4AT:GO

will generate the INEFF report for one machine, while

PRINT CAMA #4T-ABH:FOR SWB:GO

will generate the CAMA report for all No. 4 type machines in Southwestern Bell.

```

REQUEST
.CHECK DATA XBT-ABH: FOR IND:GO

10/25/74 TIME 11:04:41

DATA CHECK FOR MACHINE=EVVL IN 01 01T
TOTAL NUMBER OF ADVISORY DIAGNOSTICS= 0

DATA CHECK FOR MACHINE=SBND IN 01 01T
TOTAL NUMBER OF ADVISORY DIAGNOSTICS= 0

DATA CHECK FOR MACHINE=IPLS IN 01 01T
TOTAL NUMBER OF ADVISORY DIAGNOSTICS= 0

REQUEST
.
```

Fig. 10—Check Request Transaction—Typical

PRINT SYSTEM AVERAGE Request

6.09 During specified times each month the System averages associated with the applicable reports may be obtained. The form of the request is:

PRINT SYSTEM AVERAGE report-name:GO

6.10 An example of the System average report is shown in Fig. 13.

PRINT BASIC DATA Request

6.11 This request can be used at any time to produce a copy of the worksheet, as stored in the computer, for the machine specified. The form of the request is:

PRINT DATA report-name:FOR co abbr:GO

or PRINT DATA report-name:FOR list of CLLI:GO

6.12 An example of this request is shown in Fig. 14.

PRINT STATUS Requests

6.13 In the IMA data base, a machine can be in one of three statuses:

- Not Started—No data has been entered for the machine for this month.
- Started—Some data has been entered, but the machine is not yet completed.
- Completed—All machines are marked completed when the System averages have been calculated. Before that, all machines are considered not completed.

6.14 After a machine has been marked completed, no further data can be entered for that machine unless the AT&T IMA administrator is called to release the data for that machine.

6.15 The status of all machines of a company can be printed by use of the following statement:

PRINT status-type report-name:FOR co abbr:GO

The "status-type" is either NOT STARTED or STARTED.

FOR ALL IN COMPANY

REQUEST
 .PRINT INEFF XBT-ABH:FOR IND:GO

10/24/74 TIME 14:02:50

INDIANA BELL TELEPHONE COMPANY

CROSSBAR TANDEM SERVICE REPORT
 AVERAGE BUSY HOUR SEPTEMBER 1974

MACHINE NAME	PERCENT INEFFECTIVE MACHINE ATTEMPTS							PREV. TOTAL VCA	HI AND DRY
	ATTEMPTS HANDLED (000)	ROA	SOA	NCIT	NCTC	TOTL			
EVANSVILLE	24.2	0.3	0.1	0.0	0.0	0.4	NAV	0.5	0.0
SOUTH BEND	24.0	0.7	0.0	0.1	0.1	0.9	NAV	1.1	0.0
INDIANAPOLIS	26.1	0.9	0.0	NAP	1.4	2.3	NAV	0.8	0.0
COMPANY AVERAGE	24.8	0.6	0.0	0.0	0.5	1.2	NAV	0.8	0.0

ALL MACHINES FOR THE ABOVE REPORT ARE NOT FINAL

FOR INDIVIDUAL MACHINE

REQUEST
 .PRINT INEFF #4T-ABH:FOR OMAH NB DO 4AT:GO

02/06/75 TIME 14:32:18

NO. 4 TYPE SERVICE REPORT
 AVERAGE BUSY HOUR JANUARY 1975

COMPANY AND OFFICE	PERCENT INEFFECTIVE MACHINE ATTEMPTS						PREV. TOTAL VCA	OVFL FRA	
	TLF ATTEMPTS (000)	ROA	SOA	NCIT	FRA	TOTAL			
OMAHA	57.7	0.5	0.0	0.0	0.2	0.7	0.5	0.8	0.0

ALL MACHINES FOR THE ABOVE REPORT ARE NOT FINAL

Fig. 11—Print Report Request for INEFF—Example

REQUEST
 .PRINT CAMA XBT-ABH:FOR IND:GO

10/24/74 TIME 14:03:47

INDIANA BELL TELEPHONE COMPANY

CROSSBAR TANDEM SERVICE REPORT
 AVERAGE BUSY HOUR SEPTEMBER 1974

MACHINE NAME	CAMA PERFORMANCE									
	TRANSVTR		TRVTR		PERCENT		ICR		PERCENT	
	ATTEMPTS (000)	PC MCA	ION ATT. (000)	WRG CLG CD	NO POS ATCH	POS DIS- CON	CAMA ATT. (000)	SIGN	PERM DIGT	PART NSA
EVANSVILLE	4.6	1.1	0.8	0.7	0.5	1.0	6.5	1.1	0.1	0.1
SOUTH BEND	7.7	0.5	0.7	0.5	0.1	0.2	10.0	1.0	0.2	0.1
INDIANAPOLIS	NAP	NAV	NAP	NAV	NAV	NAV	NAP	NAV	NAV	NAV
COMPANY AVERAGE	6.1	0.8	0.8	0.6	0.3	0.6	8.3	1.1	0.1	0.1

ALL MACHINES FOR THE ABOVE REPORT ARE NOT FINAL

Fig. 12—Print Report Request for CAMA—Example

6.16 No machine list is necessary for this request. All machines in the company specified are checked and only those machines satisfying the status type requested are printed. A typical request is given in Fig. 15.

6.17 Other forms of the request are:

PRINT STATUS report-name:FOR co abbr:GO

PRINT STATUS report-name:FOR list of CLLI:GO

These forms print all statuses. A sample request for PRINT STATUS is shown in Fig. 15.

PRINT MACHINE Request

6.18 This request is used to obtain a list of the machines in any specified company or group. A typical transaction is given in Fig. 16. The form of the request is:

PRINT MACHINE machine-type:FOR co or group
 abbr:GO

REQUEST
 .PRINT SYSTEM AVERAGE XBT-ABH:GO

SYSTEM AVERAGE

AS OF 14:04:45 HRS ON 10/24/74

CROSSBAR TANDEM SERVICE RESULTS
 ABH SEPTEMBER 1974

**** PERCENT INEFFECTIVE MACHINE ATTEMPTS ****
 ATTEMPTS HI
 HANDLED PREV AND
 /000/ ROA SOA NCIT NCTC TOTL TOTL VCA DRY

* SYSTEM 17.0 0.7 0.0 0.1 0.3 1.0 NAV 0.6 0.0

CROSSBAR TANDEM SERVICE RESULTS
 ABH SEPTEMBER 1974

* * * * * CAMA PERFORMANCE * * * * *
 TRVTR ---PERCENT--- ICR
 TRANSVTR ONI WRG NO POS CAMA ----PERCENT----
 ATTEMPTS PC ATTS CLG POS DIS- ATTS PERM PART
 /000/ MCA /000/ CD ATCH CON /000/ SIGN DIGT NSA

* SYSTEM 5.0 0.8 1.7 0.8 0.4 0.4 6.3 0.8 0.2 0.2

Fig. 13—Print System Average Request—Example

The "machine-type" is XBT, #4T, or #1E.

has been entered and the System averages have been computed. The form of the request is:

PRINT RANK Request

PRINT RANK machine-type:GO

6.19 This request is used to obtain a shortened summary of the reported data. The print rank request will print a list of company names, the average percent of total ineffective attempts for each company, and the rank of each company in the System for the average busy hour report. This request will be valid only during the interval of the month which all data for the report specified

The "machine-type" again is XBT, #4T, or #1E.

6.20 Fig. 17 shows the request format for obtaining XBT company rankings.

REQUEST
 .PRINT DATA XBT-ABH:FOR IND:GO

XBT- ABH DATA FOR IND AS OF 10/24/74 14:05:52 HR

ITEM NO.	MACHINE	EVVL IN	SBND IN	IPLS IN
	NAME	Ø1 ØIT	Ø1 ØIT	Ø1 ØIT
1		555555	552891	600070
2		1821	3680	5223
3		2635	6301	4513
4		326	16	Ø
5		31	513	NAP
6		101	522	8283
7		15	Ø	Ø
8		106264	176525	NAP
9		1217	958	NAP
10		17686	17135	NAP
11		127	89	NAP
12		82	16	NAP
13		184	39	NAP
14		148608	230946	NAP
15		1689	2298	NAP
16		166	360	NAP
17		190	138	NAP
18		Ø	Ø	Ø
19		NAV	NAV	NAV
20		NAV	NAV	NAV
21		NAV	NAV	NAV
REPORTED DAYS		23	23	23

Fig. 14—Print Basic Data Request—Example

PRINT AVERAGE Request

6.20 This request is used to obtain the average (INEFF and CAMA) for all machines within a company or group. The form of the request is:

PRINT AVERAGE report-name:FOR co or group
 abbr:GO

6.21 An example of the use of this request is shown in Fig. 18.

PRINT COMBINED PERCENTAGE Request

6.22 This request combines the ineffective attempts of both #4T and XBT machines (ABH report only) and ranks companies according to their

REQUEST

.PRINT NOT STARTED STATUS XBT-ABH:FOR IND:GO

XBT-ABH NOT-STARTED STATUS
FOR IND AS OF 14:07:07 HRS ON 10/24/74

**** CLLI ****

TOTAL MACHINES NOT STARTED = 0

REQUEST

.PRINT STATUS XBT-ABH:FOR IND:GO

XBT-ABH STATUS FOR IND AS OF 14:07:53 HRS ON 10/24/74

***CLLI ***	LAST CHANGED	DATE COMPLETED
EVVL IN 01 01T	10/16/74	NOT COMPLETED
SBND IN 01 01T	10/ 0/74	NOT COMPLETED
IPLS IN 01 01T	4/ 0/74	NOT COMPLETED

TOTAL MACHINES SATISFYING REQUEST= 3

Fig. 15—Print Status Request—Typical

combined performance. The form of the request is:

PRINT COMBINED PERCENTAGE:GO

6.23 An example of this request is shown in Fig. 19.

PRINT SENDER DELAY Request

6.24 This request is used to print the number of days of sender delays reported on ABH report for a company or the entire System. The form of the request is:

PRINT SENDER DELAY:FOR co abbr:GO

or PRINT SENDER DELAY:FOR SYS:GO

6.25 Fig. 20 shows a sample of this request.

PRINT SADR Request

6.26 This request is used to print the sender delay report for the Christmas Day Total Day or the Mother's Day Total Day report. The form of the request is:

PRINT SADR:FOR co abbr:GO

or PRINT SADR:FOR SYS:GO

REQUEST
 .PRINT MACHINE XBT:FOR IND:GO

14:09:42 HRS ON 10/24/74

INDIANA BELL TELEPHONE COMPANY

	COMPANY	CLLI	MACHINE NAME
1	IND	EVVL IN 01 01T	EVANSVILLE
2	IND	SBND IN 01 01T	SOUTH BEND
3	IND	IPLS IN 01 01T	INDIANAPOLIS

REQUEST
 .PRINT MACHINE XBT:FOR XRP:GO

14:08:56 HRS ON 10/24/74

RP TANDEMS

	COMPANY	CLLI	MACHINE NAME
1	NBS	CHCG IL WB 01T	WABASH 1
2	NBS	CHCG IL FR 01T	FRANKLIN 1
3	MBT	DTRT MC BL BLT	BELL
4	MBT	DTRT MC MD TRT	TRINITY

Fig. 16—Print Machine Request Transaction—Typical

6.27 An example of this request is shown in Fig. 21.

6.29 An example of this request is shown in Fig. 22.

NEWS Request

6.28 This request is used to obtain any information from the IMA news. The form of the request is simply the word

NEWS

Review of Request

A list of all the requests a user may give is shown in Fig. 23.

REQUEST
 .PRINT RANK XBT:GO

XBT		RANKING FOR SYS	
		SEPTEMBER 1974	
RANK IN SYSTEM	COMPANY NAME	PERCENT INEF MACH ATTEMPTS	
1	NYT	0.6	
2	NJB	0.8	
	*SYS	0.9	
3	MBT	1.0	
4	ILL	1.1	
5	SWB	1.1	
6	MTN	1.2	
7	IND	1.2	
8	PAC	1.3	
9	NWB	1.3	
10	PEN	1.3	
11	NET	1.5	
12	SCB	1.8	
13	SOU	NAV	
14	WIS	NAV	
15	CAN	NAV	
16	C&P	NAV	
17	CIN	NAV	
18	SNE	NAV	
19	LLL	NAV	
20	PNB	NAV	
21	OBT	NAV	

Fig. 17—Print Rank Request—Format for Obtaining SBT Company Rankings—Example

MAINTENANCE OF IMA SYSTEM

6.30 When new machines are added to the System or when existing machines change administration,

the IMA data base must be updated. There are several utilities to do this; however, this can be done only by the AT&T Headquarters IMA administrator.

REQUEST
 .PRINT AVERAGE XBT-ABH:FOR IND:GO

10/24/74 TIME 14:11:20

INDIANA BELL TELEPHONE COMPANY

CROSSBAR TANDEM SERVICE REPORT
 AVERAGE BUSY HOUR SEPTEMBER 1974

MACHINE NAME	PERCENT INEFFECTIVE MACHINE ATTEMPTS							PREV. TOTAL	VCA	HI AND DRY
	ATTEMPTS HANDLED (000)	ROA	SOA	NCIT	NCTC	TOTL	NAV			
COMPANY AVERAGE	24.8	0.6	0.0	0.0	0.5	1.2	NAV	0.8	0.0	

ALL MACHINES FOR THE ABOVE REPORT ARE NOT FINAL

10/24/74 TIME 14:11:40

INDIANA BELL TELEPHONE COMPANY

CROSSBAR TANDEM SERVICE REPORT
 AVERAGE BUSY HOUR SEPTEMBER 1974

MACHINE NAME	CAMA PERFORMANCE									
	TRANSVTR ATTEMPTS (000)	ION PCATT.	WRG MCA (000)	NO CLG CD	PERCENT POS DIS- CON	ICR CAMA ATT. (000)	PERCENT PERM SIGN	PART DIGT	NSA	
COMPANY AVERAGE	6.1	0.8	0.8	0.6	0.3	0.6	8.3	1.1	0.1	0.1

ALL MACHINES FOR THE ABOVE REPORT ARE NOT FINAL

Fig. 18—Print Average Request—Example

REQUEST
 .PRINT COMBINED PERCENTAGES:GO

AS OF 14:23:56 ON 10/24/74

COMBINED PERCENTAGES
 SEPTEMBER 1974

	COMPANY	PERCENT INEFF	PEGCOUNT
1	NET	1.45	15809.
2	NYT	12.02	886028.
3	NJB	3.72	406808.
4	PEN	5.90	107922.
5	C&P	NAV	NAV
6	SOU	NAV	NAV
7	SCB	2.46	86116.
8	OBT	NAV	NAV
9	MBT	3.97	392656.
10	IND	1.62	81223.
11	WIS	0.62	13791.
12	ILL	8.79	249264.
13	NWB	3.39	47069.
14	SWB	3.81	810653.
15	MTN	3.37	92197.
16	PNB	NAV	NAV
17	PAC	7.36	506962.
18	SNE	NAV	NAV
19	CIN	NAV	NAV
20	CAN	NAV	NAV
21	LLL	NAV	NAV
	SYS	6.55	3696491.

BAR GRAPH RANKING FOLLOWS:

Fig. 19—Print Combined Percentage Request—Example

REQUEST
 .PRINT SENDER DELAY:FOR MTN:GO

Ø/24/74

SENDER DELAY FOR 9/74

MTN

XBT

MACHINE NAME	SADR MF	SADR DP	SADR CA	SADR OT
TCSN AZ MA Ø1T	Ø	NAV	NAV	NAV
BOIS ID MA Ø1T	Ø	NAV	NAV	NAV
BLNG MT MA Ø1T	Ø	NAV	NAV	NAV
ELPS TX MA Ø1T	Ø	NAV	NAV	NAV
GDJT CO MA Ø1T	Ø	NAV	NAV	NAV

#4T

PUBL CO MA Ø1T	Ø	NAV	NAV	NAV
CLSP CO MA Ø1T	Ø	NAV	NAV	NAV
CHYN WY MA Ø1T	Ø	NAV	NAV	NAV

Fig. 20—Print Sender Delay Request—Example

REQUEST

.PRINT SADR:FOR MTN:GO

MDTD

SADR

10/24/74

TIME 14:15:45 HRS.

MTN

MACHINE NAME	BASE	FAILURES	%
XBT			
TUCSON	-	-	NAV
BOISE	-	-	NAV
BILLINGS	-	-	NAV
EL PASO	-	-	NAV
GRAND JUNCTION	-	-	NAV
#4T			
PUEBLO	-	-	NAV
COLORADO SPRINGS	-	-	NAV
CHEYENNE	-	-	NAV

Fig. 21—Print SADR Request—Example

REQUEST
.NEWS

10/16/74 -- IMA NEWS FOLLOWS:

PRINTED INSTRUCTIONS ARE NOW AVAILABLE FOR #4T AND XBT IMA REPORTS AND HOW TO ENTER THEM INTO THE COMPUTER. COPIES ARE AUTOMATICALLY SENT TO ALL RECEIVING DFMP MATERIAL ON A 'STANDING ORDER' BASIS. IF YOU DO NOT RECEIVE DFMP'S ON STANDING ORDER OR IF YOU WISH ADDITIONAL COPIES OF THESE INSTRUCTIONS YOU MAY ORDER FROM:

WESTERN ELECTRIC CO., INC.
INDIANA PUBLICATIONS CENTER
P.O. BOX 26205
INDIANAPOLIS, INDIANA, 46226

THE ORDERING INFORMATION IS:

(QTY) DIAL FACILITIES MANAGEMENT PRACTICES
FOR XBT-----DIVISION H, SECTION 12-D-(3)
FOR #4T-----DIVISION H, SECTION 13-D-(3)
FOR COMPUTER
INSTRUCTIONS--DIVISION D, SECTION 3-A

REQUEST
.

Fig. 22—News Request—Example

1. ENTER $\left[\begin{array}{c} \text{TAPE} \\ \text{TERMINAL} \end{array} \right]$ DATA: GO
2. CHECK DATA report-name: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{grp abbr} \\ \text{list of CLLI} \end{array} \right]$: GO
3. PRINT $\left[\begin{array}{c} \text{INEFF} \\ \text{CAMA} \\ \text{BOTH} \end{array} \right]$ report-name: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{grp abbr} \\ \text{list of CLLI} \end{array} \right]$: GO
4. PRINT SYSTEM AVERAGE report-name: GO
5. PRINT DATA report-name: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{list of CLLI} \end{array} \right]$: GO
6. PRINT $\left[\begin{array}{c} \text{STARTED} \\ \text{NOT STARTED} \end{array} \right]$ STATUS report-name: FOR co abbr: GO
- 6'. PRINT STATUS report-name: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{list of CLLI} \end{array} \right]$: GO
7. PRINT MACHINE machine-type: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{grp abbr} \end{array} \right]$: GO
8. PRINT RANK machine-type: GO
9. PRINT AVERAGE report-name: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{grp abbr} \end{array} \right]$: GO
10. PRINT COMBINED PERCENTAGE: GO
11. PRINT SENDER DELAY: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{SYS} \end{array} \right]$: GO
12. PRINT SADR: FOR $\left[\begin{array}{c} \text{co abbr} \\ \text{SYS} \end{array} \right]$: GO
13. NEWS
14. LOGOUT

valid report-names: = XBT-ABH, XBT-XMTD, XBT-MDTD
 #4T-ABH, #4T-XMTD, #4T-MDTD
 #1E-ABH, #1E-XMTD, #1E-MDTD

valid machine names: = XBT, #4T, #1E

Fig. 23—List of All IMA Requests Used by Operating Companies