SERVICE OBSERVING

CONTENTS

1.0 GENERAL

1.01 This section describes the procedures to be used by the DDD Service Bureau in analyzing service observing results, and to establish methods to utilize the data with other information.

1.02 Service observations provide an indicator of equipment weakspots, but by ***themselves*** do not necessarily justify further extensive plant trouble investigations or routines.

1.03 A significant volume of observations must be taken to make the per cent "Blockage and Failure" figures meaningful.

1.04 Bureau personnel will be concerned with observation performance obtained from –

(1) Incoming Trunk Observing

(2) Outgoing Trunk Observing

(3) DDD Dial Line Observing

(4) Outward Toll (Switchboard) Observing

(5) Supplementary Observing

1.05 The point of attachment for the various types of observations is shown in Attachment #1.

1.06 HNPA results may indicate the DDD performance in a Bureau's prime area. H-FNPA results must be considered along with HNPA data to determine the quality of DDD service being furnished by a ***company*** to its customers.

1.07 As observed failures occur, (Incoming, Outgoing and DDD Dial Line) they are reported by the observer to the report receiving clerk in the DDD Bureau and to the maintenance forces of the observed machine.

1.08 The report receiving clerk places the information on a mark sense trouble ticket, which can then be merged and handled with operator trouble reports and other input data. They are also included in the monthly Bureau report of "Details of Reports and Traces." (See Section 010-401-012, Attachments #10 and #11)

1.09 The information reported will be limited to what is required to analyze machine, first link, and end office performance, and will conform to Traffic Observing Practices.

1.10 Observed machine summaries and end office performance summaries are furnished by the Data Processing Center as called for in the Traffic Observing Practices. These summaries are provided on an interim and monthly basis to the Network Analysis Bureau, and are used by the Bureau and Task Force personnel to analyze DDD performance and develop trouble patterns.

1.11 If a location is not using mark sense trouble tickets for reporting input data, it can arrange the observing data into the format which is used and this will allow inclusion with all other "reports of failures."

1.12 Current "Traffic Service Observing Practices" can be referred to when analyzing the details of the various types of service observing.

1.13 Traffic Service Observing Practices will also define eligible observing locations, quantities of observations required, and selection and placement of observing attachments.

1.14 All types of service observations which terminate in a company's territory should be analyzed to improve completion performance as measured by the AMA Billing Tape % Completion studies.

2.0 INCOMING TRUNK OBSERVING

2.01 Incoming trunk measurements are taken on trunks incoming to a toll switching machine. This insures that the calls measured will terminate (for the greater part) in the numbering plan area (NPA) served by that machine.

2.02 The results of the observations are expressed as the percent failure rate of total qualified observed attempts.

$$\%\ \text{EQUIPMENT}\ \textit{BLOCKAGES}\ \text{AND}\ \textit{FAILURES} = \frac{\textit{BLOCKAGES} + \textit{FAILURES}}{\textit{OBSERVED ATTEMPTS}} \times 100$$

BLOCKAGES = No Circuit and Reorder (NC-RO)
FAILURES = Equipment Irregularities (EQUIP. IRREGS)

2.03 Incoming trunk observations are conceded to be the best indicator of machine and end office performance, and consist of both customer and operator originated calls.

2.04 Observations at regional or sectional centers measure service on calls switched within the NPA and on calls forwarded to FNPAs. Observations at primary centers measure service to toll centers served within the NPA. Observing may be extended to class 4 offices if desired locally.

2.05 To insure that attempts observed remain in the regional, sectional or primary center involved, observations are taken on trunks from higher ranking machines or from trunks outside of the regional, sectional or primary center area.

3.0 OUTGOING TRUNK OBSERVATIONS

3.01 Outgoing trunk observations are taken on trunks handling CAMA and LAMA customer originated DDD traffic and will reflect service on calls terminating in HNPA, H-FNPA and FNPA.

3.02 The results of the observations are expressed as the percent failure rate of total qualified observed attempts.

$$\%\ \text{EQUIPMENT}\ \textit{BLOCKAGES}\ \text{AND}\ \textit{FAILURES} = \frac{\textit{BLOCKAGES + FAILURES}}{\textit{OBSERVED ATTEMPTS}} \times 100$$

3.03 These observations are good indicators of billing machine, toll switching and end office performance. Since they are outward DDD calls to the world, not all observations will terminate in the Company or NPA in which they are taken.

3.04 Under this measurement every attempt will be disposed as a completed call, busy number, don't answer, reached intercept correctly, or ineffective. Only ineffective attempts are scored as Equipment Blockages or Failures.

3.05 As with incoming trunk failures, the outgoing trunk failures are reported to the Bureau and machine supervisor as they occur. The Bureau merges the failures with other current data to broaden the base for analysis of billing office, 1st link and/or end office performance.

3.06 Since at least one additional switching machine and a AMA/CAMA trunk are included in the observed call the objective for completion performance is set lower than that for incoming trunk.

4.0 DDD DIAL LINE OBSERVATIONS

4.01 DDD dial line observations are taken on a random sample of customer lines. A complete written record of each attempt is made up to three subsequent attempts in cases where the initial attempt is ineffective. Accurate determination is made of the ineffective attempt failures, and the observation is terminated when the correct called number is reached.

4.02 These observations give the only overall measure of service from originating station to called station via the DDD network. Connection appraisal measurements are comparable in providing station to station data.

4.03 The results of the observations are expressed as the percent failure rate of total qualified observed attempts. The percent of ineffective attempts includes customer dialing irregularities (CDI). The remaining failures are expressed as –

$$\%\ \text{EQUIPMENT}\ \textit{BLOCKAGES}\ \text{AND}\ \textit{FAILURES} = \frac{\textit{BLOCKAGES + FAILURES}}{\textit{OBSERVED ATTEMPTS}} \times 100$$

4.04 DDD dial line observations do not have the volumes that other types of observations have, therefore the results may not indicate the real level of performance. Accumulation of these reports will help furnish a more reliable base.

4.05 The failures are reported to the machine supervisor and the DDD Bureau as they occur. They are merged with other failures to analyze end offices or machine irregularities (originating or terminating).

4.06 These observed calls are outward DDD. They are used to perform primarily originating analysis on the billing machine's toll switching machine's and first inter-toll link. They can also be analyzed for terminating end offices where the call remains in the HNPA or H-FNPA.

4.07 Since there is an originating office and a AMA/CAMA trunk included in the DDD dial line observed call, the objective completion performance is lower than either incoming or outgoing trunk observations.

5.0 OUTWARD TOLL OBSERVATIONS (SWITCHBOARD)

5.01 Outward toll observations are made on toll switchboard cord circuits and are primarily used to identify deviations from operating practices by Traffic personnel.

5.02 Failures ***are not*** reported to either maintenance forces or the DDD Bureau as they occur.

5.03 The results from each switchboard location are furnished to the Bureau and Task Force for analysis on a monthly report. The Bureau and Task Force use the data for analysis of weakspots, or as an aid to eliminate Traffic generated ineffective attempts from the network.

5.04 The data can be related to reorder trap results and used to reduce reorders and vacant code errors.

5.05 The results are primarily used as a reference when doing detailed ineffective call attempt analysis.

6.0 SUPPLEMENTARY OBSERVATION

6.01 Supplementary observations are performed by Traffic personnel at the request of the DDD Bureau or DDD Task Force.

6.02 No. 4 and No. 7 portable observing sets are available to obtain additional observations. They can be used with all types of facilities and methods of pulsing (DP-MF).

6.03 Supplementary observations are requested –

(1) To expand the base of observed call attempts

(2) Determine results of improvement efforts

(3) Get data on extended area service

(4) Hold forward and trace on intermittent troubles (release called station if reached).

(5) Assist in analysis of ineffective machine attempts.

(6) Isolate and sectionalize network problems.

(7) Observe the performance of a switching machine having little or no operator traffic switched through it.

SERVICE OBSERVING LOCATIONS