HANDLING CUSTOMER EXCHANGE SPECIAL SERVICE TROUBLE REPORTS BY CENTRALIZED SPECIAL SERVICE CENTER

1. GENERAL

1.01 This section covers the handling of trouble reports by the Centralized Special Service Center (CSSC).

1.02 This section is reissued due to adoption of the A.T.&T. CTRAP (Customer Trouble Report Analysis Plan). Changes are indicated by arrows.

1.03 The Centralized Special Service Center provides a means of expediting the handling of trouble reports on DATAPHONE, TWX, WATS, and Data Access Arrangements. The CSSC may assume full responsibility for any exchange special services assigned to them with approval of the General Plant Manager.

1.04 Exchange Special Services must be maintained in a manner which will reduce the out-of-service time to a minimum, exempting the customer from great expense and inconvenience. Each party involved must utilize all available testing capabilities in order to systematically gather the information required for trouble identification. Time consuming and costly actions such as dispatching repair forces, testing transmissions facilities, or actions by the customer or business machine representative, must not be attempted unless a careful analysis of available information and test results indicates that such efforts will clear the trouble.

2. DESCRIPTION

2.01 CSSCs are equipped with IN-WATS lines for customers to report trouble without being charged for the call. In addition, IFB lines are provided for local and WATS customers' trouble reporting.

2.02 The CSSC may be equipped with some or all of the following test equipment and testing arrangements.

(a) 904A or 904C Data Test Center (DTC) positions which are used to perform static tests of the customer's data set remotely without dispatching a craftsman to determine whether or not trouble exists in the data set. This quick reliable test, referred to as a LOOP-BACK test, provides a 90% level of confidence that the data set is working properly.

The 904A and C positions consist of electronic equipment used to transmit specific tones to a customer's data set. These tones activate circuitry in the data set, causing it to send back tones which indicate to the DTC positions that the data set is functioning properly. (BSP 668-100-100.)

NOTE: The 904A and 904C DTC positions are electronically identical. The 904A is cabinet mounted and the 904C is rack mounted.

(b) 904B or 904D DTC are positions which provide the means for making dynamic tests of the customer's Data Transmission System. In these tests, data signals are transmitted and received to simulate actual operation. Performing dynamic tests may require dispatching a telephone company employee equipped with the proper test equipment to the customer location.

The 904B and D DTC positions are equipped with electronic test equipment, data test sets, and data sets that are compatible with the ones to be tested. BSP 668-100-100.

NOTE: The 904B and D DTC positions are electrically identical. The 904B is cabinet mounted and the 904D is rack mounted.

(c) 904G or H DTC positions which are arranged for remote testing of DATAPHONE and other Teletypewriter stations. This includes the remote testing and monitoring of data sets 101, 103, 105, 108, and 113 type and teletypewriters of all standard codes and speeds up to 150 words per minute (WPM).

The 904G and H DTC postions are equipped with the necessary test equipment to allow the complete testing of a teletypewriter station, both teletypewriter and data set, without the need of dispatching a repairman. BSP 668-400-100.

NOTE: The 904G and H DTC positions are electrically identical. The 904G is cabinet mounted and the 904H is rack mounted.

(d) No. 3 test cabinet.

(e) Test lines to telephone and telegraph testboard.

(f) Test lines to WATS serving offices.

(g) Test lines to TWX serving offices.

(h) Other test equipment as it becomes available.

2.03 The CSSC must maintain line cards, circuit layouts cards and history card records of each customer's service served by the CSSC.

3. RECORDING REPORTS AND MEASURING SERVICE

3.01 Trouble reports are classified as customer trouble reports according to the class of service and shall be recorded on trouble ticket, Form SW-6911, as outlined in Section 660-100-018SW.

NOTE: It is not the responsibility or function of the CSSC to prepare Station Statistics. Station Statistics are counted and reported by the PSC where the equipment is located.

3.02 The "Customer Trouble Report Analysis Plan" as outlined in BSP 660-100-XXXSW will apply to trouble reports on special services described in paragraph 1.03

3.03 When a customer report is received in a Serving Test Center (STC) or Plant Service Center (PSC), the report shall be relayed to the responsible CSSC where it will be counted as a customer report. If the report was received in an STC, a Private Service Report, Form E-4220M, shall be prepared and coded as report class 3 (Information Only). If the report was received in a PSC, a trouble ticket, Form SW-6911, shall be prepared and classified as Category 3 - Customer - Received for Another Center (CUST-RAC).

3.04 When the CSSC receives a report direct from a customer or his representative, they will prepare a trouble ticket Form SW-6911. This report will be counted as (a) Category 1, Customer - Direct or (b)

Category 2, Customer - Relayed in accordance with Section 660-100-011.

3.05 Trouble Ticket Form SW-6911 is a standard, single-ply IBM card designed for direct optical readout into a computer data base. Refer to BSP 660-100-018SW for entries on Form SW-6911.

3.06 The Saber Card Reader (BSP 660-100-900SW) is used for transmittal of trouble ticket data to a remote computer which is programmed for the Mechanized Customer Trouble Report Analysis Plan (M-CTRAP).

3.07 The mechanized trouble ticket, properly completed and filed in the CSSC, and the line card are the customer's trouble history. These trouble tickets along with the information on the line cards provide a means to summarize and analyze trouble data.

3.08 The CSSC and/or DTC shall maintain a log record of all testing work. The log record information is to be inputed to the TECLOG computer via DATAPHONE Teletypewriter. Inputs should be made daily by all locations accumulating 8 or more entries per day; all other locations at least on a weekly basis. Description and operation of the TECLOG computer program is outlined in BSP 668-000-011. This program eliminates manual handling of information contained in log records and trouble tickets. It also provides for compilation, summarization, and analysis information on demand, from combined log entries.

3.09 The CSSC and/or DTC testing time charges are to be recorded as outlined in Accounting Practices V27.304 and V61.100, Part 102, Utilizing KCO 37899.

4. MAINTENANCE PLAN

4.01 The procedures outlined in this section provide a general systematic approach to locating troubles. It is intended that ingenuity, common sense, and the practical experiences of the personnel directly responsible for the service be coupled with general procedures. At any point in the procedures, facts may become apparent which definitely indicate the direction that the investigation should take, or, on close examination may reveal the source of the trouble. The Plan is intended to assist the CSSC, PSC, DTC and other investigators in developing and recognizing these facts.

4.02 It is essential that a clear understanding of the problem is obtained at the outset of the investigation. Thorough questioning of the customer along with an examination of all records should be accomplished early in the investigation.

4.03 From preliminary analysis, it should be possible to determine if more than one location is experiencing trouble , the type of trouble experienced, the time of occurence, and the particular days involved. If there are indications that one or more locations or components are causing the trouble , attention should be directed at these points initially.

4.04 The sequence of elimination of potential causes begins with the station equipment at the reporting customer location (near-end), continues with the station equipment to which the near-end customer was connected (far-end) and ends with the DDD network. Potential trouble causes fall into the following general areas:

(a) Business Machine Trouble

(b) Station Equipment Trouble (DATAPHONE DATA SET, TELEPHONE TALKING SET, TELETYPEWRITER, DATASPEED EQUIPMENT, etc.)

(c) Local Loop Trouble

(d) DDD Network Trouble

(e) Interexchange Facility Trouble

4.05 The following items are intended as a guide for the CSSC when discussing a trouble condition with a customer. The list is not a firm guide and the deletion or development of additional questions may be necessary. For example, some questions may not be applicable to specific modes of operation and, therefore, would not be used..

(a) Does the telephone portion of your circuit perform satisfactorily?

(b) Is there an extension phone on the data line?

(c) Is the AC power on?

(d) Are the persons operating the machines your regular operators and have they been trained?

(e) Has any change in your operation occurred? E.g., WATS lines, etc.

(f) Do calls go through an operator? If so, was the operator informed that it was a data call and advised not to monitor?

(g) What time of day is the trouble usually experienced?

(h) When do you normally transmit (time of day)?

(i) Are specific days involved?

(j) How often does the trouble occur?

(k) Has this trouble been experienced before? If so, what was the outcome?

(l) Any specific time of day that errors or trouble symptoms are unusually bad?

(m) When far-end originators, is the same trouble experienced?

(n) What is the name, location, and telephone number of party you were attempting to communicate with?

(o) Is the trouble in one direction or both directions of transmission on the same connection?

(p) What station or stations are experiencing trouble?

(q) Do you have trouble on calls to all stations?

(r) Have non-Telephone Company facilities and/or equipment been checked?

(s) Have the business machines been checked? Can the customer test the business machine?

(t) Have changes been made to business machines? (E.g., new equipment or modifications).

(u) What is the name of the business machine company and who is the representative in the customer's area?

(v) If noise is heard, describe it.

(w) Describe the trouble.

(x) Any other pertinent information considered necessary.

5. INVESTIGATING TROUBLE REPORTS

5.01 It is of utmost importance that all trouble reports be given special

handling in order to effect prompt restoration of service.

5.02 The exchange special service customer has been instructed to call the CSSC for assistance whenever transmission trouble is encountered. Each report must include the customer's telephone or circuit number and all pertinent information which will enable the CSSC to test and analyze the report. The CSSC will make tests to determine whether a station visit is warranted. If necessary to dispatch a craftsman the CSSC will request the PSC that serves the reporting customer to do so. The craftsman will work with the CSSC to clear equipment trouble at the station, or assist in making additional tests as required. He may request the PSC to test the local loop. The CSSC may request the assistance of the Network Service Center, Switching office , and Toll Testboard in clearing network transmission troubles.

5.03 If the cause of the trouble is evident, refer the trouble to the appropriate force for action. If the cause of the trouble is not evident, be sure the circuit is idle before making tests. It is important to remember that if the circuit is in service and in data mode, getting up on the circuit with a test selector in step-by-step offices, or no-test selectors in No. 1 and No. 5 Crossbar offices, may cause troubles ("Hits").

5.04 After service is restored to the customer, and the craftsman is released, the CSSC will close the report with the appropriate Disposition and Cause Code.

5.05 If analysis of the trouble report indicates that the trouble is in the DDD switching network the report should be referred to the home Network Service Center as outlined in BSP 660-100-013. If analysis of the trouble indicates that the trouble is in the far-end plant the report should be referred to the far-end PSC, DTC, or CSSC as outlined in BSP 660-100-013.

Referred-out trouble reports should not be closed out until the trouble has been corrected, the customer has been notified and the information has been recorded on the trouble ticket. The report should then be closed out as a referred-out (disposition code 10X).

NOTE: Enter appropriate subcode for "X" (Ref. Addendum 660-100-013SW)

5.06 When investigating DATAPHONE and Private Line Teletypewriter reports, ask the customer to check the teletypewriter in the LOCAL mode. If errors are reported, have a craftsman dispatched. To maintain customer goodwill, testing with the customer's personnel should be held to a minimum.

Precise station tests should be made with the craftsman. These tests should include:

(a) Measure actual distortion of signals received from the station.

(b) Measure actual level of incoming signals.

(c) Transmit distorted and undistorted signals to the station.

(d) Measure F1 and F2 marking and spacing frequencies.

(e) Monitor station signals where intermittent trouble persists.

6. GENERAL CSSC TESTING FUNCTIONS

6.01 The operation of the 904A and 904C DTC positions is described in BSP 668-100-500. These positions are designed for STATIC TESTING of data sets equipped with loop-back circuitry and requires customer assistance that consists of depressing a button and restoring the handset to an on-hook condition.

Testing of data sets not equipped with loop-back circuitry requires the assistance of a telephone employee (equipped with certain types of test sets) at the customer premises.

6.02 DYNAMIC TESTING of data sets can only be performed from a 904B or D DTC position and requires the assistance of a telephone employee (equipped with certain types of test sets) at the data station. The operation of the 904B and D DTC positions is described in BSP 668-100-501.

6.03 The 904G and H DTC positions are designed to test 3 or 4 row teletypewriters over a speed range from 60 to 150 WPM using all recognized telegraph codes. The 904G and H DTC positions provide the following features:

(a) Originate calls to a DATAPHONE teletypewriter station.

(b) Receive calls from a DATAPHONE teletypewriter station.

(c) Send predistorted test signals to a private line or DATAPHONE teletypewriter station.

(d) Insert additional attenuation in the transmission path to a private line or DATAPHONE teletypewriter station.

(e) Measure distoration of test signals from a private line or DATAPHONE teletypewriter station.

(f) Monitor teletypewriter signals passing in either direction over a communication path established between two private line or DATAPHONE teletypewriter stations or between 3-row 60-WPM and 4-row 100-WPM stations.

(g) Provide access to the data transmission path for level and frequency measurements.

(h) Originate or answer a telephone call.

The operation of the 904G and H DTC position is described in BSP 668-400-100.

6.04 Some Data Test Centers can also check the operation of customer's DATA SPEED Tape Senders and Tape Receivers and DATA SPEED magnetic Tape Terminals. Performance of these tests may or may not require the presence of a telephone employee on the customer's premises. The data set associated with DATA SPEED equipment can be checked on a loop-back basis from the CSSC.

6.05 Information concerning DTC coverage, telephone number, etc., can be obtained from BSP 660-002-010.

6.06 The No. 3 local test cabinet is designed to test outside plant facilities and operation of customer's central office line equipment. It also has low impedance monitoring capabilities.

6.07 The TWX and WATS test lines are provided for access to the serving office so tests of the customer's service can be made directly from the serving office to the customer.

6.08 Test lines to the toll telegraph and telephone testboards are provided so that private line data and telegraph services can be tested.