

# SWITCHED SERVICE NETWORKS

## ALL NETWORKS

### GENERAL NETWORK ANALYSIS

CONTENTS	PAGE	CONTENTS	PAGE
1. INTRODUCTION . . . . .	1	Report 54, Network Disposition Summary (Fig. 7) . . . . .	6
A. General . . . . .	1	C. PCO/SVB Analysis . . . . .	7
B. Terms . . . . .	3	4. SWITCHING RESULTS ANALYSIS . . . . .	7
2. INVENTORY . . . . .	3	A. General . . . . .	7
A. General . . . . .	3	B. Network Analysis . . . . .	8
B. Circuit Inventory . . . . .	3	Report 59, Network Switching Results . . . . .	8
Report 58 (Fig. 1) or Analysis Report E. (Fig. 2) . . . . .	4	C. Switching Machine Analysis . . . . .	8
Report 59, Transmission and Switching Inventory (Fig. 3) . . . . .	4	5. TRANSMISSION RESULTS ANALYSIS . . . . .	9
3. CUSTOMER SERVICE ANALYSIS . . . . .	4	A. General . . . . .	9
A. General . . . . .	4	B. Network Analysis . . . . .	9
SSS Trouble Ticket (Form E-6944) . . . . .	5	Report 59, Network Transmission Results . . . . .	9
Report 53, Network Results Summary (Fig. 4) and Report 52, Detailed Trouble Listing (Fig. 5) . . . . .	5	Report 44, SSS Transmission Monthly Report (Fig. 16) . . . . .	9
B. Network Analysis . . . . .	5	C. Individual Office Analysis . . . . .	9
Report 53, Network Results Summary . . . . .	5	6. RELATED BELL SYSTEM PRACTICES . . . . .	10
Report 55, Network Summary (Fig. 6) . . . . .	5	1. INTRODUCTION	
Report 52, Network Detailed Trouble Listing (Fig 5) . . . . .	6	A. General	
		1.01 This section describes the analysis procedures for Switched Service Networks (SSN). The	

#### NOTICE

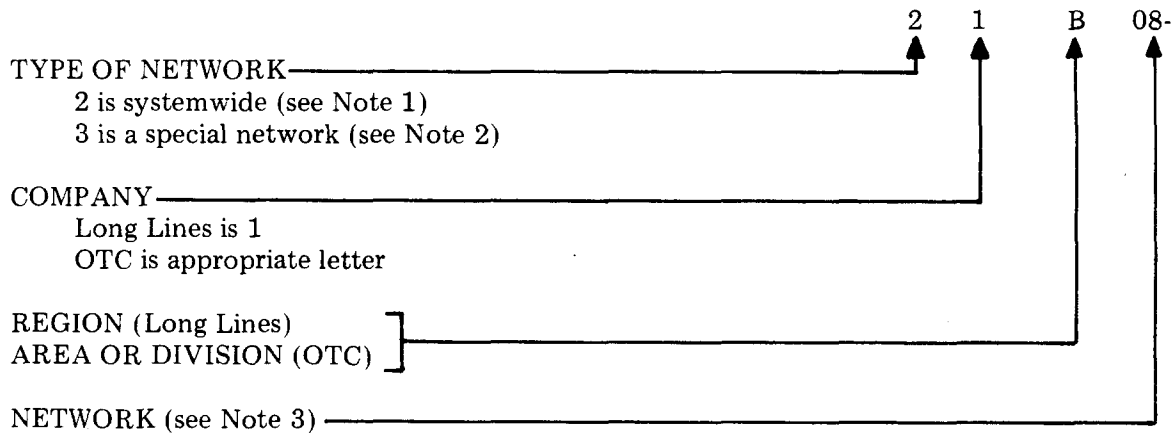
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## SECTION 309-100-005

purpose of this analysis is to identify and correct poor trends and weak spots. The general information in this section is applicable to Common Control Switching Arrangement (CCSA), Enhanced Private Switched Communications Service (EPSCS) and Electronic Tandem Networks (ETN). Specific data unique to each type network is covered in the associated section.

**1.02** Whenever this section is reissued the reason for reissue will be given in this paragraph.

**1.03** An SSN is identified by means of a network grouping identification (NGRPID) number. An example of the basic format for NGRPID's is:



Note 1. The 2 is required on all networks that will involve interstate analysis.

Note 2. The 3 may be used in addition to Note 1 for subnetwork or special analysis.

Note 3. The numbering for SSNs is specified as follows:

CCSA	01-45
EPSCS	63-46
ETN	901-999

The assignment of NGRPID is covered in the following sections:

- (a) CCSA — 309-200-007
- (b) EPSCS — 309-300-007
- (c) ETN — 309-400-007

**1.04** The NGRPID is used:

- (a) To group all activities for one SSN

- (b) To identify a specific SSN Operations Service Manager (OSM)

- (c) When completing Forms E—6948-1 through 5, Address Code Information Report, for input to the Data Processing Center (DPC).

**1.05** The following items are covered in this section:

- (a) Inventory Analysis
- (b) Customer Service Analysis

(c) Switching Results Analysis

(d) Transmission Results Analysis.

**1.06** A majority of the analysis consists of SSS Standard Reports (Table A) and Analysis plan outputs (Table B). For this reason before attempting any analysis, one should be familiar with Sections 660-225-106 and 660-225-107 covering these areas. The remainder of the analysis will be a manual combination of some SSS data with other information gathered from the network.

**1.07** The primary purpose of network results and analysis is to determine the quality of service provided the customer and ascertain what means are available to improve it. Emphasis should be placed on preventing or curing problem areas before they can have an appreciable effect on the customer's service.

## B. Terms

**1.08** The following terms have been abbreviated in this section:

ABBREVIATION	TERM
AVG	Average
CBN	Customer Billing Number
CCA	Customer Credit Allowance
CCSA	Common Control Switching Arrangement
CKT	Circuit
CLD	Customer Location District
COD	Central Office District
CPE	Customer Provided Equipment
CR	Customer Report
DPC	Data Processing Center
DPI	Data Processing Identification Code
DURTYM	Duration Time

LP	Local Plant
LPCTYM	Local Plant Clearing Time
MSC	Maintenance of Service Charge
NGRPID	Network Grouping Identification Code
PCO	Plant Control Office
RN	Referred In
RO	Referred Out
RPC	Report Class Code
SMN	Switching Machine Number
SSS	Special Services System
SVB	Serving Bureau
SVBTYM	Serving Bureau Duration Time
TRB	Trouble
TRBCDE	Trouble Code

## 2. INVENTORY

### A. General

**2.01** The initial step is to define the network. This is done through an inventory of the circuits in the network. Switching machine results should be inventoried for each switching machine number (SMN). Transmission results should be inventoried for each data processing identification (DPI) code. The network inventory must be established for each NGRPID as covered in Section 660-225-102. ***Any error in inventory will be directly reflected in the network results.***

### B. Circuit Inventory

**2.02** The person responsible for network analysis must inventory circuits by either customer billing number (CBN) or individual circuit number. The two methods should not be mixed. No circuit can be entered into a network inventory by any method until it has been properly inventoried by the PCO.

**2.03** When the CBN is used:

- (a) The input must include a class of service entry
- (b) Network inventories will be automatic from the PCO/SVB.
- (c) The network inventory per CBN must match exactly the PCO input.
- (d) Large networks will find this method easier.

**2.04** When the individual number is used, each change must be entered manually and the input should include the class of service entry.

**Report 58 (Fig. 1) or Analysis Report E (Fig. 2)**

**2.05** The SSS Network Inventory Report, Report 58 (Fig. 1), is a monthly detailed listing for the network. It is presently sorted by circuit number and may be difficult to use for large networks. The PCO inventory is the controlling factor in SSS inventory procedures and an inventory sorted by PCO is more useful when hunting inventory errors. This can be obtained by submitting an analysis request (E-6947 [Fig. 2]) per Section 660-225-107 for Report Type E. The inventory is then sorted by PCO and circuit.

**2.06** The SSS inventory printouts, Report 58 and Analysis Report E, should be compared to any existing records to determine inventory accuracy. When establishing a network inventory the following entries are of prime importance:

- (a) For SSS Network Inventory Report 58:
  - (1) Circuit Number (Column A)—All portions, prefix base and suffix, should be correct.
  - (2) SVB Entry (Column E)—This should be the correct DPI and there should be only one SVB in addition to the PCO.
  - (3) Serving Link Count (Column G)—On any SSN circuit there should not be more than two serving links inventoried.
  - (4) Customer Billing Number (Column L)—Errors could cause circuits to be omitted or included incorrectly.

(5) PCO Entry (Column N)—This should be the correct DPI for the PCO.

(b) For SSS Network Inventory Report 58 and Analysis Report E:

- (1) Intrastate-Interstate (Header)—The report provides separate categories for intrastate-interstate customer service results.
- (2) Class of Service (Header)—This is an inventory determining factor and a division in the customer service results.

The PCO is responsible for the accuracy of individual circuit inventory including CBNs. Any errors should be referred to the PCO for correction.

**2.07** There are other inventory entries on Report 58 that should be verified for accuracy. For example, the customer credit allowance (CCA) criteria must be correct if the customer is to receive proper rebates. If the customer provided equipment (CPE) is not correct, problems will arise with submitting maintenance of service charges (MSC). Any other inventory errors may distort the network results and make analysis more difficult.

**Report 59, Transmission Switching Inventory (Fig 3)**

**2.08** The SSS Network Switching and Transmission Report, Report 59 (Fig. 3), lists all the switching machine locations for a network. This report should be checked monthly to insure accuracy. Any change in location or DPI code must be coordinated through AT&T Headquarters (Section 309-XXX-007) to ensure they are included in the network results.

**2.09** If a location is not correctly inventoried in a network cross reference table, only customer service results will be provided. No switching and transmission results for that location will be included in the network summary.

**3. CUSTOMER SERVICE ANALYSIS**

**A. General**

**SSS Trouble Ticket (Form E-6944)**

**3.01** Customer service results are derived from SSS Trouble Ticket, E-6944, information

entered into the SSS computer. Missing or incorrect tickets will cause improper results. If there is more than one referred out-referred in ticket associated with a trouble, then all tickets must be accepted by the computer before any ticket is measured. It is important that all trouble tickets be entered daily or within one week of completion, to ensure accurate results plus proper CCA and MSC credit. The trouble ticket is covered in Section 660-225-104 and trouble reporting procedure in Section 309-XXX-004.

***Report 53, Network Results Summary (Fig. 4) and Report 52, Detailed Trouble Listing (Fig. 5)***

**3.02** Missing tickets should be tracked and steps taken to ensure all tickets are submitted. The Network Results Summary, Report 53 (Fig. 4), shows the total number of missing tickets for the network. The Detailed Trouble Listing, Report 52 (Fig. 5), indicates the individual missing tickets. These are end-of-report-month results and can only be used for follow up to ensure that missing tickets have been submitted.

**B. Network Analysis**

***Report 53, Network Results Summary***

**3.03** The Network Results Summary, Report 53 (Fig. 4), is covered in Section 660-225-106. It provides the customer service results for a network in two categories: intrastate and interstate. These are composed of indices for each class of service that may exist in the network. Each class of service index is broken into 3 main components: class 1 reports, class 2 reports, and duration time.

**3.04** Class 1 reports, which are found-troubles, comprise 35 percent of the combined index. On Report 53, two values are given for class 1 reports; total (Column C) and cases per 100 serving links (Column D). The value of Column D is used with Section 660-225-105 to obtain the component (Column E).

**3.05** Class 2 Reports, not-found-troubles, comprise 25 percent of the combined index. On Report 53, two values are given for class 2 reports, total (Column G) and cases per 100 serving links (Column H). The value in Column H is used with Section 660-225-105 to obtain the component (Column J).

**3.06** Duration time, measured in three categories, comprises 40 percent of the combined index. Each category is divided into total cases and average time per case. The categories are:

- (a) Referred out (RO)—Columns L and M
- (b) Serving Bureau (SVB)—Columns N and P
- (c) Local Plant (LP)—Column Q and R

The categories are combined on a direct basis using as the combining factor the percentage each category contributes to the total cases with outage time. This is explained in detail in Section 660-225-106.

**3.07** A quick check of the combined index (total of Column Z) and each of the categories given above, will give an indication of the area(s) which may be a current trouble spot or a weak trend. Each network management group should establish thresholds for these areas based on experience with their network. Any of the components that fail to meet these thresholds should be investigated on an individual SVB basis using the Network Summary, Report 55 (Fig. 6).

***Report 55, Network Summary (Fig. 6)***

**3.08** The numerical values on Report 55 are raw data rather than component indexes. If the thresholds are based on a component index value, then Section 660-225-105 should be used to convert these values to raw data thresholds. Using these raw data thresholds as a guide, scan the following columns on Report 55 to detect any entry exceeding threshold values:

- (a) Column F (Class 1 - Found)
- (b) Column G (Class 2 - Not Found)
- (c) Column J (RO Time)
- (d) Column L (SVB Time)
- (e) Column N (LP Time).

For large networks, it is better to mark all deviations distinctly and then consider them on an individual SVB basis.

**3.09** Class 1 and class 2 results are directly related to serving link inventory. Offices

with small inventories may be depicted to have worse results than ones with large serving link counts. The serving link total for each office is given in Report 55, Column E. Duration time is not inventory related and all offices should be weighed equally.

### **Report 52, Network Detailed Trouble Listing**

**3.10** When the deviations for the individual SVB's have been determined, investigation as to the cause should begin. The Network Detailed Trouble Listing, Report 52 (Fig. 5) may provide the information needed to explain the situation or direct contact with the SVB may be required. In using Report 52, the following areas should be checked.

- (a) Does the trouble code check with the plain English entry in the variable field? (The use of the plain English entry should be encouraged to aid analysis.)
- (b) Do the receive, refer and restore entries agree? (Often a single digit can be in error that could change a 5-minute outage into 24 hours and five minutes or worse.)
- (c) Does each RO ticket have a related RN ticket and vice versa?

An entry that seems unusual should be marked and verified with the SVB for accuracy.

**3.11** If there appears to be a problem related to a small group of SVB's or a single SVB, then a SSS Analysis, E-6947, may be submitted per Section 660-225-107. This is a request for a detailed trouble listing for up to 5 SVB's for further analysis. This is especially helpful in larger networks when Report 52 which is sorted by circuit number, may run over a hundred pages.

### **Report 54, Network Disposition Summary (Fig. 7)**

**3.12** The Network Disposition Summary Report 54 (Fig. 7) gives a breakdown of all trouble tickets by input, type and trouble disposition. This report will indicate which particular service (such as station equipment, local facilities, etc) may be causing difficulty.

**3.13** When more detailed information or a different format is required, Section 660-225-107 (SSS analysis system) describes the procedure to be used. Tally reports or detailed listings of trouble records may be requested by specific input and/or disposition codes. For example, in attempting to solve an index problem, it may be more helpful to look at a summary of only the measured tickets, report class 1 (CR) and class 2 (RN). Figure 8 (E-6947) is a tally request for all class 1 and class 2 reports (RPC) listed by trouble code (TRBCDE). This information is similar to Report 54 but is more specific due to the removal of all unmeasured tickets. This simplifies determining the causes of measured troubles. If a detailed listing of the individual troubles is required, the same request may be used except that report type (space 16) should be "C" for detailed listing rather than "A" for tally report. Figure 9 is an example of a tally report and Fig. 10 is a detailed listing (SVBTYM).

**3.14** The tally request, Report Type A, can be used with the various sub-parameters to do analysis for any report type or trouble code. With the use of special key words, the computer will do mathematical functions and report the results. Figure 11 is a request for the average duration time (AVG DURTYM) for all customer reports that were cleared as class 2, not found trouble (TRB). The same basic format can be used for local plant clearing time (LPTYM) or serving bureau time (SVBTYM).

**3.15** The customer dialing analysis (Report Type F) should be used on a regular basis to determine if any trouble patterns exist among the called/calling (VFI G) trouble tickets. Since these tickets are not written on a particular circuit this is the best way to study them. The Report F (Fig. 12) can be sorted by either called or calling number.) A sort by called number is most useful when looking for trouble patterns.

**3.16** The Report F will list all the called numbers numerically and all troubles to the same number will be grouped. The information given includes:

- (a) Reporting location
- (b) Report type
- (c) Trouble report

- (d) Date
- (e) Trouble and analysis codes.

Quite often this report will point out troubles in customer serving vehicles, facilities or common equipment that would not be apparent by other means.

**3.17** An additional analysis tool is the report type L. This report provides:

- (a) Percent availability—A measurement of how much of the network is available to the customer in a given time period.
- (b) Meantime to restore—The average time per trouble a network circuit is out of service.
- (c) Meantime between failures—The average length of time network circuits are available to the customer between ticketed trouble reports.

This report may be requested for a specific trouble code(s) to determine problem areas.

#### **C. PCO/SVB Analysis**

**3.18** The PCO/SVB must ensure that all circuits are inventoried completely and correctly. When adding new circuits, it is important to inventory promptly because trouble tickets will not be accepted until the circuit is inventoried. Inventory entries should be coordinated between the PCO and the SVB since the SVB inventory will not be accepted until the PCO inventory is on file.

**3.19** The same procedures used for network analysis may be applied to PCO/SVB analysis. Quite often the trends may not be as apparent due to the smaller data base. This requires more effort and the use of a longer time frame to build an effective data base. While the network analysis may be effective with only a month's data, the PCO/SVB may require up to 3 months data to develop clear trends. Due to the smaller data base, missing or incorrect tickets are more critical in PCO/SVB results and every effort should be made to get tickets in quickly and correctly.

**3.20** The standard PCO/SVB reports will be numbered differently from the network reports but the content and format are basically the same. The report numbers for the different

entities are shown below. These reports are covered in detail in Section 660-225-106. The same analysis procedure should be used by the PCO/SVB as are used by the networks.

- (a) Verify inventory (Report 18, 48)
- (b) Results summary (Report 13)
- (c) Organizational summary (Report 15)
- (d) Detailed trouble listing (Report 11, 12)
- (e) Disposition summary (Report 14)
- (f) Analysis request.

When the analysis person at the PCO/SVB looks at the customer's location district (CLD/COD) for further problem area detail, the procedure is similar to the network analysis person looking at the PCO/SVB.

**3.21** When using SSS analysis requests (E-6947), the person performing PCO analysis must use the proper PCO/SVB DPI entry in the main selection rather than the NGRPID entry. One PCO/SVB can request analysis of any of its serving CLD/COD data for its circuits.

**3.22** A permanent trouble record will be maintained for each circuit or circuit group by the PCO/SVB. This can be done by:

- (a) Using the trouble limiter on the inventory input and retaining any outputs received.
- (b) Requesting an analysis printout on a regular basis for any circuits exceeding a set trouble threshold.
- (c) Maintaining a history record card and manually entering trouble reports.

#### **4. SWITCHING RESULTS ANALYSIS**

##### **A. General**

**4.01** Network switching results are compiled from the data on the E-6946-B through F forms that are accepted by the SSS computer. These forms are covered in Section 660-225-102. Only the results from the switching machines that are

inventoried for a network will be included in that network.

**4.02** An accurate inventory of switching machines is necessary to obtain valid results. Network switching results will also be invalid if any switch fails to input its data on time. Therefore, the network analysis group should arrange to receive a copy of the information sent to the computer by the switch. When ADNet is used, this can be done by placing the address code of the network analysis group on the same message sent to the DPC. When DATAPHONE® is used, a separate transmission must be made to a DATAPHONE number provided by the network analysis group. The network analysis group can verify each message for accuracy and, as the deadline nears, contact any location that has not sent its data.

## B. Network Analysis

### *Report 59, Network Switching Results*

**4.03** The network switching portion of Report 59 (Fig. 3) displays the overall switching results for the network and each individual switching machine. The network results also include a combined index for each type of switch serving the network. These basic types are:

- (a) No. 1 Electronic Switching System (ESS) (2-wire)
- (b) No. 1 ESS (4-wire)
- (c) No. 5 Crossbar (2-wire and 4-wire)
- (d) Crossbar tandem
- (e) All others.

Each of these types is further divided into the basic component with an index for each component.

**4.04** The summary for each switch type indicates which components to highlight when going through each switch results in detail. Certain components turn up repeatedly for certain type switches (ie, stuck sender for No. 5 Crossbar, multi-frequency (MF) time-outs for 4-Wire #1ESS, etc). After going through the individual switch results on Report 59 and making the deviations from the threshold and weak spots, Report 59

results should be compared to the switching monthly reports to verify accuracy.

**4.05** There are report differences for each switch type. Report 41 (Fig. 13) is used with No. 5 crossbar, Report 42 (Fig. 14) is used with No. 1 ESS—4-wire and Report 43 (Fig. 15) is used with No. 1 ESS—2-wire and HILO 4-wire. These reports are flexible in the SSS and must be requested per Section 660-225-106 before the OSM will receive them. The switching reports show the actual input figures on Form E-6946 and the mathematical ratios used in computing the results.

**4.06** The first step in analysis should be to resolve any differences between the figures on E-6946, Reports 41, 42 and 43, and Report 59. These must be corrected before any further analysis is attempted. The sending location and the DPC should be contacted in order to verify the accuracy of the data. If the information on the E-6946 is incorrect (ie, transposition of digits) the computer will not reject it provided the format is correct.

**4.07** Unsatisfactory index components should be pursued with the individual switch or switches to analyse the causes and initiate corrective action. Certain problems may even result from external causes (ie, stuck senders or multifrequency time outs caused by carrier or a distant switch problem).

## C. Switching Machine Analysis

**4.08** Each individual switch should use its own Report 19 plus Reports 41, 42 or 43 as an analysis base. It should also utilize all other normal tools at its disposal to determine the cause of poor switching results. Good records are required to locate a fault that might appear intermittently. Each type of failure should be recorded to see if it repeats and develops into a pattern. A common point should emerge at the trouble location. The individual switching machines are covered by basic sections that will aid in determining index trouble areas. These sections are:

- (a) No. 5 Crossbar — 216-001-006
- (b) 2-wire No. 1 ESS — 231-001-005
- (c) 4-wire No. 1 ESS — 231-001-005



## 5. TRANSMISSION RESULTS ANALYSIS

### A. General

**5.01** Transmission results are comprised of three basic components:

- (a) Percent measured
- (b) Loss deviations
- (c) Noise deviations.

**5.02** The above results are calculated in two categories, trunks and access lines, and then combined for an overall value. The mathematical formula for computing the index is covered in Section 660-225-106. The transmission index is computed from information transmitted to the DPC on the E-6946-A form (see Section 660-225-102). The NGRPID, SMN and DPI must be assigned by AT&T Headquarters per Section 309-XXX-007 before results will be accepted for that network.

### B. Network Analysis

#### *Report 59, Network Transmission Results*

**5.03** The network transmission results are shown on the transmission portion of Report 59 (Fig. 3). It gives an index for the overall network and each office doing transmission tests. The basic index is divided into two categories: trunks and access lines. Each of these is further divided into loss and noise components.

**5.04** The loss component is comprised of three values:

- (a) Percent measured
- (b) Percent greater than 1.0 dB
- (c) Percent greater than 2.0 dB.

There is an immediate action limit of 3.0 dB.

**5.05** The noise component is comprised of two values:

- (a) Percent measured
- (b) Percent greater than limit.

**5.06** Percent measured is computed the same for both loss and noise and is based on a rolling three-month period. This is due to the base requirement to measure most circuits once each calendar quarter. The data for this computation is taken directly from Form E-6946-A, measurements required and measurements made for the current month and the two previous months. Loss and noise deviations are figured from the current month and only, if no measurements are required during the current month, the previous month's results will be used. If no E-6946-A input is received no results will be given.

#### *Report 44, SSS Transmission Monthly Report (Fig. 16)*

**5.07** SSS Transmission Monthly Report, Report 44 (Fig. 16), should be used for more transmission analysis detail as to individual performance. The first step in analysis should be to resolve differences between Report 44 and Form E-6946-A. This is a flexible report for network management and must be requested per Section 660-225-106, to be received. Report 44 gives the raw data received by the DPC from Form E-6946-A input.

**5.08** Transmission results should be looked at on a current month and a running trend basis. Poor results that recur on a quarterly basis may be due to a certain group of circuits that are measured at that time each quarter. Once a particular problem or trend has been identified, it should be investigated with the office(s) involved.

### C. Individual Office Analysis

**5.09** An individual office should use its Report 19 and 44 in the same manner as used in network analysis. E-6944 tickets should be maintained on routine tests to provide a permanent record for future analysis. When an unsatisfactory trend is discovered, a common point should be sought.

- Do the unsatisfactory circuits use a common carrier system, share common equipment, etc?
- Are facilities more likely to be affected by climatic extremes than other facilities?

Sometimes a revising of the test schedule can improve results. By distributing the work load

**SECTION 309-100-005**

over the full quarter, scheduling problems and missed measurements may be avoided.

**6. RELATED BELL SYSTEM PRACTICES**

**6.01** Detailed information on specific types of network analysis is provided in the following sections:

(a) CCSA — Section 309-200-005

(b) EPSCS — Section 309-300-005

(c) ETN — Section 309-400-005

**TABLE A****SSS STANDARD REPORTS**

TYPE	PRINT OUT NUMBER		
	SVB	PCO	NETWORK
Detailed Trouble Listing	11	12	52
Results Summaries	13	—	53
Disposition Summaries	14	—	54
Organizational Summaries	15	—	55
Inventory Reports	18	48	58
Switching and Transmission Summary	19	—	59

**TABLE B**  
**ANALYSIS PLAN OUTPUTS**

REPORT TYPE	DESCRIPTION
	<u>Tally Reports</u>
A	Tally from trouble file
D	Tally from inventory file (circuit tally)
H	Tally displayed by DPI
	<u>Listings</u>
B	Trouble listing from trouble file
C	Detail listing from trouble file
E	Circuit listing from inventory file
	<u>Summaries</u>
G	Trouble code summary
K	Input/output summary — same format as Report 14
	<u>Special</u>
F	Customer Dialing Analysis Report (Calling-Called)
I	Special index — same format as Report 13
J	Report class distribution by time of day
L	Meantime between outages, Meantime restored, percent availability of CKT.

REPORT 58  
RET. CODE

INTRASTATE  
CLASS OF SERVICE 05 SSN

**Fig. 1—Example of SSS Network Inventory Report 58**

660-225-107  
PLAN NO: 73E-6947  
(11-77)Special Services System  
Analysis Request

Request Period										1-16	
From			1 space	To			2 spaces	Rpt. Type			
Mo.	Day	Yr.		Mo.	Day	Yr.					
08	23	79		09	22	79		E	16	C.R. L.F.	
Main Selection										1-70	
+ NGRP ID = XXXXX -											
										70	CR LF
Reduction Parameters										1-70	
+ 1											
										70	CR LF
Sort Sequence										1-70	
+ PCOK											
										70	CR LF

Date Sent \_\_\_\_\_ Message No. \_\_\_\_\_

Fig. 2—Example of Analysis Request Form E-6947 for  
Report Type E

REPORT FOR xxxxx CUSTOMER  
PERIOD ENDING DATE

SPECIAL SERVICES SYSTEM  
NETWORK SWITCHING AND TRANSMISSION SUMMARY

PAGE

REPORT 59  
RET. CODE

----- TRANSMISSION -----					----- SWITCHING MACHINES -----																					
--- LOSS ---					--- NOISE ---																					
-- AL --		-- TRK --		-- AL --		-- TRK --																				
TOTAL	%MEAS	%MEAS	%MEAS	%MEAS																						
A. L.	%<0.7	%<1.0	%<LMT	%<LMT																						
TRKS	%<1.7	%<2.0			SWITCH																					
		#ALS		#TRKS		TOTAL																				
					2W#1ESS				NO 5 CROSSBAR				4W # 1 ESS				XBT		ALL							
TOTAL	T-RLS	INTER	TOTAL	STK-S	M-2TL	LK-RL	TOTAL	INTER	SW-FL	TOTAL	IN-SV	OTHER														
DISPD	T-2TL	AMA	T-RLS	BY-HR	M-PTS	CO-SV	OT-SV	TOTAL																		
IML	OV-FL	M-PTS	OT-SV	TOTAL																						

Fig. 3—Example of SSS Network Switching and  
Transmission Report 59

REPORT FOR xxxxx CUSTOMER  
PERIOD ENDING DATE

SPECIAL SERVICES SYSTEM  
NETWORK RESULTS SUMMARY

PAGE

REPORT 53  
RET. CODE

CLASS		SVNG		CLASS 1		WTD		CLASS 2		WTD		--- RO ---		--- SVB ---		--- LP ---		WTD	
SVC	LINK	%TOT	=	#/100	COMP	PTS	=	#/100	COMP	PTS	=	T/C	#	T/C	#	T/C	COMP	PTS	INDEX
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)	(L)	(M)	(N)	(P)	(Q)	(R)	(S)	(T)	(U)	
INTRASTATE																			
INTERSTATE																			
TOTAL																			
YEAR TO DATE PERFORMANCE						MONTH J F M A M J J A S O N D						SPECIAL SERVICES INDEX				COMP		WTD	
						BAND										INDEX	WTG	INDEX	
																(X)	(Y)	(Z)	
MISSING TICKETS												CLASS 1 TROUBLE REPORTS							
												CLASS 2 TROUBLE REPORTS							
												DURATION							
												COMBINED INDEX							

Fig. 4—Example of Network Results Summary Report 53

REPORT FOR xxxxx CUSTOMER  
PERIOD ENDING DATE

SPECIAL SERVICES SYSTEM  
NETWORK DETAIL TROUBLE LISTING

PAGE  
RET. REPORT 52  
CODE

CIRCUIT NUMBER	SVB	SEG	SVB FRM CLD W/RPT	SEG	SVB TO CLD W/TBL	RECEIVE DATE TIME	REFER DATE TIME	RESTORE DATE TIME	RPT TYP	TRBL CODE	A L	D P	DURATION SVB LP RO	C A	M C	P I	T P
INTERSTATE																	
CLASS OF SERVICE 05 SSN																	

Fig. 5—Example of Network Detail Trouble Listing  
Report 52

REPORT FOR xxxxx CUSTOMER  
PERIOD ENDING DATE

SPECIAL SERVICES SYSTEM  
NETWORK SUMMARY

PAGE  
RET. REPORT 55  
CODE

SVB/CLD	BAND	INDEX	SVNG	CLS 1	CLS 2	RO	SVB	LP	CR	RN	CPE	AVG				
A/B	C	D	LINK	#/100	#/100	#	T/C	#	T/C	#	T/C	#/100	#/100	#/100	DUR	% + 2
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
INTERSTATE																
CLASS OF SERVICE 05 SSN																

Fig. 6—Example of Network Summary Report 55

REPORT FOR xxxxx CUSTOMER  
PERIOD ENDING DATE

SPECIAL SERVICES SYSTEM  
NETWORK DISPOSITION SUMMARY

PAGE 0001

REPORT 54  
RET: CODE

CLASS 1 TROUBLE DISPOSITIONS

CLASS OF SVC	ST	PCA	LP CASES IT LF	TP	TOTAL	SVB	SVB CASES CA NPC	TOTAL	IS CASES	FC CASES	TOTAL
INTERSTATE											
05 SSN											

TOTAL CLASS 1

CLASS 2 TROUBLE DISPOSITIONS

CLASS OF SVC	TOK	FOK	SQ	ER	CC	TOTAL	INTRASTATE	CLASS OF SVC	TOK	FOK	SQ	ER	CC	TOTAL
05 SSN								INTERSTATE						
05 SSN														

TOTAL CLASS 2

OTHER TROUBLE DISPOSITIONS

CLASS OF SVC	INF	ACPE	UCPE	RO	TOTAL	INTRASTATE	CLASS OF SVC	INF	ACPE	UCPE	RO	TOTAL
05 SSN							INTERSTATE					
05 SSN												

TOTAL OTHER

REPORT TYPE INPUT

CLASS OF SVC	CR	RN	INF	AD	RLS	AST	TOTAL	CLASS OF SVC	CR	RN	INF	AD	RLS	AST	TOTAL
05 SSN								INTRASTATE							
01 SSTP								INTERSTATE							

Fig. 7—Example of Network Disposition Summary Report 54



660-225-107  
PLAN NO. 73

E-6947  
(11-77)

## Special Services System Analysis Request

OFFICE xxxxx CUSTOMER  
SPECIAL SERVICE SYSTEM  
ANALYSIS REPORT TYPE A      RECEIVED 06-19-79

PERIOD COVERED 04-23-79 TO 05-22-79

MAIN REPORT SELECTION  
+ NGRPID = xxxxx +

REDUCTION PARAMETERS  
+ RPC = (1, 2) +

## SORT SEQUENCE

REDUCTION  
KEYWORD CASES

RPC	=	
1		XXXX
2		XXX

TOTAL                    xxxx

TOTAL RECORDS DEFINED BY REDUCTION PARAMETERS = xxxx

END OF TRANSMISSION FOR    xxxx

**Fig. 9—Example of Tally Report**

Request Period										1-16
From			1 space	To			2 spaces	Rpt. Type		
Mo.	Day	Yr		Mo.	Day	Yr		A <sup>6</sup>	C.R. L.F.	
0	8	2		0	9	2		A	6	
<b>Main Selection</b>										1-70
+	WGRPID=XXXXXX-									
								70	CR LF	
<b>Reduction Parameters</b>										1-70
+	RPC=(1,2)<									
								70	CR LF	
<b>Sort Sequence</b>										1-70
+	1									
								70	CR LF	

Date Sent \_\_\_\_\_ Message No. \_\_\_\_\_

**Fig. 8—Example of Analysis Request Form E-6947 for Report Type A**

REPORT FOR xxxxx  
PROCESS DATE     DATE

SPECIAL SERVICES SYSTEM  
NETWORK DETAIL TROUBLE LISTING

REPORT 001  
PAGE

CIRCUIT NUMBER	SVB	SEG	SVB FRM		SEG	SVB TO		RECEIVE DATE TIME	REFER DATE TIME	RESTORE DATE TIME	RPT TYP	TRBL CODE	A D		DURATION				C	M	P	T
			CLD	W/RPT		CLD	W/TBL						N S	L P	SVB	LP	RO	A				

Fig. 10—Example of Network Detail Trouble Listing



REPORT FOR xxxxx OFFICE	SPECIAL SERVICES SYSTEM	REPORT 41
PERIOD ENDING DATE	#5 CROSSBAR MONTHLY REPORT	RET. CODE
SWITCHING PERFORMANCE		RATIO
DIAL TONE SPEED	PERFORMANCE	
STUCK SENDERS	FAILURES USAGE (TOTAL SENDER PEG COUNT)	
MARKER 2ND TRIAL	FAILURES USAGE (COMPLETING MARKER PEG COUNT)	
TRANSVERTER 2ND TRIAL	FAILURES USAGE (TRANSVERTER PEG COUNT)	
OFFICE OVERFLOW	FAILURES USAGE (BSY. HR. INC. PEG COUNT)	
LINK RELEASE	FAILURES USAGE (RECORDER PEG COUNT)	
IML	FAILURES USAGE (BSY. HR. INC. PEG COUNT)	
AMA RECORDER	FAILURES USAGE (RECORDER PEG COUNT)	
REPORT MONTH		

Fig. 13—Example of #5 Crossbar Monthly Report 41

REPORT FOR OFFICE	SPECIAL SERVICES SYSTEM	REPORT 42
PERIOD ENDING DATE	4W #1ESS MONTHLY REPORT	RET. CODE
SWITCHING PERFORMANCE		RATIO
MAINTENANCE INTERRUPTS		
DISCOUNT INTERRUPTS		
NET		
BASE		
SW FAILURES SW-FL		
BASE		
BSY. HR. TRANS TIME OUTS		
BSY. HR. TRANS ATTEMPTS		
BASE		
BSY. HR. MAINT USAGE		
BSY. HR. INSTALLED CAPACITY-CCS		
DISCOUNT MINUS POINTS		
TOTAL MINUS POINTS		
NET		
REPORT MONTH		

Fig. 14—Example of 4W #1 ESS Monthly Report 42

REPORT 43 FOR 1GU960 000  
 PERIOD ENDING 08/22/79 SPECIAL SERVICES SYSTEM  
 #1ESS 2W HILO 4W MONTHLY SUMMARY  
 SMN255 REPORT MONTH 08

-----INDICATOR-----	-----PERFORMANCE-----	-----THRESHOLD-----
RECEIVER ATTACHMENT DELAY		
RECORD PERFORMANCE /RADRP/	- NP	.20
HARDWARE LOST CALLS FAILURE	2007	
BASE /HDWLC/	640.9	3.13 22.00
MAINTENANCE INTERRUPTS FAILURES	157	
BASE /MTCEI/	640.9	0.24 .40
EMERGENCY ACTION UNPLANNED /EAUNP/	0	0 0
-----MEASURE COMPONENT-----		-----RATIO-----
DIAL TONE SPEED /DTSPD/		35.00
RECEIVER OVERFLOW FAILURES	0	
BASE /RC-OF/	114584	0.00
RESTORE VERIFY FAILURES		
BASE /RSV-F/	640-9	0.00
TRANSMITTER TIME-OUTS FAILURES	5072	
BASE /TR-TO/	522.9	9.70
OFFICE OVERFLOW FAILURES	----- NP	NP
BASE /OFC-O/	----- NP	----- NP
FCG AND SUPV FAILURES	1209	
BASE /FCG-S/	640.9	1.89
RECEIVER TIME-OUTS FAILURES	11316	
BASE /RC-TO/	613.2	18.45
NONSALVAGEABLE ENTRIES FAILURES		
BASE /NSE-F/	NE*	NE*

NOTICE

NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL SYSTEM  
 EXCEPT UNDER WRITTEN AGREEMENT.

\* Not equipped.

Fig. 15—Example of #1 ESS—2W and HILO 4W Monthly Report 43

REPORT FOR OFFICE  
PERIOD ENDING DATE

SPECIAL SERVICES SYSTEM  
TRANSMISSION MONTHLY REPORT

REPORT 44  
RET. CODE

ACCESS LINES

TRUNKS

NUMBER OF CONTROLLED CKTS

LOSS MEAS. REQ.

LOSS MEAS. MADE

MEAS. EXCEEDING 1.0 DB

MEAS. EXCEEDING 2.0 DB

NOISE MEAS. REQ.

NOISE MEAS. MADE

NOISE MEAS. EXCEEDING MTCE. LIMIT

REPORT MONTH

Fig. 16—Example of Transmission Monthly Report 44