JUNCTOR TRANSITION
ANALYSIS PROCEDURES
NETWORK ADMINISTRATION
NO. 1/1A "ESS*" SWITCHES

CONTENTS PAGE

Figures

1. GENERAL

1.01 This section provides procedures for network administrators to analyze junctor capacities and demands during No. 1/1A ESS switch network

* Trademark of Western Electric.

transitions. Also included are suggested corrective action procedures.

1.02 When this section is reissued, this paragraph will contain the reason for reissue.

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

1.04 An effective analysis will identify junctor capacity problems in advance. The benefits of knowing in advance that a junctor problem may exist are as follows:

(a) Corrective action can be planned to prevent service deterioration at the time of cutover.

(b) Corrective action can be accomplished in an orderly manner as the job progresses reducing the cost of unplanned corrective action.

1.05 Office additions may create service deterioration for the following reasons:

(a) When networks are added, junctors are rearranged into smaller groups to accommodate the new networks.

(b) Junctors are engineered assuming balanced networks during each phase of the transition. Extreme network imbalances will cause service deterioration.

1.06 Successful transitions require interdepartmental coordination, and a method of procedure (MOP). For additional information on these subjects, refer to Section 231-070-160.

1.07 The user of this section should be familiar with network and junctor organization. For a general description, refer to Section 231-070-320.

1.08 Refer to Section 231-070-325 for network transitions such as:

- B-Link Concentration Ratios
- Mixed Concentrator Ratios
- Loop Range Extension
- Trunk Link Network (TLN) Merging.

1.09 For Central Office Equipment Report (COER) report descriptions, refer to Section 231-070-555 and No. 1 ESS COER lessons.

1.10 For Central Office Equipment Engineering System (COEES) report descriptions, refer to Business Information System Practice (BISP) 754-150-114.

1.11 For related engineering capacity sections, refer to the following:

- 231-060-310, Line Link Networks, Engineering and Capacity Tables
- 231-060-320, Trunk Link Networks, Engineering and Capacity Tables
- 231-060-330, Junctors and Intraoffice Trunks, Engineering and Capacity Tables
- 231-060-340, Junctor Assignment Procedures, Engineering and Capacity Tables.

2. JUNCTOR ANALYSIS

A. General

2.01 A junctor analysis is performed for the following transitions:

- Gradual growth which provides for gradual line growth up to equipment exhaust.
- Rehome growth which provides for rehoming a large group of lines and uses the remaining capacity for gradual growth to exhaust.

2.02 The junctor types analyzed are as follows:

- Line-to-Line (LL) Junctor Plus Intraoffice (IAO) Trunks.
- Trunk-to-Trunk (TT) Junctor
- Line-to-Trunk (LT) Junctor.

2.03 A junctor analysis is composed of three parts:

(a) Part 1 is an analysis of the "total network" junctors to insure that demand will not exceed capacity at the exhaust date or rehome date (if applicable). This could occur if the load increased unexpectedly after the job was engineered.

(b) Part 2 is an analysis of the LL junctors plus IAO trunks in the existing network. A shortage of capacity could exist here if the trunk link network could not be turned up with sufficient IAO trunk capacity at the time of junctor installation.

(c) Part 3 is an analysis of each line-to-trunk and trunk-to-trunk junctor group in the "existing network" to insure that demand will not exceed capacity in any junctor group. This could occur in networks with entremely unbalanced loads.

B. Documents Required

2.04 Junctor analysis flowchart (Fig. 1) illustrates the flow of documents required for junctor analysis.

2.05 ***Junctor analysis must be performed by the network administrator as soon as the engineering documents are available, to allow maximum time for corrective action, if required.*** The traffic engineer provides the network administrator with the following junctor analysis documents:

- Junctor Assignment Program (JAP) report(s) (Fig. 2)
- Network Capacity Worksheet (Fig. 3)
- COEES NETCAP Report (Fig. 4)

2.06 Related documents that are provided by the traffic engineer are as follows:

- Traffic Order
- Service Check
- Junctor Data Summary
- Junctor Transition Report.

2.07 Junctor analysis documents available to the network administrator are as follows:

- COER Junctor Summary Report (Fig. 5)
- COER IAO Trunk Monthly Report (Fig. 6)
- Junctor Analysis Worksheet for an example (Fig. 7) and for duplication purposes (Fig. 8).

C. JAP Report

2.08 The JAP report (ESS 1709) lists the number of subgroups assigned to each junctor group in the proposed network. Identify subgroups associated with the "existing network" and "total network" on the JAP report. This identification will be useful when analyzing network junctor loads. Refer to Fig. 2 for an illustration of this identification.

2.09 Ensure that the correct issue of JAP is being used. Use some orderly method such as keeping each JAP printout and maintaining a log of each issue and installation dates. This can be done by tracking the "run number" which appears on every page of JAP input) and/or the issue number.

D. Network Capacity Worksheet

2.10 The network capacity worksheet (Fig. 3) is used to enter input data for the NETCAP report using the NETCAP function of COEES. Traffic engineering prepares the worksheet and enters the date into COEES. Major entries on the worksheet include the following:

- Junctor group sizes from the proposed JAP
- Network sizes and types plus junctor capacity and demand from the NETCAP report.
- Projected traffic data based on main station forecast and historical COER data.

2.11 Network administrators have an interest in the worksheet. They should:

- Confer with the traffic engineer on the traffic data entries to ensure it reflects the current projected loads.
- Receive a copy of the completed worksheet along with the NETCAP report to be familiar with the traffic characteristics that are reflected in the associated NETCAP report.

2.12 A description of the line entries on the worksheet (Form 6499) are as follows:

- Lines 1112 and 1113 describe the average busy season (ABS) projected traffic load being offered to the network. The data source is the COER machine load service summary (MLSS) reports.

- Lines 1114 and 1115 describe the network hardware quantities. The data source is the service check report or the traffic order.

- Lines 1116, 1117, and 1118 describe the junctoring as it appears on the JAP (1709 form). Average group size is entered with up to three decimal places for accuracy. On the worksheet example (Fig. 3, Line 1117) F-F, 7.666 LT average subgroup size is an average of the 7 and 8 LT subgroup sizes on the JAP report (Fig. 2, Sheet 1).

- Lines 1119 and 1120 are optional. If values are not entered, default values that are listed on the form are assumed.

2.13 For more information on the worksheet, refer to the following:

- BISP 759-150-124, Form 6499, Network Capacity Worksheet (description)

- BISP 759-190-649, Form 6499 (for the latest version of the worksheet).

E. COEES NETCAP Report

2.14 The network program of COEES calculates the capacity of a network configuration for a given office. During junctor rearrangements or job additions, it is used for capacity determination on the proposed network configurations. It provides ABS capacity and demand data which is used for junctor analysis.

2.15 Network Capacity Worksheet (Form 6499) provides the input to the network program. The output is the NETCAP report (Fig. 4).

2.16 Refer to BISP 759-150-114 for additional information and a sample of the latest version of the report.

F. COER Junctor Summary Report

2.17 The COER Junctor Summary Report (Fig. 5) provides average monthly demand for each junctor group in the existing network. The network administrator selects the appropriate monthly report to use for junctor analysis.

2.18 The monthly junctor report selected should be representative of the traffic load that will be carried by the "existing network junctors" on the Monday after cutover.

2.19 If the representative traffic load monthly report is difficult to identify, the data may have to be calculated for the Monday after cutover. This calculation would be based on last busy season data factored to reflect the junctor usage on the Monday after cutover.

G. COER IAO Trunk Report

2.20 The COER IAO Trunk Report (Fig. 6) provides average monthly IAO trunk demand for the existing network. Select the same month as used for the COER Junctor Summary Report (paragraphs 2.17, 2.18, and 2.19).

H. Junctor Analysis Worksheet

2.21 Junctors must be analyzed for the "total network" and the "existing network," consequently the worksheet is divided as follows:

(a) ***Part 1:*** The proposed "total network" capacity is compared to the proposed "total network" demand.

(b) ***Parts 2 and 3:*** The proposed "existing network" capacity is compared to the present "existing network" demand.

2.22 Use blank form (Fig. 8) for duplication purposes. Refer to Fig. 7 for an example of a prepared worksheet. Preparation instructions are provided in the following paragraphs.

Part 1 - Total Network

2.23 Enter the "total network" capacity and demand, expressed in hundred call seconds (CCS), for LL junctors plus IAO trunks, LT junctors, and TT junctors. The capacity and demand data source is the NETCAP report (Fig. 4, Sheet 1).

Part 2 - Existing Network (LL Junctor Plus IAO Trunk)

2.24 Enter the "existing network" capacity and demand for the LL junctors plus IAO trunks.

(a) Demand data source is the COER reports. The demand is calculated by adding the COER monthly LL junctor total demand (Fig. 5) to the

COER monthly IAO trunk demand (Fig. 6). In the example, the demand is LL 0 CCS plus IAO 6521 CCS which equals 6521 CCS.

(b) Capacity data source is the NETCAP report or the capacity tables. The capacity is calculated by adding the LL junctor capacity to the IAO trunk capacity.

(1) The LL junctor capacity is calculated by multiplying the number of "existing network" junctor groups on the JAP by the corresponding CCS/group on the NETCAP report (Fig. 4, Sheet 2).

(2) If all the IAO trunks are available to the existing network at the time the JAP is installed, the IAO trunk capacity source is the NETCAP report (Fig. 4, Sheet 2).

(3) If all the IAO trunks are not available to the existing network at the time the JAP is installed, the IAO trunk tables (Section 231-060-330) provide the capacity.

(4) In the example, LL junctors were not provided and all the IAO trunks would be available to the existing network at the time the JAP is installed with a capacity of 9548 CCS.

Part 3 - Existing Network (LT and TT Junctors)

2.25 Enter any "existing network" LT and TT junctor group whose demand exceeds capacity. Compare each junctor subgroup demand listed on the COER Junctor Summary Report (Fig. 5) with the capacity for that subgroup. The junctor subgroup capacity is determined as follows:

(a) Capacities for LT or TT junctor groups of one subgroup size per junctor type are obtained from the NETCAP report (Fig. 4, Sheet 2). In the JAP example, the TT junctors were one subgroup size per type and the NETCAP report subgroup capacities were: 2 subgroups (F-F) equal 576 CCS/SG, and 1 subgroup (F-S) equals 227 CCS/subgroup.

(b) Capacities for LT or TT junctor groups of two or more subgroup sizes per junctor type are obtained from capacity tables (Section 231-060-330). Data needed to enter the table such as TLN-trunk junctor ratio (TJR), TLN-SIZE, and TLN-% C-link occupancy are provided on the NETCAP report. In the JAP example, the LT junctors had two subgroup sizes and the capacities from the LT junctors (TJR = 1024 1:1, 0.50 OCC) capacity table were: 7 subgroups = 2603 CCS/SG, and 8 subgroups = 3147 CCS/subgroup.

Analysis and Remarks

2.26 Analyze parts 1, 2, and 3 using the following criteria:

- If junctor capacity exceeds demand, capacity is satisfactory.
- If junctor demand exceeds capacity, corrective action is required.

Enter appropriate remarks in the analysis portion.

3. CORRECTIVE ACTION PROCEDURES

A. Identification

3.01 Corrective action is required if the junctor demand will exceed junctor capacity in any junctor area of the switching network during the transition. The need for corrective action is identified on the junctor analysis worksheet.

B. Interdepartmental Coordination

3.02 If corrective action is required, interdepartmental coordination via a meeting may be necessary. In other cases, a phone call may be all that is needed. The interdepartmental members should include at least the following:

- Maintenance Engineering
- Traffic Engineering
- Central Office Maintenance
- Network Administration
- Equipment Engineering.

3.03 Possible corrective actions are as follows:

- Decreasing junctor load in the overloaded networks
- Increasing junctor capacity in the overloaded networks. Because this requires an interim

JAP, the need for it should be identified as early as possible.

C. Decreasing Junctor Load in the Overloaded Networks

3.04 The LT and TT junctor loads may be decreased in the overloaded TLNs by decreasing the number of trunks working in these networks. Trunks refer to service circuits, IAO trunks, and outgoing trunks. Decreasing junctor load requires close coordination with network maintenance and a close monitoring of the junctor group loads and service reports. To decrease the junctor load, apply the following actions:

(1) Activate sufficient available trunks in the underloaded TLNs to idle trunks in the overloaded TLNs.

(2) Transfer trunks from the overloaded to the underloaded TLNs if required. Attempt to select trunks that would normally have to be transferred at a later date.

(3) The junctor load may be restored by activating the idle trunks. The timing will depend on load balance conditions in the network. To identify the right time, monitor the COER network summary and Network Operation Report Generator (NORGEN) load service and exception reports.

3.05 Although the junctor load could be decreased in the old network by transferring lines to the new line link network (LLN), **trunk transfers are the preferred method.** One trunk transfer will shift more junctor load than four or more line transfers.

D. Increasing Junctor Capacity in the Overloaded Networks

3.06 The junctor capacity may be increased in overloaded networks by installing a transitional JAP. This transitional JAP must be designed to favor the overloaded networks by increasing their junctor group sizes. A corresponding reduction is required in the junctor group sizes of the underloaded networks.

3.07 Refer to Fig. 2, Sheet 2 for an example of a transitional JAP favoring LT junctors in the existing network. This JAP increases capacity in the existing network by increasing all the subgroup sizes to 8. The new network subgroup size is decreased proportionately.

3.08 Traffic engineering is responsible for preparing a transitional JAP. Network administration has the responsibility to assist traffic engineering in the estimation of load requirements. The need for a transitional JAP must be identified early.

3.09 Engineering may use the COER junctor transition engineering system to determine the transitional junctor redistributions required. The system produces a transition network report. This report may be used to analyze the transitional JAP.

3.10 After the interim JAP and the associated COER reports are received, prepare another junctor analysis worksheet to determine if the junctor capacity is satisfactory now.

3.11 The junctor capacity may be restored to normal by installing the final JAP at the appropriate time after the junctor load has been shifted. The timing will depend on load balance as indicated in the COER network summary and NORGEN load service and exception reports. This timing should be a joint traffic engineer/network administrator decision.

4. TRANSITION LINE ASSIGNMENT

4.01 Line assignment is performed in a normal manner, when possible, during transitions. Section 231-070-605 provides line assignment considerations. Section 231-070-740 provides load balance procedures.

4.02 However, additional care must be taken with line assignment during transitions because of changing conditions. Lines are assigned to network portions that vary in traffic load carrying capacity. The old LLN and new LLN may carry different size loads at cutover. The assignment policy may change during the transition.

5. POSTCUTOVER CONSIDERATIONS

A. Load Balance

5.01 Requirements for LLN load balance still apply on the day after cutover. However, immediate balance by line transfers may not be economically feasible. To overcome this problem, two loading divisions (parent and child) are permitted for the 6-month period after cutover. During this period, the major portion of line balance is achieved through line assignment. Line transfers are reserved for a final balance effort, if required. Care must be taken to spread heavy users by line transfers if not cared for by assignment. Refer to Section 231-070-740 for more information.

B. COER Office Description File Update

5.02 After the cutover is completed, the junctor data in the COER office description file (ODF) is updated. The ODF is updated from the "COER data input" portion of the COEES NETCAP report. Refer to Section 231-070-556 and No. 1 ESS COER lessons for more information on COER. Refer to BISP 759-130-114 for additional information on COEES reports.

C. Junctor Main Station Capacity

5.03 After cutover, update the COER junctor data base using the latest NETCAP (COER data input) report. For more information, refer to Section 231-070-556.

6. DOCUMENTATION REFERENCES

6.01 Refer to Section 780-100-022 for a complete list of recommended documents for the administration of a No. 1/1A ESS switch.

6.02 The following documents provide information in areas related to this section.

SECTION	SUBJECT
231-060-310	Line Link Networks—Engineering and Capacity Tables
231-060-320	Trunk Link Networks—Engineering and Capacity Tables
231-060-330	Junctors and Interoffice Trunks—Engineering and Capacity Tables
231-060-340	Junctor Assignment Procedures—Engineering and Capacity Tables
231-070-160	Transition Management—Method of Procedure
231-070-320	Networks and Junctors—Description
231-070-325	Network Transition—Considerations
231-070-555	COER—Administrative Guidelines
231-070-605	Line and Number—Assignment Considerations
231-070-740	Load Balance

OTHER DOCUMENTS	SUBJECT
BISP 759-150-114	System Functions and Outputs—No. 1/1A ESS Equipment (COEES)
BISP 759-150-124	Interpreting Input Data—No. 1/1A ESS Equipment (COEES Form 6499)
BISP 759-190-649	Input Worksheet—Form 6499 (COEES)

7. GLOSSARY

7.01 The following is a listing of acronyms used in this section.

ACRONYMS	ITEM
ABS	Average Busy Season
BISP	Bell Information System Practices
CCS	Hundred Call Seconds
COER	Central Office Engineering Report
COEES	Central Office Equipment Engineering System
JAP	Junctors Assignment Program
IAO	Intraoffice
LL	Line-to-Line
LLN	Line Link Network
LT	Line-to-Trunk
MLSS	Machine Load Service Summary

ACRONYMS	ITEM	ACRONYMS	ITEM
MOP	Method of Procedure	TJR	Trunk Junctor Ratio
NORGEN	Network Operation Report Generator	TLN	Trunk Link Network
		TT	Trunk-to-Trunk

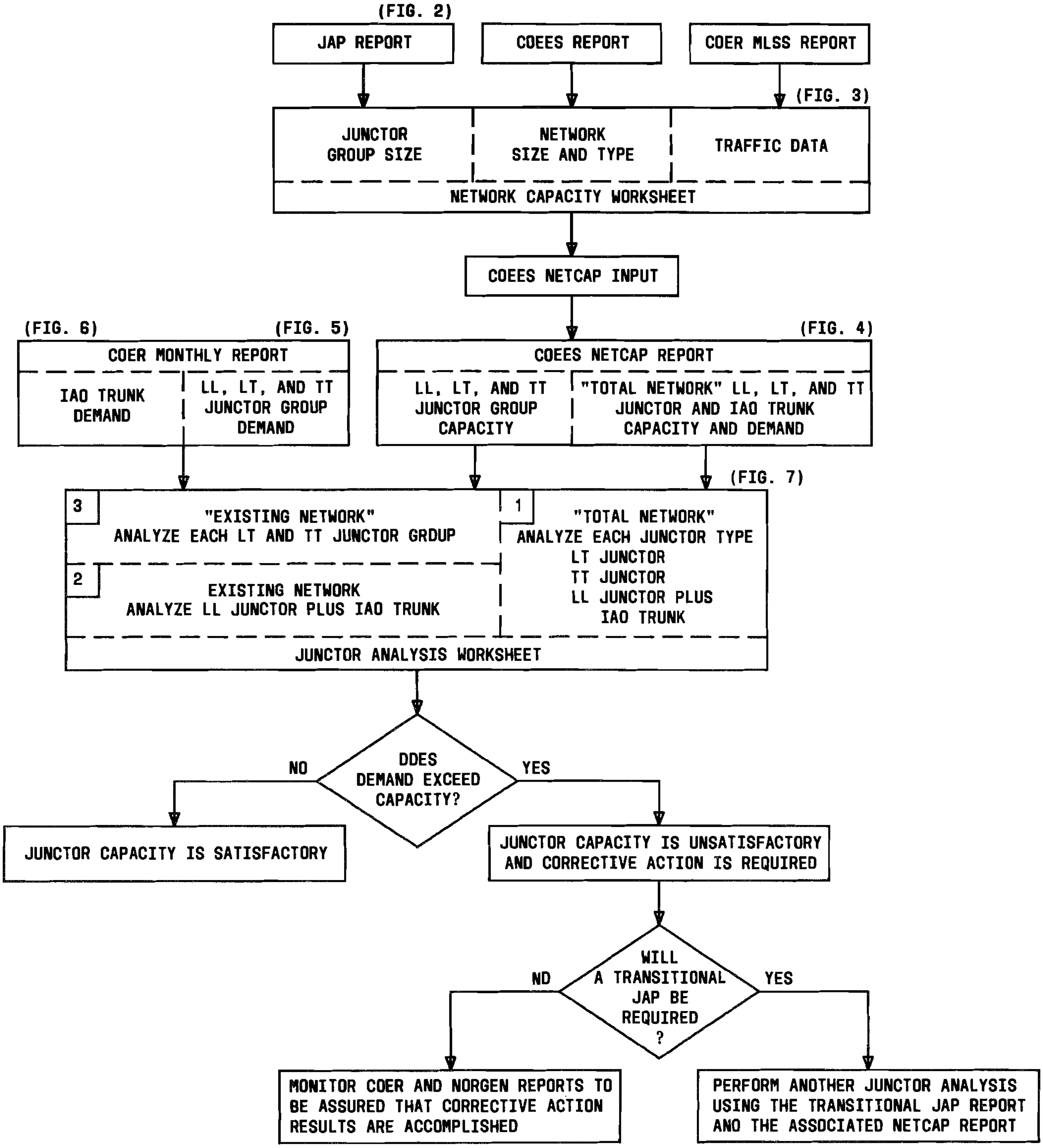

Fig. 1—Junctor Analysis Flowchart (2.04)

FINAL JAP

ESS RUN ORDER TEL BASE/CO

1709 JUNCTOR ASSIGNMENT PROGRAM ISSUE XX.X

SUMMARY OF THE PARAMETERS USED FOR THIS JUNCTOR ASSIGNMENT
7 LINE LINK NETWORKS (LLN)
7 TRUNK LINK NETWORKS (TLN) — 1024 TYPE.
0 JUNCTORS FRAMES (JF)

JUNCTOR SUBGROUPS ASSIGNED. ***LLN TO TLN***

	— EXISTING NETWORK —						NEW
NET	T00	T01	T02	T03	T04	T05	T06
L00	7	8	8	7	8	8	7
L01	8	7	8	8	7	8	8
L02	8	8	7	8	8	7	8
L03	7	8	8	7	8	8	7
L04	8	7	8	8	7	8	8
L05	8	8	7	8	8	7	8
L06	4	4	4	4	4	4	4
	— TOTAL NETWORK —						

JUNCTOR SUBGROUPS ASSIGNED. ***TLN TO TLN***

	— EXISTING NETWORK —						NEW
NET	T00	T01	T02	T03	T04	T05	T06
T00	1	2	2	2	2	2	2
T01	0	1	2	2	2	2	2
T02	0	0	1	2	2	2	2
T03	0	0	0	1	2	2	2
T04	0	0	0	0	1	2	2
T05	0	0	0	0	0	1	2
T06	0	0	0	0	0	0	1
	— TOTAL NETWORK —						

Fig. 2—Example of JAP Reports (Sheet 1 of 2) (2.05, 2.07, 2.11, 3.08, 3.11)

TRANSITIONAL JAP

ESS RUN ORDER TEL BASE/CO

1709 JUNCTOR ASSIGNMENT PROGRAM ISSUE XX.X

SUMMARY OF THE PARAMETERS USED FOR THIS JUNCTOR ASSIGNMENT
7 LINE LINK NETWORKS (LLN)
7 TRUNK LINK NETWORKS (TLN) — 1024 TYPE.
0 JUNCTORS FRAMES (JF)

JUNCTOR SUBGROUPS ASSIGNED. ***LLN TO TLN***

	— EXISTING NETWORK —						NEW
NET	T00	T01	T02	T03	T04	T05	T06
L00	8	8	8	8	8	8	5
L01	8	8	8	8	8	8	6
L02	8	8	8	8	8	8	6
L03	8	8	8	8	8	8	5
L04	8	8	8	8	8	8	6
L05	8	8	8	8	8	8	6
L06	4	4	4	4	4	4	4
	— TOTAL NETWORK —						

JUNCTOR SUBGROUPS ASSIGNED. ***TLN TO TLN***

	— EXISTING NETWORK —						NEW
NET	T00	T01	T02	T03	T04	T05	T06
T00	1	2	2	2	2	2	2
T01	0	1	2	2	2	2	2
T02	0	0	1	2	2	2	2
T03	0	0	0	1	2	2	2
T04	0	0	0	0	1	2	2
T05	0	0	0	0	0	1	2
T06	0	0	0	0	0	0	1
	— TOTAL NETWORK —						

Fig. 2—Example of JAP Reports (Sheet 2 of 2) (2.05, 2.07, 2.11, 3.08, 3.11)

759-190-649 BISP

CENTRAL OFFICE EQUIPMENT ENGINEERING SYSTEM

OCT 1982
FORM 6499 PG 1 OF 1

No. 1/1A ESS Network Capacity Worksheet for Local or Combined Local/Toll Office

NOTE
* - IN MARGIN DENOTES CHANGED LINES WITH THIS ISSUE

LINE NO.	NPA CODE	NNX	CLLI
1110	999	999	DOGWOOD

LINE NO.	Form Number
1111	6499

LINE NO.	HOST + RSS MAIN STATIONS	HOST + RSS LINE TERMS	HOST LLN CCS/MS	HOST + RSS LL CCS/MS	WORKING TRUNK TERMS	IAO TRUNKS	TANDEM CCS	% TTSCOI (8 ASSUMED)	% TTSCTDM (5 ASSUMED)
1112	25225	25225	3.13	.32	6225	332	0	8	5

LINE NO.	RSS MS	RSS VOICE CHANNELS	CHANNEL CCS/RSS MS
1113	0	0	0

LINE NO.	LJR RATIO X.XH OR XR	NUMBER OF FULL LLN'S	NUMBER OF FRACT LLN'S	LINE SW/FRACT. LLN	IS THIS A COMB LCL/ TOLL OFFICE (Y/N)
1114	4R	6	1	0	N

LINE NO.	TJR RATIO X.XX	1024 OR 2048 TLN	NUMBER OF FULL TLN'S	NUMBER OF FRACT. TLN'S	TRUNK SW/FRACT. TLN
1115	1.00	1024	7	0	0

LINE NO.	LINE TO LINE AVG SG/GRP				
	F – F	F – S	F – FR	FR – S	FR – FR
1116	0	0	0	0	0

LINE NO.	LINE TO TRUNK AVG SG/GRP			
	F – F	F – FR	FR – F	FR – FR
1117	7.666	0	4	0

LINE NO.	TRUNK TO TRUNK AVG SG/GRP				
	F – F	F – S	F – FR	FR – S	FR – FR
1118	2	1	0	0	0

LINE NO.	DEFAULTABLE RATIOS			
	TANDEM GROWTH TO MAIN STATION GROWTH (TMGR) (0 ASSUMED)	TLN PF IOHD TO ABS (1 ASSUMED)	TLN RAT AT O+T (1 ASSUMED)	IAO AT O+T BH TO IAO AT IAO BH (IAORAT) (1 ASSUMED)
1119	0	1	1	1

LINE NO.	TAN AT O+T BH TO TAN AT TAN BH (TANRAT) (1 ASSUMED)	% LINE FILL (LF) (95% ASSUMED)	% TRUNK FILL (TF) (95% ASSUMED)
1120	1	95	95

Fig. 3—Example of Network Capacity Worksheet (2.05, 2.09, 2.11)

GO NET CAP

ITEM	QUANTITY MTCE	QUANTITY TRAF	CCS CAPACITY	CCS DEMAND	MAIN STATIONS CAPACITY	MAIN STATIONS DEMAND	%TRAF CAP
LOAD RATIOS							
10HD PK FACTOR = 1.00					TLN TO O+T BH RAT = 1.00		
IAC:O+T BH RAT = 1.00					TAN:O+T BH RAT = 1.00		
LLN (IJR=4.0R, 24.00 ISW)							
FULL		6	14720 EACH				
FRACTIONAL (0/4)		1	0 EACH				
LOAD (CCS/M=3.13)			88320	78954	28217	25225	89
HOST ONLY (CCS/M=3.13)			88320	78954	28217	25225	
LN TERM (FILL = 95%)			23240LI	25225LI			109
HOST ONLY (M/L = 1.00)			23240LI	25225LI	23240	25225	109
TLN (TJR = 1.0, SIZE = 1024, %OCC=50, 28 TSW)							
FULL		7	18400 EACH				
FRACTIONAL (0/4)		0	0 EACH				
LOAD			128800	89003	36503	25225	69
TAN CCS (TMGR= 0.00)			0	0			0
TERMINALS (FILL = 95%)			6809TN	6889TN			101
JUNCTORS							
LL+IAO (ABS CCS/M= .32, LLN@ 40% OCC)			9029	8072	28217	25225	89
LT ABS (TLN@ 50% OCCS)			114254	78954	36503	25225	69
TT (TLN@ 50% OCC)			7270	5024	36503	25225	69

Fig. 4—Example of COEES NETCAP Report (Sheet 1 of 2) (2.05, 2.14, 2.20)

COER DATA INPUT

	F-F	F-S	FR-F	FR-S	FR-FR
LL SG/GRP	0.00	0.00	0.00	0.00	0.00
GROUP CCS	0	0	0	0	0

IAO TRUNKS = 332
IAO TRUNK CAP = 9548

	F-F	F-FR	FR-F	FR-FR
LT SG/GRP	7.67	0.00	4.00	0.00
LT CAP	2965	0	1001	0

	F-F	F-S	F-FR	FR-S	FR-FR
TT SG/GRP	2.00	1.00	0.00	0.00	0.00
TT CAP	576	227	0	0	0

REQUEST =

Fig. 4—Example of COEES NETCAP Report (Sheet 2 of 2) (2.05, 2.14, 2.20)

L—T JUNCTOR SUMMARY REPORT FOR HOUR ENDING 11:30
COMPONENT BUSY HOUR

03/23/1982 TO 04/16/1982 — 19 DAY (S) OF DATA

JUNCTORS	AVG CCS/DAY	NO. DAY FLAGGED	ENG CAP	% ENG CAP	ENG S—GP	TOP 10 RANK	INST S—GP
L 0 — T 0	1839						
L 0 — T 1	3300						
L 0 — T 2	1961						
L 0 — T 3	1860						
L 0 — T 4	1897						
L 0 — T 5	1886						
L 1 — T 0	1863						
L 1 — T 1	1902						
L 1 — T 2	1893						
L 1 — T 3	1904						
L 1 — T 4	1906						
L 1 — T 5	1912						
L 2 — T 0	1931						
L 2 — T 1	1933						
L 2 — T 2	1922						
L 2 — T 3	1954						
L 2 — T 4	1906						
L 2 — T 5	1937						
L 3 — T 0	1876						
L 3 — T 1	1901						
L 3 — T 2	1921						
L 3 — T 3	1910						
L 3 — T 4	1908						
L 3 — T 5	1890						
L 4 — T 0	1919						
L 4 — T 1	1952						
L 4 — T 2	1858						
L 4 — T 3	1894						
L 4 — T 4	1861						
L 4 — T 5	1923						
L 5 — T 0	1807						
L 5 — T 1	1903						
L 5 — T 2	1933						
L 5 — T 3	1932						
L 5 — T 4	1864						
L 5 — T 5	489						
TOTAL L—T	68447						

Fig. 5—Example of COER Junctor Summary Report (Sheet 1 of 2) (2.06, 2.16)

L—T JUNCTOR SUMMARY REPORT FOR HOUR ENDING 11:30
COMPONENT BUSY HOUR

03/23/1982 TO 04/16/1982 — 19 DAY (S) OF DATA

JUNCTORS	AVG CCS/DAY	NO. DAY FLAGGED	ENG CAP	% ENG CAP	ENG S—GP	TOP 10 RANK	INST S—GP
T 0 — T 0	120						
T 0 — T 1	240						
T 0 — T 2	248						
T 0 — T 3	240						
T 0 — T 4	241						
T 0 — T 5	243						
T 1 — T 1	118						
T 1 — T 2	242						
T 1 — T 3	215						
T 1 — T 4	219						
T 1 — T 5	213						
T 2 — T 2	121						
T 2 — T 3	229						
T 2 — T 4	218						
T 2 — T 5	216						
T 3 — T 3	102						
T 3 — T 4	211						
T 3 — T 5	210						
T 4 — T 4	108						
T 4 — T 5	211						
T 5 — T 5	230						
TOTAL T—T	4205						

Fig. 5—Example of COER Junctor Summary Report (Sheet 2 of 2) (2.06, 2.16)

NO. 1 ESS SERVICE CIRCUITS AND SPECIAL TRUNKS
DETAILED DATA FROM 08/21/1981 TO 09/20/1981
ALL COMPONENT HOURS

ITEM NO. 10: IAO TRUNK P <> 11:30

	PER STATION		USAGE		PEG	HT	OVF	CAP		CAP	OCC
	CCS	CALLS	TRFFC	MB	COUNT	SEC.	%	%	NCI	CCS	%
03/23/82			6401						296	8462	
03/24/82			6542						296	8462	
03/25/82			6499						296	8462	
03/26/82			.						.	.	
03/29/82			.						.	.	
03/30/82			.						.	.	
03/31/82			.						.	.	
04/01/82			.						.	.	
04/02/82			.						.	.	
04/06/82			.						.	.	
04/07/82			.						.	.	
04/08/82			.						.	.	
04/09/82			.						.	.	
04/12/82			.						.	.	
04/13/82			.						.	.	
04/14/82			6524						296	8462	
04/15/82			6620						296	8462	
04/16/82			6542						296	8462	
AVERAGE			6521						296	8462	

Fig. 6—Example of COER IAO Trunk Monthly Report

OFFICE ______________________ DATE ____________

JAP TO BE USED: RUN NUMBER____________ ISSUE NUMBER____________

1 TOTAL NETWORK

EACH JUNCTOR TYPE			ANALYZE REMARKS
TYPE	CAPACITY	DEMAND	
LL + IAO	9029	8072	Junctor capacity is satisfactory
LT	114254	78954	↓
TT	7270	5024	↓

2 EXISTING NETWORK

LL JUNCTOR PLUS IAO TRUNK			ANALYSIS REMARKS
TYPE	CAPACITY	DEMAND	
LL + IAO	9548	6521	Junctor capacity is satisfactory

3 EXISTING NETWORK

EACH LT AND TT JUNCTOR GROUP			ANALYZE REMARKS
GROUP NO.	CAPACITY	DEMAND	
20-T1	3147	3300	This group requires monitoring
			And the removal of excess demand
T5-T5	227	230	This group requires monitoring

Fig. 7—Example of Junctor Analysis Worksheet (2.06, 2.19, 2.20)

OFFICE ______________________ DATE ____________

JAP TO BE USED: RUN NUMBER____________ ISSUE NUMBER____________

1	TOTAL NETWORK		
EACH JUNCTOR TYPE			ANALYZE REMARKS
TYPE	CAPACITY	DEMAND	
LL + IAO			
LT			
TT			

2	EXISTING NETWORK		
LL JUNCTOR PLUS IAO TRUNK			ANALYSIS REMARKS
TYPE	CAPACITY	DEMAND	
LL + IAO			

3	EXISTING NETWORK		
EACH LT AND TT JUNCTOR GROUP			ANALYZE REMARKS
GROUP NO.	CAPACITY	DEMAND	

Fig. 8—Junctor Analysis Worksheet (2.06, 2.19, 2.20)