

NTP 297-3601-456

DMS-10 Family

# **600-Series Generics**

## Operational Measurements

08.01

For Generic 602.20 Standard August 2006

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**NORTEL**



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# **600-Series Generics**

## Operational Measurements

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# Section 1: Introduction

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## Scope and purpose of this publication

The DMS-10 switch operational measurement (OPM) system is used to monitor system performance and level of service. The OPM system is entirely software-controlled and requires no external equipment.

The purpose of the OPM system is to assist DMS-10 switch administration and maintenance activities in:

- day-to-day system performance calculation, including switch load and performance and facilities load and performance
- plant maintenance programs, which can be scheduled, on the basis of OPM data, during periods of low equipment use
- traffic studies (for cost separation)
- facilities planning, to determine the quantity of equipment required to maintain a level of service (for example, the number of trunks in a trunk group)
- traffic studies on individual line and trunk circuits

This NTP describes the OPM system in terms of the registers for which statistics are collected and scheduling for both data accumulation and data printout:

- Section 2, “Operational Measurements for EADAS,” contains descriptions of the EADAS data blocks, presented in the order in which they appear on the EADAS output.
- Section 3, “Data Flow,” describes the accumulation, storage, and printing out of the OPM data.

- Section 4, “Measurement Blocks,” provides a sample printout of each OPM data block and a description of each of the registers within the data block. Flow charts are provided for selected new or significantly affected measurement blocks showing the sequence of events that cause the measurement block registers to be incremented and the relationship between the registers within the block. The flow charts appear immediately following the description of the measurement block registers. Three symbols are used in the flow charts:



indicates a yes/no decision



indicates an activity



indicates that a register is incremented

- Section 5 describes how OPM reports are generated. The section also includes the prompting sequences used to manipulate OPM data.

### Terminology

The following terms apply to call types as they are used in the description of OPM registers:

- *originating call*-a call initiated on a subscriber line served by the office being considered
- *incoming call*-a call originating in another office and terminating to a subscriber line served by the office being considered
- *terminating call*-a call completed to a subscriber line served by the office being considered
- *outgoing call*-a call routed to an outgoing trunk group
- *revertive call*-a call originating and terminating on the same multiparty line

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## Section 2: Operational measurements for EADAS

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### EADAS

The No.1A Engineering and Administration Data Acquisition System (EADAS) is a centralized Operations Support System (OSS) that is used to collect traffic and performance measurements from several switching systems by way of unidirectional, dedicated data links. EADAS measurements are acquired in the DMS-10 switch as part of operational measurement (OPM) blocks provided by the OPM System. The measurements include standard traffic and performance data as well as maintenance and validity data. Specifically, the EADAS measurements record:

- network maintenance usage
- trunk maintenance usage
- receiver maintenance usage
- validity (reliability of data)
- idle system real time

As scheduled in overlay CNFG (SYS) (see NTP 297-3401-311, *Data Modification Manual*), the DMS-10 switch formats and then transmits the data to EADAS over a dedicated data link (Serial Data Interface (SDI)). A-message data may be transmitted either every half-hour or hourly on the hour; D-message data may be transmitted daily (at 2 a.m.), hourly on the hour, or hourly on the half-hour. At EADAS, the data are processed, printed, and relayed to network terminals in operations centers.

### Cluster applications

In a Cluster configuration, each Satellite Switching Office (SSO) transmits its EADAS data to the host (Host Switching Office (HSO) or Large Cluster Controller (LCC)) using a Data Link Controller (DLC) data link. The data from up to 17 offices (one HSO and 16 SSOs) are then transmitted from the host to EADAS.

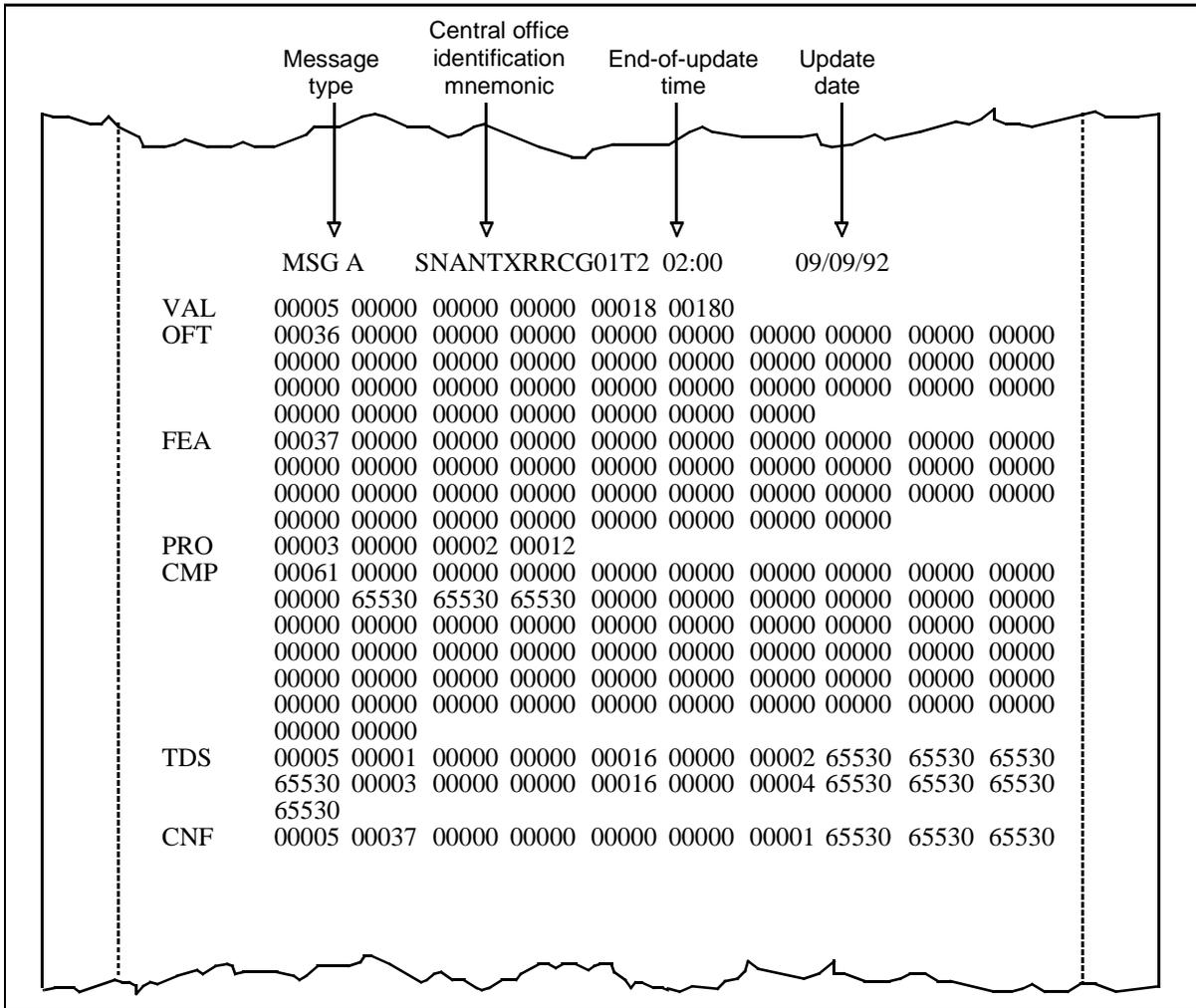
2-2 Operational measurements for EADAS

The EADAS reports for the host and for each SSO are available immediately following the end of the designated data collection intervals. HSO and SSO EADAS report compilation, however, occurs independently. The host, for example, can compile its EADAS report every hour even if an SSO is compiling its EADAS report every half-hour.

**Print out format**

In an EADAS printout, as shown in Figure 2-1, the beginning of each section is identified by the appropriate three-letter label (for example, VAL). Lines begin with six spaces and finish with an EOL notation. Data consists of key words, followed by one or more data lines of up to ten five-digit blocks. Entries for unused fields are given a value of 65530, indicating they are not implemented. Fields containing values that exceed the EADAS maximum, 65525, are given a value of 65526.

**Figure 2-1: EADAS measurement block printout format example**



### Interface pack and peripheral loop group identification (DMS-10 Classic network)

Tables 2-A, 2-B, 2-C and 2-D list the group identification numbers for Conference, DS-30A Interface, Multiplex Loop Interface (MLI), and Tone and Digit Sender packs and for peripheral loops.

<b>Table 2-A: Group identification assignments for components in CE-01 bay shelf 5 network group 0</b>								
Component Function	Pack Position							
	9	11	12	13	14	15	16	17
Conference Pack	-	03	04	82	-	-	-	-
DS-30A and MLI Pack	-	-	-	82	73	64	55	46
Tone and Digit Sender Pack	03	04	-	-	-	-	-	-
Peripheral Loop	-	-	-	83	74	65	56	47
				90	81	72	63	54

<b>Table 2-B: Group identification assignments for components in CE-01 bay shelf 4 network group 0</b>								
Component Function	Pack Position							
	9	11	12	13	14	15	16	17
Conference Pack	-	01	02	37	-	-	-	-
DS-30A and MLI Pack	-	-	-	37	28	19	10	01
Tone and Digit Sender Pack	01	02	-	-	-	-	-	-
Peripheral Loop	-	-	-	38	29	20	11	02
				45	36	27	18	09

<b>Table 2-C: Group identification assignments for components in CE-01 bay shelf 3 network group 1</b>								
Component Function	Pack Position							
	9	11	12	13	14	15	16	17
Conference Pack	-	07	08	127	-	-	-	-
DS-30A and MLI Pack	-	-	-	127	118	109	100	91
Tone and Digit Sender Pack	07	08	-	-	-	-	-	-
Peripheral Loop	-	-	-	128	119	110	101	92
				135	126	117	108	99

<b>Table 2-D: Group identification assignments for components in CE-01 bay shelf 2 network group 1</b>								
Component Function	Pack Position							
	9	11	12	13	14	15	16	17
Conference Pack	-	05	06	172	-	-	-	-
DS-30A and MLI Pack	-	-	-	172	163	154	145	136
Tone and Digit Sender Pack	05	06	-	-	-	-	-	-
Peripheral Loop	-	-	-	173	164	155	146	137
				180	171	162	153	144

**Interface pack and peripheral loop group identification (DMS-10EN network)**

Tables 2-E, and 2-F list the group identification numbers for 8T04 packs (MLI or D3A application), GTS circuits, and for peripheral loops. If a pack is assigned as an MLI, the MLI block will have the appropriate count while the DSA block will show 65530. If a pack is assigned as a D3A, the DSA block will have the appropriate counts and the MLI block will show 65530.

<b>Table 2-E: Group identification assignments for components in CE-01 bay shelf 4</b>					
Component Function	Pack Position				
	12	14	16	18	20
8T04 (MLI or D3A)	133	100	67	34	1
GTS	1	2	3	4	5
Peripheral Loop	134	101	68	35	2
	165	132	99	66	33

<b>Table 2-F: Group identification assignments for components in CE-01 bay shelf 5</b>					
Component Function	Pack Position				
	12	14	16	18	20
8T04 (MLI or D3A)	298	265	232	199	166
GTS	6	7	8	9	10
Peripheral Loop	299	266	233	200	167
	330	297	264	231	198

## Print out explanation

The following pages contain explanations of the EADAS data blocks, presented in the order in which they appear on the EADAS report. Each explanation consists of introductory information and a table that contains a brief explanation of the section fields within each data block. Each field number corresponds to a five-digit field in the data block. For example, field 1 in the VAL data block, which is 00005, is the first five-digit field. Refer to Figure 2-1 for a printout example.

A more detailed explanation of each field is in the section entitled “Measurement blocks.” Refer to the OPM block listed in the OPM Block Cross Reference column and use the data block mnemonic to locate the detailed explanation. “NA” in the OPM Block Cross Reference column indicates that the detailed explanation is in the table.

## Validity Measurements (VAL)

Table 2-G explains the fields of the Validity Measurements data block. This data block is formatted at each 30- or 60-min. interval and at each 24-hr interval. The 24-hr message consists of only a Validity Measurement and a Division of Revenue Measurement.

<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00005	NA
2	Line Load Control (LLC) not activated or any number of LLC activations	NA
3	No system initializations or any number of system initializations	NA
4	Number of times the system intentionally did not conduct a scan (always 00000)	NA
5	Number of 100-s scans	NA
6	Number of 10-s scans	NA

## Office Totals Measurements (OFT)

Office Totals are measurements taken of the overall traffic load and various originating service parameters. Table 2-H explains the fields of the Office Totals Measurements data block.

<b>Table 2-H: Office Totals Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00051	NA
2	Originating Terminating (ORTM) Peg Count	TRAF (OPM001)
3	Originating Terminating (ORTM) Blockage	TRAF (OPM001)
4	Originating Terminating (ORTM) Usage	TRAF (OPM001)
5	Originating Outgoing (OROG) Peg Count	TRAF (OPM001)
6	Originating Outgoing (OROG) Blockage	TRAF (OPM001)
7	Originating Outgoing (OROG) Usage	TRAF (OPM001)
8	Originating Non-Completing (ORNC) Peg Count	TRAF (OPM001)
9	Revertive (RVRT) Peg Count	TRAF (OPM001)
10	Revertive (RVRT) Usage	TRAF (OPM001)
11	Incoming Terminating (INTM) Peg Count	TRAF (OPM001)
12	Incoming Terminating (INTM) Blockage	TRAF (OPM001)
13	Incoming Terminating (INTM) Usage	TRAF (OPM001)
14	Incoming Outgoing (INOG) Peg Count	TRAF (OPM001)
15	Incoming Outgoing (INOG) Blockage	TRAF (OPM001)
16	Incoming Outgoing (INOG) Usage	TRAF (OPM001)
17	Incoming Non-completing (INNC) Peg Count	TRAF (OPM001)
18	Originating Permanent Signal (PSIG) Peg Count	OSVC (OPM002)
19	Originating Partial Dial Timeout (PDTO) Peg Count	OSVC (OPM002)
20	Originating Partial Dial Abandon (PABN) Peg Count	OSVC (OPM002)
21	Originating False Start (FSTR) Peg Count	OSVC (OPM002)
22	Originating Digitone Call (DGTC) Peg Count	OSVC (OPM002)
23	Originating Dial Pulse Calls (DPC) Peg Count	OSVC (OPM002)
24	Originating Total Calls (TOTC) Peg Count	OSVC (OPM002)
25	Originating Digitone Dial Tone Speed (DGTS) Percent	OSVC (OPM002)
26	Originating Dial Pulse Dial Tone Speed (DPS) Percent	OSVC (OPM002)
27	Originating Total Dial Tone Speed (TOTS) Percent	OSVC (OPM002)
28	Incoming Permanent Signal (PSIG) Peg Count	ISVC (OPM003)
29	Incoming Partial Dial Timeout (PDTO) Peg Count	ISVC (OPM003)
30	Incoming Partial Dial Abandons (PABN) Peg Count	ISVC (OPM003)

<b>Table 2-H: (Continued)</b>		
<b>Office Totals Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
31	Incoming Hits (HITS) Peg Count	ISVC (OPM003)
32	Incoming Multi-frequency Receiver Calls (MFRC) Peg Count	ISVC (OPM003)
33	Incoming Total Calls (TOTC) Peg Count	ISVC (OPM003)
34	Incoming Receiver Attachment Delay (MFRS) Percent	ISVC (OPM003)
35	Calls Not Receiving Digitone Peripheral Time Slot within 3 s (PLTS) Percent	OSVC (OPM002)
36	Calls Not Receiving MFR Peripheral Time Slot within 3 s (PLTS) Percent	ISVC (OPM003)
37	Distinctive Ringing Revertive Call Peg Count (DRRA)	TRAF (OPM001)
38	User to User - Q.931 level 3 messages (UTOU)	TRAF (OPM001)
39	Calling Party Subaddress Provided (CPSP)	TRAF (OPM001)
40	Calling Party Subaddress Delivered (CPSD)	TRAF (OPM001)
41	Integrated Services Digital Network Calls (ISDN)	OSVC (OPM002)
42	Packet to Packet (P2P) Peg Count	TRAF (OPM001)
43	Packet to Packet (P2P) Blockage	TRAF (OPM001)
44	Packet to Packet (P2P) Usage	TRAF (OPM001)
45	Packet to Circuit (P2C) Peg Count	TRAF (OPM001)
46	Packet to Circuit (P2C) Blockage	TRAF (OPM001)
47	Packet to Circuit (P2C) Usage	TRAF (OPM001)
48	Circuit to Packet (C2P) Peg Count	TRAF (OPM001)
49	Circuit to Packet (C2P) Blockage	TRAF (OPM001)
50	Circuit to Packet (C2P) Usage	TRAF (OPM001)
51	Packet Non-completing (PNC) Peg Count	TRAF (OPM001)
52	Packet Trunk Overflow (PTOV) Peg Count	TRAF (OPM001)

## Custom Calling Features Measurements (FEA)

Custom Calling Features Measurements are data recording the use of various custom calling features. Table 2-I explains the fields of the Features Measurements data block.

<b>Table 2-I: Custom Calling Features Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00052	
2	Call Waiting Attempts (CWAT) Peg Count	CCF (OPM011)
3	Call Waiting Attempts Answered (CWAA) Peg Count	CCF (OPM011)
4	Call Forward Activation (CFWA) Peg Count	CCF (OPM011)
5	Call Forwarded (CFWD) Peg Count	CCF (OPM011)
6	Call Forwarded (CFWD) Usage	CCF (OPM011)
7	Speed Calls Long List Changes (SCLL) Peg Count	CCF (OPM011)
8	Speed Calls Short List Changes (SCSL) Peg Count	CCF (OPM011)
9	Speed Calls Long List (SPCL) Peg Count	CCF (OPM011)
10	Speed Calls Long List (SPCL) Usage	CCF (OPM011)
11	Speed Calls Short List (SPCS) Peg Count	CCF (OPM011)
12	Speed Calls Short List (SPCS) Usage	CCF (OPM011)
13	Three Way Calling (3WC) Peg Count	CCF (OPM011)
14	Three Way Calling (3WC) Blockage	CCF (OPM011)
15	Three Way Calling (3WC) Usage	CCF (OPM011)
16	Remote Calls Forwarding (RCFW) Peg Count	CCF (OPM011)
17	Remote Calls Forwarding (RCFW) Blockage	CCF (OPM011)
18	Remote Calls Forwarding (RCFW) Usage	CCF (OPM011)
19	Cancel Call Waiting (CCWT) Peg Count	CCF (OPM011)
20	Usage Sensitive Call Waiting Answer (UCWA) Peg Count	CCF (OPM011)
21	Usage Sensitive Call Waiting Answer (UCWA) Blockage	CCF (OPM011)
22	Usage Sensitive Call Forward Activate (UCFA) Peg Count	CCF (OPM011)
23	Usage Sensitive Call Forward Deactivate (UCFD) Peg Count	CCF (OPM011)
24	Usage Sensitive Three-Way Call Answer (U3WA) Peg Count	CCF (OPM011)
25	Usage Sensitive Three-Way Call Answer (U3WA) Blockage	CCF (OPM011)
26	Ring Again (RAG) Peg Count	CCF (OPM011)
27	Residential User Transfer, from conference (UTFC) Peg Count	CCF (OPM011)
28	Residential User Transfer, from consultation hold (UTFH) Peg Count	CCF (OPM011)
29	Call Forward Remote Access Activation (CFRA) Peg Count	CCF (OPM011)
30	Call Forward Remote Access Software Block (CFRS) Peg Count	CCF (OPM011)

<b>Table 2-1: (Continued)</b>		
<b>Custom Calling Features Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
31	Call Forward Remote Access Hardware Block (CFRH) Peg Count	CCF (OPM011)
32	Call Forward Remote Access PIN/DN Block (CFRP) Peg Count	CCF (OPM011)
33	User Programmable Call Forward Busy Activation Attempts (CFBA) Peg Count	CCF (OPM011)
34	User Programmable Call Forward Don't Answer Activation Attempts (CFDA) Peg Count	CCF (OPM011)
35	Usage Sensitive User Programmable Call Forward Busy Activation Attempts (UCBA) Peg Count	CCF (OPM011)
36	Usage Sensitive User Programmable Call Forward Busy Deactivation Attempts (UCBD) Peg Count	CCF (OPM011)
37	Usage Sensitive User Programmable Call Forward Don't Answer Activation Attempts (UCDA) Peg Count	CCF (OPM011)
38	Usage Sensitive User Programmable Call Forward Don't Answer Deactivation Attempts (UCDD) Peg Count	CCF (OPM011)
39	Fixed Destination Call Forwarding Activation (CFFA) Attempts Peg Count	CCF (OPM011)
40	Usage Sensitive Fixed Destination Call Forwarding Activation (UFFA) Attempts Peg Count	CCF (OPM011)
41	Usage Sensitive Fixed Destination Call Forwarding Deactivation (UFFD) Attempts Peg Count	CCF (OPM011)
42	Additional Call Offering, Calls Offered (ACCO) Attempts Peg Count	CCF (OPM011)
43	Additional Call Offering, Calls Accepted (ACCA) Attempts Peg Count	CCF (OPM011)
44	Dial Call Waiting (DCWT) Attempts Peg Count	CCF (OPM011)
45	User Transfer From Flexible Calling (UTFF) Attempts Peg Count	CCF (OPM011)
46	ISDN Hold Capability Activation (IHCA) Attempts Peg Count	CCF (OPM011)
47	ISDN Hold Capability Rejection (IHCR) Attempts Peg Count	CCF (OPM011)
48	Long Distance Alert Ringing Attempts (LRG) Peg Count	CCF (OPM011)
49	Long Distance Alert Ringing Successful Attempts (LRGA) Peg Count	CCF (OPM011)
50	Long Distance Alert Call Waiting Attempts (LCW) Peg Count	CCF (OPM011)
51	Long Distance Alert Call Waiting Successful Attempts (LCWA) Peg Count	CCF (OPM011)
52	Web Based Long Speed Calling List Updates (SCLU) Peg Count	CCF (OPM011)
53	Web Based Short Speed Calling List Updates (SCSU) Peg Count	CCF (OPM011)

## Processor Measurements (PRO)

Processor Measurements provide processor usage data. Table 2-J explains the fields of the Processor Measurements data block.

<b>Table 2-J: Processor Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00003 if CCS7 is not configured 00005 if CCS7 is configured	NA
2	Processor Active:00000 if Processor 0 Active 00001 if Processor 1 Active	NA
3	Processor Background (BKGD) Usage	PRO (OPM012)
4	Portion of real time spent performing nondeferrable functions that would be performed with zero calls in the system (T, a constant determined by NTI).	NA
5	CCS7 Level 3 average processor usage	PRO (OPM012)
6	CCS7 Level 3 maximum processor usage	PRO (OPM012)

## Component Measurements (CMP)

Component Measurements provide data on service circuit demand, provisioning, and use. Table 2-K explains the fields of the Component Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-K: Component Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00098	NA
2	Digitone Receiver (PDTR) Request Peg Count.	SVCE (OPM005)
3	Digitone Receiver (PDTR) Peg Count.	SVCE (OPM005)
4	Digitone Receiver (PDTR) Usage. Scan rate = 10 s; sent = 100 s.	SVCE (OPM005)
5	Digitone Receiver (PDTR) Overflow.	SVCE (OPM005)
6	Digitone Receiver (PDTR) Maintenance Usage.	SVCE (OPM005)
7	Multifrequency Receiver (PMFR) Request Peg Count.	SVCE (OPM005)
8	Multifrequency Receiver (PMFR) Peg Count.	SVCE (OPM005)
9	Multifrequency Receiver (PMFR) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
10	Multifrequency Receiver (PMFR) Overflow.	SVCE (OPM005)
11	Multifrequency Receiver (PMFR) Maintenance Usage.	SVCE (OPM005)
12	Spare	
13	Spare	
14	Spare	
15	Digit Sender (DSND) Request Peg Count	SVCE (OPM005)
16	Digit Sender (DSND) Peg Count	SVCE (OPM005)
17	Digit Sender (DSND) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
18	Busy Tone (BUSY) Request Peg Count	SVCE (OPM005)
19	Busy Tone (BUSY) Peg Count	SVCE (OPM005)
20	Busy Tone (BUSY) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
21	Ring Back Tone (RNGB) Request Peg Count	SVCE (OPM005)
22	Ring Back Tone (RNGB) Peg Count	SVCE (OPM005)
23	Ring Back Tone (RNGB) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
24	Reorder Tone (RORD) Request Peg Count	SVCE (OPM005)
25	Reorder Tone (RORD) Peg Count	SVCE (OPM005)
26	Reorder Tone (RORD) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
27	Dial Tone (DIAL) Request Peg Count	SVCE (OPM005)

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<b>Table 2-K: (Continued)</b>		
<b>Component Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
28	Dial Tone (DIAL) Peg Count	SVCE (OPM005)
29	Dial Tone (DIAL) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
30	Howler Tone (HOWL) Request Peg Count	SVCE (OPM005)
31	Howler Tone (HOWL) Peg Count	SVCE (OPM005)
32	Howler Tone (HOWL) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
33	High Tone (HIGH) Request Peg Count	SVCE (OPM005)
34	High Tone (HIGH) Peg Count	SVCE (OPM005)
35	High Tone (HIGH) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
36	Low Tone (LOW) Request Peg Count	SVCE (OPM005)
37	Low Tone (LOW) Peg Count	SVCE (OPM005)
38	Low Tone (LOW) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
39	Special Dial Tone (SPDT) Request Peg Count	SVCE (OPM005)
40	Special Dial Tone (SPDT) Peg Count	SVCE (OPM005)
41	Special Dial Tone (SPDT) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
42	Confirmation Tone (CFMT) Request Peg Count	SVCE (OPM005)
43	Confirmation Tone (CFMT) Peg Count	SVCE (OPM005)
44	Confirmation Tone (CFMT) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
45	Call Wait Tone (CWT) Request Peg Count	SVCE (OPM005)
46	Call Wait Tone (CWT) Peg Count	SVCE (OPM005)
47	Call Wait Tone (CWT) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
48	For the DMS-10 Classic network, Tone and Digit Sender (TDS) Request Peg Count. For the DMS-10EN, Global Tone Services (GTS) requests.	SVCE (OPM005)
49	For the DMS-10 Classic network, Tone and Digit Sender (TDS) Peg Count. For the DMS-10EN, the number of times Global Tone Services (GTS) requests are satisfied.	SVCE (OPM005)
50	For the DMS-10 Classic Network, Tone and Digit Sender (TDS) Usage (scan rate = 10 s; sent = 100 s). For the DMS-10EN, a Global Tone Services (GTS) channels usage measurement (scan rate = 10 s; sent = 100 s).	SVCE (OPM005)
51	Directed Call Pickup with Barge-In (DCBI) Request Peg Count	SVCE (OPM005)
52	Directed Call Pickup with Barge-In (DCBI) Peg Count	SVCE (OPM005)
53	Directed Call Pickup with Barge-In (DCBI) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
54	Request to Use a TDS Resource for Calling Number Delivery (CND) Peg Count (CLID)	SVCE (OPM005)

<b>Table 2-K: (Continued)</b>		
<b>Component Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
55	TDS Resources Used for CND (CLID) Peg Count	SVCE (OPM005)
56	TDS Resources Usage for CND (CLID). Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
57	Request to Use a TDS/UTR Resource for ISUP Continuity Test (CONT) Peg Count	SVCE (OPM005)
58	TDS/UTR Resources Used for ISUP Continuity Test (CONT) Peg Count	SVCE (OPM005)
59	TDS/UTR Resources Usage for ISUP Continuity Test (CONT); Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
60	Requests to Use UTR Resource for Coin Detection (CUTR) Peg Count	SVCE (OPM005)
61	UTR Resources Used for Coin Detection (CUTR) Peg Count	SVCE (OPM005)
62	UTR Resource Usage for Coin Detection (CUTR). Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
63	Requests to activate Message Waiting Indicator lamp (MWIL) Peg Count	SVCE (OPM005)
64	Message Waiting Indicator lamp activations (MWIL) Peg Count	SVCE (OPM005)
65	Message Waiting Indicator lamp usage (MWIL). Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
66	Requests to use TDS Resource for warble tone (WARB) Peg Count	SVCE (OPM005)
67	TDS Resources used for warble tone (WARB) Peg Count	SVCE (OPM005)
68	TDS usage for warble tone (WARB). Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
69	Requests to use TDS Resource for end-to-end DTMF (N2N) Peg Count	SVCE (OPM005)
70	TDS Resources used for end-to-end DTMF (N2N) Peg Count	SVCE (OPM005)
71	TDS usage for end-to-end DTMF (N2N). Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
72	Universal Tone Receiver Digitone (UDTR) Request Peg Count	SVCE (OPM005)
73	Universal Tone Receiver Digitone (UDTR) Peg Count	SVCE (OPM005)
74	Universal Tone Receiver Digitone (UDTR) Usage . Scan rate = 10 s; sent = 100 s.	SVCE (OPM005)
75	Universal Tone Receiver Digitone (UDTR) Overflow	SVCE (OPM005)
76	Universal Tone Receiver Digitone (UDTR) Maintenance Usage	SVCE (OPM005)
77	Universal Tone Receiver Multifrequency (UMFR) Request Peg Count	SVCE (OPM005)
78	Universal Tone Receiver Multifrequency (UMFR) Peg Count	SVCE (OPM005)
79	Universal Tone Receiver Multifrequency (UMFR) Usage. Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
80	Universal Tone Receiver Multifrequency (UMFR) Overflow	SVCE (OPM005)

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<b>Table 2-K: (Continued)</b>		
<b>Component Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
81	Universal Tone Receiver Multifrequency (UMFR) Maintenance Usage	SVCE (OPM005)
82	Number of times Calling Identity on Call Waiting (CWID) tones are requested	SVCE (OPM005)
83	Number of times Calling Identity on Call Waiting (CWID) tone requests are satisfied	SVCE (OPM005)
84	Usage measurements for Calling Identity on Call Waiting (CWID). Scan rate = 10 s; sent = 100 s	SVCE (OPM005)
85	Requests for Customer-assignable Tone 1 (CTN1) Peg Count	SVCE (OPM005)
86	Peg Count of the Requests for Customer-assignable Tone 1 (CTN1) that were satisfied	SVCE (OPM005)
87	Usage measurement for resources used for Customer-assignable Tone 1 (CTN1)	SVCE (OPM005)
88	Requests for Customer-assignable Tone 2 (CTN2) Peg Count	SVCE (OPM005)
89	Peg Count of the Requests for Customer-assignable Tone 2 (CTN2) that were satisfied	SVCE (OPM005)
90	Usage measurement for resources used for Customer-assignable Tone 2 (CTN2)	SVCE (OPM005)
91	Requests for Customer-assignable Tone 3 (CTN3) Peg Count	SVCE (OPM005)
92	Peg Count of the Requests for Customer-assignable Tone 3 (CTN3) that were satisfied	SVCE (OPM005)
93	Usage measurement for resources used for Customer-assignable Tone 3 (CTN3)	SVCE (OPM005)
94	Requests for Customer-assignable Tone 4 (CTN4) Peg Count	SVCE (OPM005)
95	Peg Count of the Requests for Customer-assignable Tone 4 (CTN4) that were satisfied	SVCE (OPM005)
96	Usage measurement for resources used for Customer-assignable Tone 4 (CTN4)	SVCE (OPM005)
97	Requests for Customer-assignable Tone 5 (CTN5) Peg Count	SVCE (OPM005)
98	Peg Count of the Requests for Customer-assignable Tone 5 (CTN5) that were satisfied	SVCE (OPM005)
99	Usage measurement for resources used for Customer-assignable Tone 5 (CTN5)	SVCE (OPM005)

## Tone and Digit Senders Measurements (TDS) (DMS-10 Classic network)

Table 2-L explains the fields of the Tone and Digit Senders Measurements data block. This section consists of 29 entries, if one network group is configured, or 57 entries if two network groups are configured. Table 2-L explains the data block for one entry. Fields 2 through 8 are repeated for each entry.

The group identification numbers for Tone and Digit Sender packs are given in Tables 2-A, 2-B, 2-C, and 2-D. The group identification numbers in this section are in ascending order.

Entries for unassigned Tone and Digit Sender packs are given the value of 65530, indicating they are not implemented.

<b>Table 2-L: Tone and Digit Senders Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each Tone and Digit Sender: 00007	NA
2	Tone and Digit Sender Pack Group Identification Number	NA
3	Tone and Digit Sender (TDS) Peg Count	NTWK (OPM006)
4	Tone and Digit Sender (TDS) Blockage	NTWK (OPM006)
5	Tone and Digit Sender (TDS) Usage	NTWK (OPM006)
6	Tone and Digit Sender (TDS) Maintenance Usage	NTWK (OPM006)
7	Field Not Used	NA
8	Field Not Used	NA
9	Field Not Used	NA

## Global Tone Services Measurements (TDS) (DMS-10EN network)

Table 2-M explains the fields of the Global Tone Services Measurements data block. Each GTS is provided its own set of data. This section consists of 71 entries. Table 2-L explains the data block for one entry. Fields 2 through 8 are repeated for each entry.

The group identification numbers for each GTS are given in Tables 2-E, and 2-F. The group identification numbers in this section are in ascending order.

Entries for unassigned GTS circuits are given the value of 65530, indicating they are not implemented.

<b>Table 2-M: Global Tone Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each Tone and Digit Sender: 00007	NA
2	Global Tone Services Group Identification Number (1 - 10)	NA
3	Global Tone Services (GTS) Peg Count	NTWK (OPM006)
4	Global Tone Services (GTS) Blockage	NTWK (OPM006)
5	Global Tone Services (GTS) Usage	NTWK (OPM006)
6	Field Not Used	NA
7	Conference Circuit Peg Count	NTWK (OPM006)
8	Conference Circuit Blockage Count	NTWK (OPM006)
9	Conference Circuit Usage	NTWK (OPM006)

## Conference Circuits Measurements (CNF) (DMS-10 Classic network)

Table 2-N explains the fields of the Conference Circuits Measurements data block. This section consists of 31 entries, if one network group is configured, or 61 entries if two network groups are configured. Table 2-N explains data blocks for one entry. Fields 2 through 6 are repeated for each entry.

The group identification numbers for Conference packs are given in Tables -2-A, 2-B, 2-C, and 2-D.

Entries for unassigned Conference Circuits are given a value of 65530, indicating they are not implemented.

<b>Table 2-N: Conference Circuits Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each Conference pack: 00005	NA
2	Conference Pack Group Identification Number	NA
3	Conference Circuit (CNF) Peg Count	NTWK (OPM006)
4	Conference Circuit (CNF) Blockage	NTWK (OPM006)
5	Conference Circuit (CNF) Usage	NTWK (OPM006)
6	Conference Circuit (CNF) Maintenance Usage	NTWK (OPM006)

## Multiplex Loop Interface Measurements (MLI)

Table 2-O explains the fields of the Multiplex Loop Interface Measurements data block. This section consists of 451 entries if one network group is configured or 901 entries if two network groups are configured. Table 2-O explains the data block for one pack and one peripheral loop. Fields 2 through 6 contain pack information and are repeated for each pack. Fields 7 through 11 contain information for each peripheral loop on the indicated pack and are repeated for each loop.

*Note: The peg count for the Multiplex Loop Interface (MLI) pack is not the sum of the peg counts for the associated peripheral loops. The relationship between peg counts varies according to the office configuration.*

The group identification numbers for the MLI packs and the peripheral loops for DMS-10 Classic network are given in Tables 2-A, 2-B, 2-C, and 2-D. The group identification numbers for the 8T04 packs (MLI application) and the peripheral loops for DMS-10EN Expanded network are given in Tables 2-E and 2-F.

Entries for unassigned (MLI) packs and their associated peripheral loops are assigned the value of 65530, indicating they are not implemented.

<b>Table 2-O: Multiplex Loop Interface Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each Multiplex Loop Interface pack: 00005	NA
2	Multiplex Loop Interface Pack Group Identification Number	NA
3	Multiplex Loop Interface (MLI) Peg Count	NTWK (OPM006)
4	Multiplex Loop Interface (MLI) Blockage	NTWK (OPM006)
5	Multiplex Loop Interface (MLI) Usage	NTWK (OPM006)
6	Multiplex Loop Interface (MLI) Maintenance Usage	NTWK (OPM006)
7	Peripheral Loop Group ID	NA
8	Peripheral Loop (PELP) Peg Count	NTWK (OPM006)
9	Peripheral Loop (PELP) Blockage	NTWK (OPM006)
10	Peripheral Loop (PELP) Usage	NTWK (OPM006)
11	Peripheral Loop (PELP) Maintenance Usage	NTWK (OPM006)

## DS-30A Interface Measurements (DSA)

Table 2-P explains the fields of the DS-30A Interface Measurements data block. This section consists of 451 entries if one network group is configured, or 901 entries if two network groups are configured. Table 2-P contains the data block explanation for one pack and one peripheral loop. Fields 2 through 6 contain pack information and are repeated for each pack. Fields 7 through 11 contain information for each peripheral loop on the indicated pack and are repeated for each loop.

*Note:* The peg count for the DS-30A Interface pack is not the sum of the peg counts for the associated peripheral loops. The relationship between peg counts varies according to the office configuration.

The group identification numbers for the DS-30A Interface packs and the peripheral loops for DMS-10 Classic Network are given in Tables 2-A, 2-B, 2-C, and 2-D. The group identification numbers for the 8T04 packs (DS-30A application) and the peripheral loops for DMS-10EN Expanded network are given in Tables 2-E and 2-F.

Entries for unassigned DS-30A Interface packs and their associated peripheral loops have the value of 65530, indicating they are not implemented.

<b>Table 2-P: DS-30A Interface Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each DS-30A Interface pack: 00005	NA
2	DS-30A Interface Pack Group Identification Number	NA
3	DS-30A Interface (D3A) Peg Count	NTWK (OPM006)
4	DS-30A Interface (D3A) Blockage	NTWK (OPM006)
5	DS-30A Interface (D3A) Usage	NTWK (OPM006)
6	DS-30A Interface (D3A) Maintenance Usage	NTWK (OPM006)
7	Peripheral Loop Group ID	NA
8	Peripheral Loop (PELP) Peg Count	NTWK (OPM006)
9	Peripheral Loop (PELP) Blockage	NTWK (OPM006)
10	Peripheral Loop (PELP) Usage	NTWK (OPM006)
11	Peripheral Loop (PELP) Maintenance Usage	NTWK (OPM006)

## Customer Group Measurements (CGM)

Table 2-Q explains the fields of the Customer Group Measurements data block. The length of this section varies with the number of Hunt Groups and the software generic configured in the office.

The number of entries under this section consists of the number of Hunt Groups configured in the office. There are no entries for unassigned Hunt Groups.

Table 2-Q contains the data block explanations for one Hunt Group. Fields 2 through 4 are repeated for each entry. This section is not sent to the No. 1A EADAS, if no Hunt Group is assigned in the system. The Hunt Group numbers are given in ascending order.

<b>Table 2-Q: Customer Group Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each Hunt Group: 00003	NA
2	Hunt Group Number	NA
3	Hunt Group (HTGP) Peg Count	HUNT (OPM010)
4	Hunt Group (HTGP) Overflow	HUNT (OPM010)

## Customer Line Measurements (CLM)

Table 2-R explains the fields of the Customer Line Measurements data block. The length of this section varies with the number of study registers configured in the office. The number of entries under this section is 20 study registers, if the number of the used study registers in the office is 20 or less. In an office, with the number of study registers ranging from 21 through 40, the entries are for 40 registers, and so on, up to a maximum of 6 blocks. The last block only, has entries for 28 study registers.

Table 2-R contains the data block explanations for one study register. Fields 2 through 7 are repeated for each entry. The entries for each unassigned study register within a block are given the value of 65530, indicating they are not implemented. This section is not be sent to the No. 1A EADAS, if no study registers are assigned any circuits in the system. The study register identification numbers are given in ascending order.

*Note:* A register identification number is assigned internally by DMS-10 switch software for each study register. This number and its associated measurements are forwarded to the No. 1A EADAS. The Operational Measurement Control (OMC) overlay program can be used to query one or all of the study registers, in order to determine the circuit associated with these identification numbers.

### Overflow Registers for Busy Lines

The Overflow Registers for Busy Lines feature modifies the SREG measurement block to include separate peg counts for call originations and call terminations, and an overflow peg count for calls terminating to a busy line or line trunk that has special studies activated. The new or modified fields in the CLM data block resulting from the introduction of this feature are so noted in the data block explanations.

<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each study register: 00006	NA
2	Study Register Identification Number (see Note)	NA
3	Peg count for call originations (ORIG).	SREG (OPM007)
4	Total usage time for call originations (OUSE) at a scan rate of 100 ccs.	SREG (OPM007)
5	The number of times a call is terminated to a non-idle line or line trunk that has special studies activated (OVFL).	SREG (OPM007)
6	Call terminations (TERM).	SREG (OPM007)
7	Total usage time for call terminations (TUSE) at a scan rate of 100 ccs.	SREG (OPM007)

## Outgoing Trunk Group Measurements (TKO)

Table 2-S explains the fields of the Outgoing Trunk Group Measurements data block. The DMS-10 switch prints only entries for assigned trunk groups and does not print entries for unassigned trunk groups. Table 2-S explains the data block for one entry. Fields 2 through 7 are repeated for each assigned outgoing trunk group. The trunk group numbers in this section are in ascending order.

<b>Table 2-S: Outgoing Trunk Group Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each outgoing trunk group: 00006	NA
2	Outgoing Trunk Group Identification Number	NA
3	Outgoing Trunk Group (OGP) Peg Count	TRK (OPM004)
4	Outgoing Trunk Group (OGP) Usage	TRK (OPM004)
5	Outgoing Trunk Group (OGP) Overflow	TRK (OPM004)
6	Outgoing Trunk Group (OGP) Maintenance Usage	TRK (OPM004)
7	Outgoing Trunk Group (OGP) Trunk Glare Peg Count	TRK (OPM004)

## Incoming Trunk Group Measurements (TKI)

Table 2-T explains the fields of the Incoming Trunk Group Measurements data block. The DMS-10 switch prints only entries for assigned trunk groups and does not print entries for unassigned trunk groups. Table 2-T explains the data block for one entry. Fields 2 through 5 are repeated for each assigned incoming trunk group. The trunk group numbers in this section are in ascending order.

<b>Table 2-T: Incoming Trunk Group Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each incoming trunk group: 00004	NA
2	Incoming Trunk Group Identification Number	NA
3	Incoming Trunk Group (IGP) Peg Count	TRK (OPM004)
4	Incoming Trunk Group (IGP) Usage	TRK (OPM004)
5	Incoming Trunk Group (IGP) Maintenance Usage	TRK (OPM004)

**CAMA Measurements (AXB)**

Table 2-U explains the fields of the CAMA Measurements data block.

<b>Table 2-U: CAMA Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00007	NA
2	Automatic Number Identification Calls (ANI) Peg Count	CAMA (OPM009)
3	ANI Failure Subtending Local Office (ANFL) Peg Count	CAMA (OPM009)
4	ANI Failure CAMA Recording Office (ANFC) Peg Count	CAMA (OPM009)
5	Operator Number Identification Calls (ONI) Peg Count	CAMA (OPM009)
6	CAMA Position Disconnects (PDIS) Peg Count	CAMA (OPM009)
7	Match Check Failures (MCKF) Peg Count	CAMA (OPM009)
8	Calling Code Failures (CLGF) Peg Count	CAMA (OPM009)

## Equal Access IC/INC Carrier Traffic Measurements (AXC)

Table 2-V explains the fields of the Equal Access IC/INC Carrier Traffic Measurements data block.

<b>Table 2-V: Equal Access IC/INC Carrier Traffic Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00005	NA
2	Originating Calls Using 101XXXX Access by Carrier (10XX)	EQA (OPM015)
3	Originating Calls Using 950-XXXX Access Code by Carrier (950)	EQA (OPM015)
4	Originating Calls Using 800/ Predesignated (PIC)	EQA (OPM015)
5	Originating Calls Routed to Access Tandem (AT)	EQA (OPM015)
6	Originating Call Using 101XXXX and 950-XXXX Access (TNDM)	EQA (OPM015)

## Equal Access Trunk Measurements (AXD)

Table 2-W explains the fields of the Equal Access Trunk Measurements data block. The DMS-10 switch prints only entries for assigned trunk groups and does not print entries for unassigned trunk groups. Table 2-V contains the data block explanation for one entry. Fields 2 through 6 are repeated for each assigned trunk group. The trunk group identification numbers in this section are in ascending order.

<b>Table 2-W: Equal Access Trunk Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each access tandem trunk group: 00005	NA
2	Trunk Group Identification Number	NA
3	IC/INC Carrier Identification (CARR)	EQA (OPM015)
4	IC/INC Peg Counts + Overflow on a Shared Trunk (CARR)	EQA (OPM015)
5	IC/INC Overflow on a Shared Trunk (CARR)	EQA (OPM015)
6	IC/INC Traffic Usage on a Shared Trunk (CARR)	EQA (OPM015)

## Integrated Business Services Measurements (AXE)

Table 2-X explains the fields of the Integrated Business Services Services Measurements data block.

<b>Table 2-X: Integrated Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00034	NA
2	Call Hold Feature (CHD) Peg Count	IBS (OPM016)
3	Terminating Calls to Busy IBS Lines with Call Waiting Feature (CWAT) Peg Count	IBS (OPM016)
4	Waiting Calls Retrieved by IBS Called Line (CWAA) Peg Count	IBS (OPM016)
5	Call Forwarding Activations (CFWA) Peg Count	IBS (OPM016)
6	Calls Forwarded (CFWD) Peg Count	IBS (OPM016)
7	Calls Routed by Convenience Dialing (CNVD) Peg Count	IBS (OPM016)
8	Convenience Dialing Updates (CCVD) Peg Count	IBS (OPM016)
9	3 Way Conference Calls (CONF) Peg Count	IBS (OPM016)
10	3 Way Conference Calls (CONF) Blockage	IBS (OPM016)
11	3 Way Conference Calls (CONF) Usage	IBS (OPM016)
12	User 3 Way Conference Call Transfer (UTFC) Peg Count	IBS (OPM016)
13	Consultations Hold Transfers (UTFH) Peg Count	IBS (OPM016)
14	Busy Transfer Feature (BTF) Peg Count	IBS (OPM016)
15	Intercom Calls (INT) Peg Count	IBS (OPM016)
16	Call Pickup Feature (CPU) Peg Count	IBS (OPM016)
17	Distinctive Ringing (DSR) Peg Count	IBS (OPM016)
18	Don't Answer Transfer Calls (DAT) Peg Count	IBS (OPM016)
19	Cancel Call Waiting (CCWT) Peg Count	IBS (OPM016)
20	Ring Again (RAG) Peg Count	IBS (OPM016)
21	Directed Call Pickup without Barge-In (DCPU) Peg Count	IBS (OPM016)
22	Directed Call Pickup with Barge-In (DCBI) Peg Count	IBS (OPM016)
23	Directed Call Pickup with Barge-In (DCBI) Blockage	IBS (OPM016)
24	Directed Call Pickup with Barge-In (DCBI) Usage	IBS (OPM016)
25	Directed Call Pickup from Any Station (DPUA) Peg Count	IBS (OPM016)
26	User Programmable Call Forward Busy Activation Attempts (CFBA) Peg Count	IBS (OPM016)
27	User Programmable Call Forward Don't Answer Activation Attempts (CFDA) Peg Count	IBS (OPM016)
28	Usage Sensitive User Programmable Call Forward Busy Activation Attempts (UCBA) Peg Count	IBS (OPM016)

2-28 Operational measurements for EADAS

<b>Table 2-X: (Continued)</b>		
<b>Integrated Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
29	Usage Sensitive User Programmable Call Forward Busy Deactivation Attempts (UCBD) Peg Count	IBS (OPM016)
30	Usage Sensitive User Programmable Call Forward Don't Answer Activation Attempts (UCDA) Peg Count	IBS (OPM016)
31	Usage Sensitive User Programmable Call Forward Don't Answer Deactivation Attempts (UCDD) Peg Count	IBS (OPM016)
32	Fixed Destination Call Forwarding Activation (CFFA) Attempts Peg Count	IBS (OPM016)
33	Usage Sensitive Fixed Destination Call Forwarding Activation (UFFA) Attempts Peg Count	IBS (OPM016)
34	Usage Sensitive Fixed Destination Call Forwarding Deactivation (UFFD) Attempts Peg Count	IBS (OPM016)
35	Web Based Convenience Dialing List Updages (CVDU) Peg Count	IBS (OPM016)

## Enhanced Business Services Measurements (AXF)

Table 2-Y explains the fields of the Enhanced Business Services Services Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-Y: Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00258	NA
2	EBS Group Identification Number	NA
3	Originating Calls (ORIG) Peg Count	EBS (OPM017)
4	Within Group Station to Station Calls (STS) Peg Count	EBS (OPM017)
5	Incoming Calls from outside Group (INC) Peg Count	EBS (OPM017)
6	Direct Outward Dialing (DOD) Peg Count	EBS (OPM017)
7	Call Hold Feature (CHD) Peg Count	EBS (OPM017)
8	Terminating Calls to Busy EBS Lines with Call Waiting Feature (CWAT) Peg Count	EBS (OPM017)
9	Waiting Calls Retrieved by EBS Called Line (CWAA) Peg Count	EBS (OPM017)
10	Call Forwarding Activations (CFWA) Peg Count	EBS (OPM017)
11	Calls Forwarded (CFWD) Peg Count	EBS (OPM017)
12	Speed Calling (GSCU) Peg Count	EBS (OPM017)
13	Peg Count of Speed Calling Updates (GSCL)	EBS (OPM017)
14	Short Speed Calling (SSCU) Peg Count	EBS (OPM017)
15	Short Speed Calling Updates (SSCL) Peg Count	EBS (OPM017)
16	Long Speed Calling (LSCU) Peg Count	EBS (OPM017)
17	Long Speed Calling Updates (LSCL) Peg Count	EBS (OPM017)
18	Three-Way Call Conference (CONF) Peg Count	EBS (OPM017)
19	Three-Way Conference (CONF) Blockage	EBS (OPM017)
20	Three-Way Conference (CONF) Usage	EBS (OPM017)
21	User Three-Way Conference Call Transfer (UTFC) Peg Count	EBS (OPM017)
22	Consultation Hold Transfer (UTFH) Peg Count	EBS (OPM017)
23	Busy Transfer Feature (BTF) Peg Count	EBS (OPM017)
24	Call Pickup Feature (CPU) Peg Count	EBS (OPM017)
25	Distinctive Ringing (DSR) Peg Count	EBS (OPM017)
26	Don't Answer Transfer Calls (DAT) Peg Count	EBS (OPM017)
27	Cancel Call Waiting (CCWT) Peg Count	EBS (OPM017)
28	Primary DID Virtual Facilities Group (PDID) Peg Count	EBS (OPM017)

2-30 Operational measurements for EADAS

<b>Table 2-Y: (Continued)</b>		
<b>Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
29	Primary DID Virtual Facilities Group (PDID) Blockage	EBS (OPM017)
30	Primary DID Virtual Facilities Group (PDID) Usage	EBS (OPM017)
31	Overflow DID Virtual Facilities Group (ODID) Peg Count	EBS (OPM017)
32	Overflow DID Virtual Facilities Group (ODID) Blockage	EBS (OPM017)
33	Overflow DID Virtual Facilities Group (ODID) Usage	EBS (OPM017)
34	INWATS Virtual Facilities Group (VIWT) Peg Count	EBS (OPM017)
35	INWATS Virtual Facilities Group (VIWT) Blockage	EBS (OPM017)
36	INWATS Virtual Facilities Group (VIWT) Usage	EBS (OPM017)
37	Customer Assignable Virtual Facilities Group V1 (VV1) Peg Count	EBS (OPM017)
38	Customer Assignable Virtual Facilities Group V1 (VV1) Blockage	EBS (OPM017)
39	Customer Assignable Virtual Facilities Group V1 (VV1) Usage	EBS (OPM017)
40	Customer Assignable Virtual Facilities Group V2 (VV2) Peg Count	EBS (OPM017)
41	Customer Assignable Virtual Facilities Group V2 (VV2) Blockage	EBS (OPM017)
42	Customer Assignable Virtual Facilities Group V2 (VV2) Usage	EBS (OPM017)
43	Customer Assignable Virtual Facilities Group V3 (VV3) Peg Count	EBS (OPM017)
44	Customer Assignable Virtual Facilities Group V3 (VV3) Blockage	EBS (OPM017)
45	Customer Assignable Virtual Facilities Group V3 (VV3) Usage	EBS (OPM017)
46	Customer Assignable Virtual Facilities Group V4 (VV4) Peg Count	EBS (OPM017)
47	Customer Assignable Virtual Facilities Group V4 (VV4) Blockage	EBS (OPM017)
48	Customer Assignable Virtual Facilities Group V4 (VV4) Usage	EBS (OPM017)
49	Customer Assignable Virtual Facilities Group V5 (VV5) Peg Count	EBS (OPM017)
50	Customer Assignable Virtual Facilities Group V5 (VV5) Blockage	EBS (OPM017)
51	Customer Assignable Virtual Facilities Group V5 (VV5) Usage	EBS (OPM017)
52	Primary DOD Virtual Facilities Group (PDOD) Peg Count	EBS (OPM017)
53	Primary DOD Virtual Facilities Group (PDOD) Blockage	EBS (OPM017)
54	Primary DOD Virtual Facilities Group (PDOD) Usage	EBS (OPM017)
55	Overflow DOD Virtual Facilities Group (ODOD) Peg Count	EBS (OPM017)
56	Overflow DOD Virtual Facilities Group (ODOD) Blockage	EBS (OPM017)
57	Overflow DOD Virtual Facilities Group (ODOD) Usage	EBS (OPM017)
58	OUTWATS All Virtual Facilities Group (VOWT) Peg Count	EBS (OPM017)
59	OUTWATS All Virtual Facilities Group (VOWT) Blockage	EBS (OPM017)
60	OUTWATS All Virtual Facilities Group (VOWT) Usage	EBS (OPM017)
61	Band 0 OUTWATS Virtual Facilities Group (VOW0) Peg Count	EBS (OPM017)
62	Band 0 OUTWATS Virtual Facilities Group (VOW0) Blockage	EBS (OPM017)
63	Band 0 OUTWATS Virtual Facilities Group (VOW0) Usage	EBS (OPM017)

<b>Table 2-Y: (Continued)</b>		
<b>Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
64	Band 1 OUTWATS Virtual Facilities Group (VOW1) Peg Count	EBS (OPM017)
65	Band 1 OUTWATS Virtual Facilities Group (VOW1) Blockage	EBS (OPM017)
66	Band 1 OUTWATS Virtual Facilities Group (VOW1) Usage	EBS (OPM017)
67	Band 2 OUTWATS Virtual Facilities Group (VOW2) Peg Count	EBS (OPM017)
68	Band 2 OUTWATS Virtual Facilities Group (VOW2) Blockage	EBS (OPM017)
69	Band 2 OUTWATS Virtual Facilities Group (VOW2) Usage	EBS (OPM017)
70	Band 3 OUTWATS Virtual Facilities Group (VOW3) Peg Count	EBS (OPM017)
71	Band 3 OUTWATS Virtual Facilities Group (VOW3) Blockage	EBS (OPM017)
72	Band 3 OUTWATS Virtual Facilities Group (VOW3) Usage	EBS (OPM017)
73	Band 4 OUTWATS Virtual Facilities Group (VOW4) Peg Count	EBS (OPM017)
74	Band 4 OUTWATS Virtual Facilities Group (VOW4) Blockage	EBS (OPM017)
75	Band 4 OUTWATS Virtual Facilities Group (VOW4) Usage	EBS (OPM017)
76	Band 5 OUTWATS Virtual Facilities Group (VOW5) Peg Count	EBS (OPM017)
77	Band 5 OUTWATS Virtual Facilities Group (VOW5) Blockage	EBS (OPM017)
78	Band 5 OUTWATS Virtual Facilities Group (VOW5) Usage	EBS (OPM017)
79	Band 6 OUTWATS Virtual Facilities Group (VOW6) Peg Count	EBS (OPM017)
80	Band 6 OUTWATS Virtual Facilities Group (VOW6) Blockage	EBS (OPM017)
81	Band 6 OUTWATS Virtual Facilities Group (VOW6) Usage	EBS (OPM017)
82	Band 7 OUTWATS Virtual Facilities Group (VOW7) Peg Count	EBS (OPM017)
83	Band 7 OUTWATS Virtual Facilities Group (VOW7) Blockage	EBS (OPM017)
84	Band 7 OUTWATS Virtual Facilities Group (VOW7) Usage	EBS (OPM017)
85	Band 8 OUTWATS Virtual Facilities Group (VOW8) Peg Count	EBS (OPM017)
86	Band 8 OUTWATS Virtual Facilities Group (VOW8) Blockage	EBS (OPM017)
87	Band 8 OUTWATS Virtual Facilities Group (VOW8) Usage	EBS (OPM017)
88	Band 9 OUTWATS Virtual Facilities Group (VOW9) Peg Count	EBS (OPM017)
89	Band 9 OUTWATS Virtual Facilities Group (VOW9) Blockage	EBS (OPM017)
90	Band 9 OUTWATS Virtual Facilities Group (VOW9) Usage	EBS (OPM017)
91	Band 10 OUTWATS Virtual Facilities Group (VO10) Peg Count	EBS (OPM017)
92	Band 10 OUTWATS Virtual Facilities Group (VO10) Blockage	EBS (OPM017)
93	Band 10 OUTWATS Virtual Facilities Group (VO10) Usage	EBS (OPM017)
94	Band 11 OUTWATS Virtual Facilities Group (VO11) Peg Count	EBS (OPM017)
95	Band 11 OUTWATS Virtual Facilities Group (VO11) Blockage	EBS (OPM017)
96	Band 11 OUTWATS Virtual Facilities Group (VO11) Usage	EBS (OPM017)
97	Band 12 OUTWATS Virtual Facilities Group (VO12) Peg Count	EBS (OPM017)
98	Band 12 OUTWATS Virtual Facilities Group (VO12) Blockage	EBS (OPM017)

2-32 Operational measurements for EADAS

<b>Table 2-Y: (Continued)</b>		
<b>Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
99	Band 12 OUTWATS Virtual Facilities Group (VO12) Usage	EBS (OPM017)
100	Band 13 OUTWATS Virtual Facilities Group (VO13) Peg Count	EBS (OPM017)
101	Band 13 OUTWATS Virtual Facilities Group (VO13) Blockage	EBS (OPM017)
102	Band 13 OUTWATS Virtual Facilities Group (VO13) Usage	EBS (OPM017)
103	Band 14 OUTWATS Virtual Facilities Group (VO14) Peg Count	EBS (OPM017)
104	Band 14 OUTWATS Virtual Facilities Group (VO14) Blockage	EBS (OPM017)
105	Band 14 OUTWATS Virtual Facilities Group (VO14) Usage	EBS (OPM017)
106	Band 15 OUTWATS Virtual Facilities Group (VO15) Peg Count	EBS (OPM017)
107	Band 15 OUTWATS Virtual Facilities Group (VO15) Blockage	EBS (OPM017)
108	Band 15 OUTWATS Virtual Facilities Group (VO15) Usage	EBS (OPM017)
109	Directed Call Pickup without Barge-In (DCPU) Usage	EBS (OPM017)
110	Directed Call Pickup with Barge-In (DCBI) Peg Count	EBS (OPM017)
111	Directed Call Pickup with Barge-In (DCBI) Blockage	EBS (OPM017)
112	Directed Call Pickup with Barge-In (DCBI) Usage	EBS (OPM017)
113	Directed Call Pickup From Any Station (DPUA) Peg Count	EBS (OPM017)
114	Ring Again (RAG) Peg Count	EBS (OPM017)
115	Call Waiting Incoming Attempts (CWIA) Peg Count	EBS (OPM017)
116	Call Waiting Incoming Attempts Answered (CWIT) PEG Count	EBS (OPM017)
117	Call Waiting Intragroup Attempts (CWGA) Peg Count	EBS (OPM017)
118	Call Waiting Intragroup Attempts Answered (CWGT) Peg Count	EBS (OPM017)
119	Dial Call Waiting Attempts (DCWA) Peg Count	EBS (OPM017)
120	Dial Call Waiting Attempts Answered (DCAT) Peg Count	EBS (OPM017)
121	Inhibit Call Waiting Attempts (ICWA) Peg Count	EBS (OPM017)
122	Call Waiting Originating Attempts (CWOA) Peg Count	EBS (OPM017)
123	Call Waiting Originating Attempts Answered (CWOT) Peg Count	EBS (OPM017)
124	Group INWATS Virtual Facilities Group (GI01) Peg Count	EBS (OPM017)
125	Group INWATS Virtual Facilities Group (GI01) Blockage	EBS (OPM017)
126	Group INWATS Virtual Facilities Group (GI01) Usage	EBS (OPM017)
127	Group INWATS Virtual Facilities Group (GI02) Peg Count	EBS (OPM017)
128	Group INWATS Virtual Facilities Group (GI02) Blockage	EBS (OPM017)
129	Group INWATS Virtual Facilities Group (GI02) Usage	EBS (OPM017)
130	Group INWATS Virtual Facilities Group (GI03) Peg Count	EBS (OPM017)
131	Group INWATS Virtual Facilities Group (GI03) Blockage	EBS (OPM017)
132	Group INWATS Virtual Facilities Group (GI03) Usage	EBS (OPM017)
133	Group INWATS Virtual Facilities Group (GI04) Peg Count	EBS (OPM017)

<b>Table 2-Y: (Continued)</b>		
<b>Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
134	Group INWATS Virtual Facilities Group (GI04) Blockage	EBS (OPM017)
135	Group INWATS Virtual Facilities Group (GI04) Usage	EBS (OPM017)
136	Group INWATS Virtual Facilities Group (GI05) Peg Count	EBS (OPM017)
137	Group INWATS Virtual Facilities Group (GI05) Blockage	EBS (OPM017)
138	Group INWATS Virtual Facilities Group (GI05) Usage	EBS (OPM017)
139	Group INWATS Virtual Facilities Group (GI06) Peg Count	EBS (OPM017)
140	Group INWATS Virtual Facilities Group (GI06) Blockage	EBS (OPM017)
141	Group INWATS Virtual Facilities Group (GI06) Usage	EBS (OPM017)
142	Group INWATS Virtual Facilities Group (GI07) Peg Count	EBS (OPM017)
143	Group INWATS Virtual Facilities Group (GI07) Blockage	EBS (OPM017)
144	Group INWATS Virtual Facilities Group (GI07) Usage	EBS (OPM017)
145	Group INWATS Virtual Facilities Group (GI08) Peg Count	EBS (OPM017)
146	Group INWATS Virtual Facilities Group (GI08) Blockage	EBS (OPM017)
147	Group INWATS Virtual Facilities Group (GI08) Usage	EBS (OPM017)
148	Group INWATS Virtual Facilities Group (GI09) Peg Count	EBS (OPM017)
149	Group INWATS Virtual Facilities Group (GI09) Blockage	EBS (OPM017)
150	Group INWATS Virtual Facilities Group (GI09) Usage	EBS (OPM017)
151	Group INWATS Virtual Facilities Group (GI10) Peg Count	EBS (OPM017)
152	Group INWATS Virtual Facilities Group (GI10) Blockage	EBS (OPM017)
153	Group INWATS Virtual Facilities Group (GI10) Usage	EBS (OPM017)
154	Group INWATS Virtual Facilities Group (GI11) Peg Count	EBS (OPM017)
155	Group INWATS Virtual Facilities Group (GI11) Blockage	EBS (OPM017)
156	Group INWATS Virtual Facilities Group (GI11) Usage	EBS (OPM017)
157	Group INWATS Virtual Facilities Group (GI12) Peg Count	EBS (OPM017)
158	Group INWATS Virtual Facilities Group (GI12) Blockage	EBS (OPM017)
159	Group INWATS Virtual Facilities Group (GI12) Usage	EBS (OPM017)
160	Group INWATS Virtual Facilities Group (GI13) Peg Count	EBS (OPM017)
161	Group INWATS Virtual Facilities Group (GI13) Blockage	EBS (OPM017)
162	Group INWATS Virtual Facilities Group (GI13) Usage	EBS (OPM017)
163	Group INWATS Virtual Facilities Group (GI14) Peg Count	EBS (OPM017)
164	Group INWATS Virtual Facilities Group (GI14) Blockage	EBS (OPM017)
165	Group INWATS Virtual Facilities Group (GI14) Usage	EBS (OPM017)
166	Group INWATS Virtual Facilities Group (GI15) Peg Count	EBS (OPM017)
167	Group INWATS Virtual Facilities Group (GI15) Blockage	EBS (OPM017)
168	Group INWATS Virtual Facilities Group (GI15) Usage	EBS (OPM017)

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<b>Table 2-Y: (Continued)</b>		
<b>Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
169	Group INWATS Virtual Facilities Group (GI16) Peg Count	EBS (OPM017)
170	Group INWATS Virtual Facilities Group (GI16) Blockage	EBS (OPM017)
171	Group INWATS Virtual Facilities Group (GI16) Usage	EBS (OPM017)
172	Group OUTWATS Virtual Facilities Group (GO01) Peg Count	EBS (OPM017)
173	Group OUTWATS Virtual Facilities Group (GO01) Blockage	EBS (OPM017)
174	Group OUTWATS Virtual Facilities Group (GO01) Usage	EBS (OPM017)
175	Group OUTWATS Virtual Facilities Group (GO02) Peg Count	EBS (OPM017)
176	Group OUTWATS Virtual Facilities Group (GO02) Blockage	EBS (OPM017)
177	Group OUTWATS Virtual Facilities Group (GO02) Usage	EBS (OPM017)
178	Group OUTWATS Virtual Facilities Group (GO03) Peg Count	EBS (OPM017)
179	Group OUTWATS Virtual Facilities Group (GO03) Blockage	EBS (OPM017)
180	Group OUTWATS Virtual Facilities Group (GO03) Usage	EBS (OPM017)
181	Group OUTWATS Virtual Facilities Group (GO04) Peg Count	EBS (OPM017)
182	Group OUTWATS Virtual Facilities Group (GO04) Blockage	EBS (OPM017)
183	Group OUTWATS Virtual Facilities Group (GO04) Usage	EBS (OPM017)
184	Group OUTWATS Virtual Facilities Group (GO05) Peg Count	EBS (OPM017)
185	Group OUTWATS Virtual Facilities Group (GO05) Blockage	EBS (OPM017)
186	Group OUTWATS Virtual Facilities Group (GO05) Usage	EBS (OPM017)
187	Group OUTWATS Virtual Facilities Group (GO06) Peg Count	EBS (OPM017)
188	Group OUTWATS Virtual Facilities Group (GO06) Blockage	EBS (OPM017)
189	Group OUTWATS Virtual Facilities Group (GO06) Usage	EBS (OPM017)
190	Group OUTWATS Virtual Facilities Group (GO07) Peg Count	EBS (OPM017)
191	Group OUTWATS Virtual Facilities Group (GO07) Blockage	EBS (OPM017)
192	Group OUTWATS Virtual Facilities Group (GO07) Usage	EBS (OPM017)
193	Group OUTWATS Virtual Facilities Group (GO08) Peg Count	EBS (OPM017)
194	Group OUTWATS Virtual Facilities Group (GO08) Blockage	EBS (OPM017)
195	Group OUTWATS Virtual Facilities Group (GO08) Usage	EBS (OPM017)
196	Group OUTWATS Virtual Facilities Group (GO09) Peg Count	EBS (OPM017)
197	Group OUTWATS Virtual Facilities Group (GO09) Blockage	EBS (OPM017)
198	Group OUTWATS Virtual Facilities Group (GO09) Usage	EBS (OPM017)
199	Group OUTWATS Virtual Facilities Group (GO10) Peg Count	EBS (OPM017)
200	Group OUTWATS Virtual Facilities Group (GO10) Blockage	EBS (OPM017)
201	Group OUTWATS Virtual Facilities Group (GO10) Usage	EBS (OPM017)
202	Group OUTWATS Virtual Facilities Group (GO11) Peg Count	EBS (OPM017)
203	Group OUTWATS Virtual Facilities Group (GO11) Blockage	EBS (OPM017)

<b>Table 2-Y: (Continued)</b>		
<b>Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
204	Group OUTWATS Virtual Facilities Group (GO11) Usage	EBS (OPM017)
205	Group OUTWATS Virtual Facilities Group (GO12) Peg Count	EBS (OPM017)
206	Group OUTWATS Virtual Facilities Group (GO12) Blockage	EBS (OPM017)
207	Group OUTWATS Virtual Facilities Group (GO12) Usage	EBS (OPM017)
208	Group OUTWATS Virtual Facilities Group (GO13) Peg Count	EBS (OPM017)
209	Group OUTWATS Virtual Facilities Group (GO13) Blockage	EBS (OPM017)
210	Group OUTWATS Virtual Facilities Group (GO13) Usage	EBS (OPM017)
211	Group OUTWATS Virtual Facilities Group (GO14) Peg Count	EBS (OPM017)
212	Group OUTWATS Virtual Facilities Group (GO14) Blockage	EBS (OPM017)
213	Group OUTWATS Virtual Facilities Group (GO14) Usage	EBS (OPM017)
214	Group OUTWATS Virtual Facilities Group (GO15) Peg Count	EBS (OPM017)
215	Group OUTWATS Virtual Facilities Group (GO15) Blockage	EBS (OPM017)
216	Group OUTWATS Virtual Facilities Group (GO15) Usage	EBS (OPM017)
217	Group OUTWATS Virtual Facilities Group (GO16) Peg Count	EBS (OPM017)
218	Group OUTWATS Virtual Facilities Group (GO16) Blockage	EBS (OPM017)
219	Group OUTWATS Virtual Facilities Group (GO16) Usage	EBS (OPM017)
220	User Programmable Call Forward Busy Activation Attempts (CFBA) Peg Count	EBS (OPM017)
221	User Programmable Call Forward Don't Answer Activation Attempts (CFDA) Peg Count	EBS (OPM017)
222	Usage Sensitive User Programmable Call Forward Busy Activation Attempts (UCBA) Peg Count	EBS (OPM017)
223	Usage Sensitive User Programmable Call Forward Busy Deactivation Attempts (UCBD) Peg Count	EBS (OPM017)
224	Usage Sensitive User Programmable Call Forward Don't Answer Activation Attempts (UCDA) Peg Count	EBS (OPM017)
225	Usage Sensitive User Programmable Call Forward Don't Answer Deactivation Attempts (UCDD) Peg Count	EBS (OPM017)
226	Group Intercom origination (GIC) Peg Count	EBS (OPM017)
227	Call Park, Directed Call Park, and Call Park retrieval access code (CPAT) or key activation Peg Count	EBS (OPM017)
228	Call Park retrieval before first recall call (CPRT) Peg Count	EBS (OPM017)
229	Call Park recall timer expiration (CPEX) Peg Count	EBS (OPM017)
230	Call Park completed recall answers (CPCR) Peg Count	EBS (OPM017)
231	Call Park calls abandoned (CPAB) Peg Count	EBS (OPM017)
232	Camp-On call activation (COAT) Peg Count	EBS (OPM017)

2-36 Operational measurements for EADAS

<b>Table 2-Y: (Continued)</b>		
<b>Enhanced Business Services Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
233	Camp-On calls answered (COAS) Peg Count	EBS (OPM017)
234	Camp-On call recall timer expiration (COEX) Peg Count	EBS (OPM017)
235	Camp-On call answers by administrative DN (CODN) Peg Count	EBS (OPM017)
236	Camp-On calls abandoned (COAB) Peg Count	EBS (OPM017)
237	Fixed Destination Call Forwarding Activation (CFFA) Attempts Peg Count	EBS (OPM017)
238	Usage Sensitive Fixed Destination Call Forwarding Activation (UFFA) Attempts Peg Count	EBS (OPM017)
239	Usage Sensitive Fixed Destination Call Forwarding Deactivation (UFFD) Attempts Peg Count	EBS (OPM017)
240	User Transfer From Flexible Calling (UTFF) Attempts Peg Count	EBS (OPM017)
241	ISDN Hold Capability Activation (IHCA) Attempts Peg Count	EBS (OPM017)
242	ISDN Hold Capability Rejection (IHCR) Attempts Peg Count	EBS (OPM017)
243	Call Park successful attempts (CPPS) Peg Count	EBS (OPM017)
244	Call Park unsuccessful attempts (CPPU) Peg Count	EBS (OPM017)
245	Call Park successful call retrievals (CPRS) Peg Count	EBS (OPM017)
246	Call Park unsuccessful call retrievals (CPRU) Peg Count	EBS (OPM017)
247	Call Park forwarded calls (CPCF) Peg Count	EBS (OPM017)
248	Music on Hold (MOH) Attempts Peg Count	EBS (OPM017)
249	Music on Hold (MOH) Unsuccessful Attempts Peg Count	EBS (OPM017)
250	Make Set Busy All Calls activation (SBAA) Peg Count	EBS (OPM017)
251	Make Set Busy All Calls failed termination attempt (SBAT) Peg Count	EBS (OPM017)
252	Make Set Busy Intragroup Calls activation (SBIA) Peg Count	EBS (OPM017)
253	Make Set Busy Intragroup Calls failed termination attempt (SBIT) Peg Count	EBS (OPM017)
254	Handsfree Auto Answerback treatment (AABT) Peg Count	EBS (OPM017)
255	Handsfree Auto Answerback activation (AABA) Peg Count	EBS (OPM017)
256	Handsfree Auto Answerback deactivation (AABD) Peg Count	EBS (OPM017)
257	Web Based Short Speed Calling List updates (WEBS) Peg Count	EBS (OPM017)
258	Web Based Long Speed Calling List updates (WEBL) Peg Count	EBS (OPM017)
259	Web Based Group Speed Calling List updates (WEBG) Peg Count	EBS (OPM017)

## Maintenance Measurements (AXG)

Table 2-Z explains the fields of the Maintenance Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-Z: Maintenance Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00073	NA
2	Central Processing Unit (CPU) Peg Count	MTCE (OPM008)
3	Central Processing Unit (CPU) Usage	MTCE (OPM008)
4	Memory (MEM) Peg Count	MTCE (OPM008)
5	Memory (MEM) Usage	MTCE (OPM008)
6	Initialization (INI) Peg Count	MTCE (OPM008)
7	Multiplex Loop (MLI) Peg Count	MTCE (OPM008)
8	Multiplex Loop (MLI) Usage	MTCE (OPM008)
9	DS30-A Interface (D3A) Peg Count	MTCE (OPM008)
10	DS30-A Interface (D3A) Usage	MTCE (OPM008)
11	For the DMS-10 Classic network, Tone and Digit Sender (TDS) Peg Count. For the DMS-10EN, Global Tone Services (GTSB) Peg Count.	MTCE (OPM008)
12	For the DMS-10 Classic network, Tone and Digit Senders (TDS) Usage. For the DMS-10EN, Global Tone Service (GTSB) Usage.	MTCE (OPM008)
13	Conference Circuits (CNF) Peg Count	MTCE (OPM008)
14	Conference Circuits (CNF) Usage	MTCE (OPM008)
15	Subscriber Carrier Module (SCM) Peg Count	MTCE (OPM008)
16	Subscriber Carrier Module (SCM) Usage	MTCE (OPM008)
17	Peripheral Shelf (PSHF) Peg Count	MTCE (OPM008)
18	Peripheral Shelf (PSHF) Usage	MTCE (OPM008)
19	Digital Carrier Module (DCM) Peg Count	MTCE (OPM008)
20	Digital Carrier Module (DCM) Usage	MTCE (OPM008)
21	Trunk Circuits out-of-service (TRK) Peg count	MTCE (OPM008)
22	Trunk Circuits out-of-service (TRK) Usage	MTCE (OPM008)
23	Line Circuits out-of-service (LINE) Peg Count	MTCE (OPM008)
24	Line Circuits out-of-service (LINE) Usage	MTCE (OPM008)
25	Receivers (RCVR) Peg Count	MTCE (OPM008)
26	Receivers (RCVR) Usage	MTCE (OPM008)
27	Peripheral Processor Pack (PEPR) Peg Count	MTCE (OPM008)

2-38 Operational measurements for EADAS

<b>Table 2-Z: (Continued)</b>		
<b>Maintenance Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
28	Peripheral Processor Pack (PEPR) Usage	MTCE (OPM008)
29	Line Concentration Module Controller (LCMC) Peg Count	MTCE (OPM008)
30	Line Concentration Module Controller (LCMC) Usage	MTCE (OPM008)
31	Line Sub-group (LSG) Peg Count	MTCE (OPM008)
32	Line Sub-group (LSG) Usage	MTCE (OPM008)
33	Peripheral Loop (PELP) Peg Count	MTCE (OPM008)
34	Peripheral Loop (PELP) Usage	MTCE (OPM008)
35	SLC-96 (SLCS) Peg Count	MTCE (OPM008)
36	SLC-96 (SLCS) Usage	MTCE (OPM008)
37	SCM-10S Controller (SCSC) Peg Count	MTCE (OPM008)
38	SCM-10S Controller (SCSC) Usage	MTCE (OPM008)
39	Remote Line Subgroup (RLSG) Peg Count	MTCE (OPM008)
40	Remote Line Subgroup (RLSG) Usage	MTCE (OPM008)
41	Remote Line Concentrating Module (RLCM) Peg Count	MTCE (OPM008)
42	Remote Line Concentrating Module (RLCM) Usage	MTCE (OPM008)
43	SCM-10U Controller (SCUC) Peg Count	MTCE (OPM008)
44	SCM-10U Controller (SCUC) Usage	MTCE (OPM008)
45	Remote Carrier Urban (RCU) Controller (RCUC) Peg Count	MTCE (OPM008)
46	Remote Carrier Urban (RCU) Controller (RCUC) Usage	MTCE (OPM008)
47	Remote Carrier Urban (RCU) Line Sub-group (ULSG) Peg Count	MTCE (OPM008)
48	Remote Carrier Urban (RCU) Line Sub-group (ULSG) Usage	MTCE (OPM008)
49	Universal Tone Receiver (UTR) Peg Count	MTCE (OPM008)
50	Universal Tone Receiver (UTR) Usage	MTCE (OPM008)
51	Universal Tone Receiver (UTR) Channel (UTRC) Peg Count	MTCE (OPM008)
52	Universal Tone Receiver (UTR) Channel (UTRC) Usage	MTCE (OPM008)
53	Hazard Line (HAZL) Peg Count	MTCE (OPM008)
54	Hazard Line (HAZL) Usage	MTCE (OPM008)
55	Overvoltage (OVLT) Peg Count	MTCE (OPM008)
56	Overvoltage (OVLT) Usage	MTCE (OPM008)
57	RSC-S (RSCS) Peg Count	MTCE (OPM008)
58	RSC-S (RSCS) Usage	MTCE (OPM008)
59	Digital Signal Interface (DSI) Peg Count	MTCE (OPM008)
60	Digital Signal Interface (DSI) Usage	MTCE (OPM008)
61	DSI Link (DSLK) Peg Count	MTCE (OPM008)
62	DSI Link (DSLK) Usage	MTCE (OPM008)

<b>Table 2-Z: (Continued)</b>		
<b>Maintenance Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
63	Integrated Services Digital Network Download Attempts (IDLA)	MTCE (OPM008)
64	Integrated Services Digital Network Download Failures (IDLF)	MTCE (OPM008)
65	Enhanced Subscriber Module Access (ESMA) Controller Maintenance Request Peg Count (ESMC)	MTCE (OPM008)
66	Enhanced Subscriber Module Access (ESMA) Controller Maintenance Usage (ESMC)	MTCE (OPM008)
67	Integrated Digital Terminal (IDT) Maintenance Request Peg Count	MTCE (OPM008)
68	Integrated Digital Terminal (IDT) Maintenance Usage	MTCE (OPM008)
69	EDCH Maintenance Request Peg Count	MTCE (OPM008)
70	EDCH Maintenance Usage	MTCE (OPM008)
71	Star Hub Controller Maintenance Request Peg Count (HUBC)	MTCE (OPM008)
72	Star Hub Controller Maintenance Usage (HUBC)	MTCE (OPM008)
73	Not operational.	NA
74	Not operational.	NA

## Enhanced 800 Services (E800) Measurements (AXH)

Table 2-AA explains the fields of the Enhanced 800 Services (E800) Measurements data block.

<b>Table 2-AA: E800 Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00011	NA
2	Number Services Call Originations (NCISO)	E800 (OPM025)
3	Blocked Calls - Vacant Codes (BCVC)	E800 (OPM025)
4	Blocked Calls - Mass Calling (BCMC)	E800 (OPM025)
5	Blocked Calls - Service Control Point (SCP) Overload Controls (BCOC)	E800 (OPM025)
6	Blocked Calls - SMS Initiated Controls (BCSC)	E800 (OPM025)
7	Block List Overflow - 6-digit Vacant Code (OSIX)	E800 (OPM025)
8	Block List Overflow - 10-digit Vacant code (OTEN)	E800 (OPM025)
9	Block List Overflow - Nonpurchased NPA (ONPA)	E800 (OPM025)
10	Block List Overflow - SCP Overload (OOVL)	E800 (OPM025)
11	Block List Overflow - Mass Calling (OMCL)	E800 (OPM025)
12	Block List Overflow - SMS Initiated (OSMS)	E800 (OPM025)

## Common Channel Signaling #7 (CCS7) Link Measurements (AXI)

Table 2-AB explains the fields of the CCS7 Link Measurements data block. Fields 2 through 12 are repeated for each assigned link.

<b>Table 2-AB: CCS7 Link Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each link: 00013	NA
2	Link Number. 0xxyy where xx is the link set and yy is the link within the set.	S7L2 (OPM020)
3	Cumulative duration of link in in-service state (INSV)	S7L2 (OPM020)
4	Cumulative duration of SL unavailability for any reason (LNAV)	S7L2 (OPM020)
5	Number of SIF and SIO octets transmitted (OCTX)	S7L2 (OPM020)
6	Number of SIF and SIO octets received (OCTR)	S7L2 (OPM020)
7	Number of Message Signaling Units (MSUs) discarded due to SL congestion - threshold 1 (MSU1)	S7L2 (OPM020)
8	Number of MSUs discarded due to SL congestion - threshold 2 (MSU2)	S7L2 (OPM020)
9	Number of MSUs discarded due to SL congestion - threshold 3 (MSU3)	S7L2 (OPM020)
10	Number of congestion events resulting in the loss of MSUs - threshold 1 (CGL1)	S7L2 (OPM020)
11	Number of congestion events resulting in the loss of MSUs - threshold 2 (CGL2)	S7L2 (OPM020)
12	Number of congestion events resulting in the loss of MSUs - threshold 3 (CGL3)	S7L2 (OPM020)
13	Percentage showing Level 2 average processor usage rate	PRO (OPM012)
14	Percentage showing Level 2 maximum processor usage rate	PRO (OPM012)

## Common Channel Signaling #7 (CCS7) Office Data Measurements (AXJ)

Table 2-AC explains the fields of the CCS7 Office Data Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AC: CCS7 Office Data Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00024	NA
2	SCCP routing failure: Network failure. Point code not available (DPUN).	SCCP (OPM023)
3	SCCP routing failure: Network congestion (NWCG).	SCCP (OPM023)
4	SCCP routing failure: Subsystem failure (SSFL).	SCCP (OPM023)
5	SCCP routing failure: Subsystem congestion (SSCG).	SCCP (OPM023)
6	SCCP routing failure: Unequipped user (UNEQ).	SCCP (OPM023)
7	UDTS messages sent to SCCP (UDTS).	SCCP (OPM023)
8	UDTS messages received by SCCP (UDTR).	SCCP (OPM023)
9	Total SCCP messages received (MSGR).	SCCP (OPM023)
10	Total SCCP messages sent (MSGs).	SCCP (OPM023)
11	Total messages sent by Class 0: connectionless only (SNT0)	SCCP (OPM023)
12	Total messages sent by Class 1: connectionless only. This field is not currently implemented.	SCCP (OPM023)
13	Total messages received by Class 0: connectionless only (REC0)	SCCP (OPM023)
14	Total messages received by Class 1: connectionless only. This field is not currently implemented.	SCCP (OPM023)
15	Total number of TCAP messages sent by the node (MSNT)	TCAP (OPM024)
16	Total number of TCAP messages received by the node (MREC)	TCAP (OPM024)
17	TCAP protocol error in transaction portion: Unrecognized package type (PKGT)	TCAP (OPM024)
18	TCAP protocol error in transaction portion: Incorrect transaction portion (INCT)	TCAP (OPM024)
19	TCAP protocol error in transaction portion: Badly structured transaction portion (BADT)	TCAP (OPM024)
20	TCAP protocol error in transaction portion: Unrecognized transaction ID (TRID)	TCAP (OPM024)
21	TCAP protocol error in component portion: Unrecognized component (COMP)	TCAP (OPM024)

<b>Table 2-AC: (Continued)</b>		
<b>CCS7 Office Data Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
22	TCAP protocol error in component portion: Incorrect component portion (INCC)	TCAP (OPM024)
23	TCAP protocol error in component portion: Badly structured component portion (BADC)	TCAP (OPM024)
24	TCAP protocol error in component portion: Invoke problem, unrecognized correlation ID (NVID)	TCAP (OPM024)
25	TCAP protocol error in component portion: Return error problem, unrecognized correlation ID (REID) and also when the SSP receives a rejection component in response to an SSP query.	TCAP (OPM024)

### Emergency Stand-Alone (ESA) Measurements (AXK)

Table 2-AD explains the fields of the Emergency Stand-Alone (ESA) Measurements data block. The length of this section varies according to the number of remotes configured in the office. The DMS-10 switch prints the ESA data block in a packet format. Each packet contains entries for four remotes. A maximum of 16 packets is provided.

Table 2-AD contains the data block explanations for one remote. Fields 2 through 22 are repeated for each remote. If enough remotes are not assigned in order to fill the entire packet, entries for unassigned remotes are assigned the value of 65530, indicating they are not implemented.

<b>Table 2-AD: Emergency Stand-Alone Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each remote: 00021	NA
2	ESA Group Identification Number	NA
3	Origination Calls (ORIG) Peg Count	ESA (OPM026)
4	Origination Calls (ORIG) Blockage	ESA (OPM026)
5	Termination Calls (TERM) Peg Count	ESA (OPM026)
6	Termination Calls (TERM) Blockage	ESA (OPM026)
7	Originating/Terminating (ORTM) Peg Count	ESA (OPM026)
8	Lines System-Made-Busy (LSMB) Peg Count	ESA (OPM026)
9	Coin Faults (COIF) Peg Count	ESA (OPM026)
10	Ring Pretrip (RGPT) Peg Count	ESA (OPM026)
11	Ring Block (RGB) Peg Count	ESA (OPM026)
12	Ringing Continuity Failure (RGCF) Peg Count	ESA (OPM026)
13	Ringing Test Register Failure (RGTR) Peg Count	ESA (OPM026)
14	Translation Error (XLAT) Peg Count	ESA (OPM026)
15	Prefix Usage (PRFX) Peg count	ESA (OPM026)
16	Trunk Origination (TORG) Peg count	ESA (OPM026)
17	Trunk Origination (TORG) Blockage	ESA (OPM026)
18	Trunk Termination (TTRM) Peg count	ESA (OPM026)
19	Trunk Termination (TTRM) Blockage	ESA (OPM026)
20	Trunk Origination - Termination (TORT) Peg count	ESA (OPM026)
21	Trunk System-Made-Busy (TSMB) Peg count	ESA (OPM026)
22	Trunk Translation Error (TXL) Peg count	ESA (OPM026)

## Remote Intraswitching (INTR) Measurements (AXL)

Table 2-AE explains the fields of the Remote Intraswitching (INTR) Measurements data block. The length of this section varies according to the number of remotes configured in the office. The DMS-10 switch prints the INTR data block in a packet format. Each packet contains entries for four remotes, and a maximum of 16 packets is provided.

Table 2-AD contains the data block explanations for one remote. Fields 2 through 16 are repeated for each remote. If enough remotes are not assigned in order to fill the entire packet, entries for unassigned remotes are assigned the value of 65530, indicating they are not implemented.

<b>Table 2-AE: Remote Intraswitching (INTR) Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each remote: 00015	NA
2	INTR Group Identification Number	NA
3	Total Calls (TOTC) Peg Count	INTR (OPM027)
4	Total Calls (TOTC) Blockage	INTR (OPM027)
5	Total Calls (TOTC) Usage	INTR (OPM027)
6	Interunit Calls (INTE) Peg Count	INTR (OPM027)
7	Interunit Calls (INTE) Blockage	INTR (OPM027)
8	Interunit Calls (INTE) Usage	INTR (OPM027)
9	Intraunit-0 Calls (IAU0) Peg Counts	INTR (OPM027)
10	Intraunit-0 Calls (IAU0) Blockage	INTR (OPM027)
11	Intraunit-0 Calls (IAU0) Usage	INTR (OPM027)
12	Intraunit-1 Calls (IAU1) Peg Counts	INTR (OPM027)
13	Intraunit-1 Calls (IAU1) Blockage	INTR (OPM027)
14	Intraunit-1 Calls (IAU1) Usage	INTR (OPM027)
15	Transferred Calls (XFER) Peg Count	INTR (OPM027)
16	Transferred Calls (XFER) Blockage	INTR (OPM027)

### DMO Modifiable Pool Measurements (AXM)

Table 2-AF explains the fields of the DMO Modifiable Pool Measurements data block.

The Billing Register (BR) information is output only for offices configured for Automatic Message Accounting (AMA). The Data Link Controller Output Register Pool (MDLC), Satellite Bulk Pool in the Host Switching Office (SSOB), and Billing Pool for Satellite Formatted Billing in the Host Switching Office (AMAB) information is output only for offices in a DMS-10 Cluster configuration. If the information is not output, the entries are given the value 65530, indicating they are not implemented.

<b>Table 2-AF: DMO Modifiable Pool Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items per pool type: 6	NA
2	Call Register Pool (CR) Identification	POOL (OPM019)
3	Call Register Pool (CR) Allocated Count	POOL (OPM019)
4	Call Register Pool (CR) Usable Count	POOL (OPM019)
5	Call Register Pool (CR) Idle Count	POOL (OPM019)
6	Call Register Pool (CR) Blockage	POOL (OPM019)
7	Call Register Pool (CR) Peg Count	POOL (OPM019)
8	Line Register Pool (LR) Identification	POOL (OPM019)
9	Line Register Pool (LR) Allocated Count	POOL (OPM019)
10	Line Register Pool (LR) Usable Count	POOL (OPM019)
11	Line Register Pool (LR) Idle Count	POOL (OPM019)
12	Line Register Pool (LR) Blockage	POOL (OPM019)
13	Line Register Pool (LR) Peg Count	POOL (OPM019)
14	Message Pool I/O System (MTTY) Identification	POOL (OPM019)
15	Message Pool I/O System (MTTY) Allocated Count	POOL (OPM019)
16	Message Pool I/O System (MTTY) Usable Count	POOL (OPM019)
17	Message Pool I/O System (MTTY) Idle Count	POOL (OPM019)
18	Message Pool I/O System (MTTY) Blockage	POOL (OPM019)
19	Message Pool I/O System (MTTY) Peg Count	POOL (OPM019)
20	Digit Buffer Pool (DIGB) Identification	POOL (OPM019)
21	Digit Buffer Pool (DIGB) Allocated Count	POOL (OPM019)
22	Digit Buffer Pool (DIGB) Usable Count	POOL (OPM019)
23	Digit Buffer Pool (DIGB) Idle Count	POOL (OPM019)
24	Digit Buffer Pool (DIGB) Blockage	POOL (OPM019)

<b>Table 2-AF: (Continued)</b>		
<b>DMO Modifiable Pool Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
25	Digit Buffer Pool (DIGB) Peg Count	POOL (OPM019)
26	Billing Register Pool (BR) Identification	POOL (OPM019)
27	Billing Register Pool (BR) Allocated Count	POOL (OPM019)
28	Billing Register Pool (BR) Usable Count	POOL (OPM019)
29	Billing Register Pool (BR) Idle Count	POOL (OPM019)
30	Billing Register Pool (BR) Blockage	POOL (OPM019)
31	Billing Register Pool (BR) Peg Count	POOL (OPM019)
32	Maintenance Register Pool (MR) Identification	POOL (OPM019)
33	Maintenance Register Pool (MR) Allocated Count	POOL (OPM019)
34	Maintenance Register Pool (MR) Usable Count	POOL (OPM019)
35	Maintenance Register Pool (MR) Idle Count	POOL (OPM019)
36	Maintenance Register Pool (MR) Blockage	POOL (OPM019)
37	Maintenance Register Pool (MR) Peg Count	POOL (OPM019)
38	DLC Output Register Pool (MDLC) Identification	POOL (OPM019)
39	DLC Output Register Pool (MDLC) Allocated Count	POOL (OPM019)
40	DLC Output Register Pool(MDLC) Usable Count	POOL (OPM019)
41	DLC Output Register Pool (MDLC) Idle Count	POOL (OPM019)
42	DLC Output Register Pool (MDLC) Blockage	POOL (OPM019)
43	DLC Output Register Pool (MDLC) Peg Count	POOL (OPM019)
44	Satellite Bulk Pool in HSO (SSOB) Identification	POOL (OPM019)
45	Satellite Bulk Pool in HSO (SSOB) Allocated Count	POOL (OPM019)
46	Satellite Bulk Pool in HSO (SSOB) Usable Count	POOL (OPM019)
47	Satellite Bulk Pool in HSO (SSOB) Idle Count	POOL (OPM019)
48	Satellite Bulk Pool in HSO (SSOB) Blockage	POOL (OPM019)
49	Satellite Bulk Pool in HSO (SSOB) Peg Count	POOL (OPM019)
50	Satellite Billing Pool in HSO (AMAB) Identification	POOL (OPM019)
51	Satellite Billing Pool in HSO (AMAB) Allocated Count	POOL (OPM019)
52	Satellite Billing Pool in HSO (AMAB) Usable Count	POOL (OPM019)
53	Satellite Billing Pool in HSO (AMAB) Idle Count	POOL (OPM019)
54	Satellite Billing Pool in HSO (AMAB) Blockage	POOL (OPM019)
55	Satellite Billing Pool in HSO (AMAB) Peg Count	POOL (OPM019)
56	Small Feature Buffers (SFTR) Identification	POOL (OPM019)
57	Small Feature Buffers (SFTR) Allocated Count	POOL (OPM019)
58	Small Feature Buffers (SFTR) Usable Count	POOL (OPM019)
59	Small Feature Buffers (SFTR) Idle Count	POOL (OPM019)

<b>Table 2-AF: (Continued)</b>		
<b>DMO Modifiable Pool Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
60	Small Feature Buffers (SFTR) Blockage	POOL (OPM019)
61	Small Feature Buffers (SFTR) Peg Count	POOL (OPM019)
62	Large Feature Buffers (LFTR) Identification	POOL (OPM019)
63	Large Feature Buffers (LFTR) Allocated Count	POOL (OPM019)
64	Large Feature Buffers (LFTR) Usable Count	POOL (OPM019)
65	Large Feature Buffers (LFTR) Idle Count	POOL (OPM019)
66	Large Feature Buffers (LFTR) Block Count	POOL (OPM019)
67	Large Feature Buffers (LFTR) Peg Count	POOL (OPM019)
68	Extra Large Feature Buffers (XFTR) Identification	POOL (OPM019)
69	Extra Large Feature Buffers (XFTR) Allocated Count	POOL (OPM019)
70	Extra Large Feature Buffers (XFTR) Usable Count	POOL (OPM019)
71	Extra Large Feature Buffers (XFTR) Idle Count	POOL (OPM019)
72	Extra Large Feature Buffers (XFTR) Block Count	POOL (OPM019)
73	Extra Large Feature Buffers (XFTR) Peg Count	POOL (OPM019)
74	Service Register (RSVC) Identification	POOL (OPM019)
75	Service Register (RSVC) Allocated Count	POOL (OPM019)
76	Service Register (RSVC) Usable Count	POOL (OPM019)
77	Service Register (RSVC) Idle Count	POOL (OPM019)
78	Service Register (RSVC) Block Count	POOL (OPM019)
79	Service Register (RSVC) Peg Count	POOL (OPM019)
80	ISDN Call Buffer for Q.931 signalling protocol (Q931) Identification	POOL (OPM019)
81	ISDN Call Buffer for Q.931 signalling protocol (Q931) Allocated Count	POOL (OPM019)
82	ISDN Call Buffer for Q.931 signalling protocol (Q931) Usable Count	POOL (OPM019)
83	ISDN Call Buffer for Q.931 signalling protocol (Q931) Idle Count	POOL (OPM019)
84	ISDN Call Buffer for Q.931 signalling protocol (Q931) Block Count	POOL (OPM019)
85	ISDN Call Buffer for Q.931 signalling protocol (Q931) Peg Count	POOL (OPM019)
86	ISDN Customer Premise Equipment Buffer (CPEB) Identification	POOL (OPM019)
87	ISDN Customer Premise Equipment Buffer (CPEB) Allocated Count	POOL (OPM019)
88	ISDN Customer Premise Equipment Buffer (CPEB) Usable Count	POOL (OPM019)
89	ISDN Customer Premise Equipment Buffer (CPEB) Idle Count	POOL (OPM019)
90	ISDN Customer Premise Equipment Buffer (CPEB) Block Count	POOL (OPM019)
91	ISDN Customer Premise Equipment Buffer (CPEB) Peg Count	POOL (OPM019)
92	Transaction Register (TRNS) Identification	POOL (OPM019)
93	Transaction Register (TRNS) Allocated Count	POOL (OPM019)

<b>Table 2-AF: (Continued)</b>		
<b>DMO Modifiable Pool Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
94	Transaction Register (TRNS) Usable Count	POOL (OPM019)
95	Transaction Register (TRNS) Idle Count	POOL (OPM019)
96	Transaction Register (TRNS) Block Count	POOL (OPM019)
97	Transaction Register (TRNS) Peg Count	POOL (OPM019)
98	Transaction and Fixed Format Interface Register (TAFF) Identification	POOL (OPM019)
99	Transaction and Fixed Format Interface Register (TAFF) Allocated Count	POOL (OPM019)
100	Transaction and Fixed Format Interface Register (TAFF) Usable Count	POOL (OPM019)
101	Transaction and Fixed Format Interface Register (TAFF) Idle Count	POOL (OPM019)
102	Transaction and Fixed Format Interface Register (TAFF) Block Count	POOL (OPM019)
103	Transaction and Fixed Format Interface Register (TAFF) Peg Count	POOL (OPM019)

## Simplified Message Desk Interface (AXN)

Table 2-AG explains the fields of the Simplified Message Desk Interface (SMDI) Measurements data block. Fields 2 through 12 are repeated four times, once for each possible SMDI port. If an SMDI port is not configured, then the fields are given a value of 65530, indicating that they are not used.

<b>Table 2-AG: Simplified Message Desk Interface Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each SMDI register: 00011	NA
2	SMDI Unit Number	NA
3	Input Peg Count (INPU)	SMDI (OPM028)
4	Input Messages Discarded Count (INPU)	SMDI (OPM028)
5	Output Peg Count (OUT)	SMDI (OPM028)
6	Output Messages Blocked Count (OUT)	SMDI (OPM028)
7	Successful MDSS Activation Messages Received Peg Count (MACT)	SMDI (OPM028)
8	MDSS Activation Messages Blocked Count (MACT)	SMDI (OPM028)
9	Successful MDSS Deactivation Messages Received Peg Count (MDAC)	SMDI (OPM028)
10	MDSS Deactivation Messages Blocked Count (MDAC)	SMDI (OPM028)
11	Successful MDSS Message Transfers from the DMS-10 Switch to the VMS Peg Count (MERR)	SMDI (OPM028)
12	MDSS Message Transfers from the DMS-10 Switch to the VMS Blocked Count (MERR)	SMDI (OPM028)

**CLASS Measurements (AXO)**

Table 2-AH explains the fields of the Custom Local Area Signaling Services (CLASS) Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AH: CLASS Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 0111	NA
2	ACB Activation (ACT) Peg Count	CLAS (OPM030)
3	ACB Activation (ACT) Blockage	CLAS (OPM030)
4	ACB Long-term Denial (LDEN) Peg Count	CLAS (OPM030)
5	ACB Short-term Denial (SDEN) Peg Count	CLAS (OPM030)
6	ACB Short-term Denial Tone (STON) Peg Count	CLAS (OPM030)
7	ACB Immediate Processing (IMED) Peg Count	CLAS (OPM030)
8	ACB Delayed Processing (DLAY) Peg Count	CLAS (OPM030)
9	ACB Timeout (TIME) Peg Count	CLAS (OPM030)
10	ACB Resumption (RSUM) Peg Count	CLAS (OPM030)
11	ACB SCR or ACB Anonymous Call Rejection (ACR) Response Peg Count.	CLAS (OPM030)
12	ACB Deactivation (DACT) Peg Count	CLAS (OPM030)
13	ACB TCAP Timeout (TCTO) Peg Count	CLAS (OPM030)
14	ACB TCAP Error (TCER) Peg Count	CLAS (OPM030)
15	AR Activation (ACT) Peg Count	CLAS (OPM030)
16	AR Activation (ACT) Blockage	CLAS (OPM030)
17	AR Two-stage Activation (2STG) Peg Count	CLAS (OPM030)
18	AR Long-term Denial (LDEN) Peg Count	CLAS (OPM030)
19	AR Short-term Denial (SDEN) Peg Count	CLAS (OPM030)
20	AR Short-term Denial Tone (STON) Peg Count	CLAS (OPM030)
21	AR Immediate Processing (IMED) Peg Count	CLAS (OPM030)
22	AR Delayed Processing (DLAY) Peg Count	CLAS (OPM030)
23	AR Timeout (TIME) Peg Count	CLAS (OPM030)
24	AR Resumption (RSUM) Peg Count	CLAS (OPM030)
25	AR SCR or AR Anonymous Call Rejection (ACR) Response Peg Count.	CLAS (OPM030)
26	AR Deactivation (DACT) Peg Count	CLAS (OPM030)
27	AR TCAP Timeout (TCTO) Peg Count	CLAS (OPM030)

<b>Table 2-AH: (Continued)</b>		
<b>CLASS Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
28	AR TCAP Error (TCER) Peg Count	CLAS (OPM030)
29	CND Directory Number (DN) Transmission Peg Count	CLAS (OPM030)
30	CND Private (PRIV) 'P' Transmission Peg Count	CLAS (OPM030)
31	CND Unavailable (UNAV) 'O' Peg Count	CLAS (OPM030)
32	CND Customer Activation (ACT) Peg Count	CLAS (OPM030)
33	CND Customer Deactivation (DACT) Peg Count	CLAS (OPM030)
34	CNB Activation (ACT) Peg Count	CLAS (OPM030)
35	CNB Activation (ACT) Blockage	CLAS (OPM030)
36	CNB Private (PRIV) DN (DN Suppression) Peg Count	CLAS (OPM030)
37	CNB Public (PUBL) DN (DN Suppression Removed) Peg Count	CLAS (OPM030)
38	COT Activation (ACT) Peg Count	CLAS (OPM030)
39	COT Activation (ACT) Blockage	CLAS (OPM030)
40	COT DN Unavailable (UNAV) Peg Count	CLAS (OPM030)
41	COT Two-stage Activation (2STG) ('1' dialed) Peg Count	CLAS (OPM030)
42	COT Trace (TRAC) Confirmation Peg Count	CLAS (OPM030)
43	Screen List Editing (SLE) for SCA Sessions Peg Count	CLAS (OPM030)
44	Screen List Editing (SLE) for SCA Blockage	CLAS (OPM030)
45	Screen List Editing (SLE) for SCA 10-second Usage	CLAS (OPM030)
46	SCA Activations (ACT) Peg Count	CLAS (OPM030)
47	SCA Deactivations (DACT) Peg Count	CLAS (OPM030)
48	SCA Screened (SCRN) Calls Peg Count	CLAS (OPM030)
49	SCA Screened Calls Rejected (REJ) Peg Count	CLAS (OPM030)
50	SCA TCAP Timeout (TCTO) Peg Count	CLAS (OPM030)
51	SCA TCAP Error (TCER) Peg Count	CLAS (OPM030)
52	Screen List Editing (SLE) for SCF Sessions Peg Count	CLAS (OPM030)
53	Screen List Editing (SLE) for SCF Blockage	CLAS (OPM030)
54	Screen List Editing (SLE) for SCF 10-second Usage	CLAS (OPM030)
55	SCF Activations (ACT) Peg Count	CLAS (OPM030)
56	SCF Deactivations (DACT) Peg Count	CLAS (OPM030)
57	SCF Screened (SCRN) Calls Peg Count	CLAS (OPM030)
58	SCF Screened Calls Forwarded (CFW) Peg Count	CLAS (OPM030)
59	SCF TCAP Timeout (TCTO) Peg Count	CLAS (OPM030)
60	SCF TCAP Error (TCER) Peg Count	CLAS (OPM030)
61	Screen List Editing (SLE) for SCR Sessions Peg Count	CLAS (OPM030)
62	Screen List Editing (SLE) for SCR Blockage	CLAS (OPM030)

<b>Table 2-AH: (Continued)</b>		
<b>CLASS Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
63	Screen List Editing (SLE) for SCR 10-second Usage	CLAS (OPM030)
64	SCR Activations (ACT) Peg Count	CLAS (OPM030)
65	SCR Deactivations (DACT) Peg Count	CLAS (OPM030)
66	SCR Screened (SCRN) Calls Peg Count	CLAS (OPM030)
67	SCR Screened Calls Rejected (REJ) Peg Count	CLAS (OPM030)
68	SCR TCAP Timeout (TCTO) Peg Count	CLAS (OPM030)
69	SCR TCAP Errors (TCER) Peg Count	CLAS (OPM030)
70	Screen List Editing (SLE) for SDR Sessions Peg Count	CLAS (OPM030)
71	Screen List Editing (SLE) for SDR Blockage	CLAS (OPM030)
72	Screen List Editing (SLE) for SDR 10-second Usage	CLAS (OPM030)
73	SDR Activations (ACT) Peg Count	CLAS (OPM030)
74	SDR Deactivations (DACT) Peg Count	CLAS (OPM030)
75	SDR Screened (SCRN) Calls Peg Count	CLAS (OPM030)
76	SDR Distinctive Ringing (DRNG) Attempts Peg Count	CLAS (OPM030)
77	SDR Distinctive Call Waiting (CWT) Tone Attempts Peg Count	CLAS (OPM030)
78	SDR TCAP Timeouts (TCTO) Peg Count	CLAS (OPM030)
79	SDR TCAP Errors (TCER) Peg Count	CLAS (OPM030)
80	CNAM Name (NAME) Peg Count	CLAS (OPM030)
81	CNAM Name Private Indicator (PRIV) Peg Count	CLAS (OPM030)
82	CNAM Unavailable Indicator (UNAV) Peg Count	CLAS (OPM030)
83	Residential data base CNAM TCAP Messages Sent (RTCQ) Peg Count	CLAS (OPM030)
84	CNAM Automatic Code Gapping Block (ACGB) Peg Count	CLAS (OPM030)
85	CNAM Automatic Code Gapping Control Table Overflow (ACGO) Peg Count	CLAS (OPM030)
86	Residential data base CNAM TCAP Timeout (RTTO) Peg Count	CLAS (OPM030)
87	CNAM TCAP Errors (TCER) Peg Count	CLAS (OPM030)
88	CNAB Activation (ACT) Attempts Peg Count	CLAS (OPM030)
89	CNAB Activation (ACT) Attempts Blockage	CLAS (OPM030)
90	CIDS Delivery (CNND) Activation Attempts Peg Count	CLAS (OPM030)
91	CIDS Delivery (CNND) Activation Blockage	CLAS (OPM030)
92	CIDS Blocking (CNNB) Activation Attempts Peg Count	CLAS (OPM030)
93	CIDS Blocking (CNNB) Activation Blockage	CLAS (OPM030)
94	ACR Activation (ACT) Attempts Peg Count	CLAS (OPM030)
95	ACR Activation (ACT) Blockage	CLAS (OPM030)

<b>Table 2-AH: (Continued)</b>		
<b>CLASS Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
96	ACR Deactivation (DACT) Attempts Peg Count	CLAS (OPM030)
97	ACR Deactivation (DACT) Blockage	CLAS (OPM030)
98	ACR Anonymous Call Rejection (REJ) Peg Count	CLAS (OPM030)
99	AR Block to Private calls (ARPR) Peg Count	CLAS (OPM030)
100	AR Block Repetitive calls (AR1X) Peg Count	CLAS (OPM030)
101	Centralized data base CNAM TCAP Messages Sent (CTCQ) Peg Count	CLAS (OPM030)
102	Local data base CNAM TCAP Messages Sent (LTCQ) Peg Count	CLAS (OPM030)
103	Centralized data base CNAM TCAP Timeout (CTTO) Peg Count	CLAS (OPM030)
104	Local data base CNAM TCAP Timeout (LTTO) Peg Count	CLAS (OPM030)
105	SCA Web Based List Requests (WEBR) Peg Count	CLAS (OPM030)
106	SCA Web Based List Updates (WEBU) Peg Count	CLAS (OPM030)
107	SCF Web Based List Requests (WEBR) Peg Count	CLAS (OPM030)
108	SCF Web Based List Updates (WEBU) Peg Count	CLAS (OPM030)
109	SCR Web Based List Requests (WEBR) Peg Count	CLAS (OPM030)
110	SCR Web Based List Updates (WEBU) Peg Count	CLAS (OPM030)
111	SDR Web Based List Requests (WEBR) Peg Count	CLAS (OPM030)
112	SD7R Web Based List Updates (WEBU) Peg Count	CLAS (OPM030)

## ISUP Measurements (AXP)

Table 2-AI explains the fields of the Integrated Services Digital Network User Part (ISUP) Measurements data block.

<b>Table 2-AI: ISUP Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 0019	NA
2	Outgoing Messages (OTGM)	ISUP (OPM031)
3	Incoming Messages (INCM)	ISUP (OPM031)
4	Error Messages (ERRM)	ISUP (OPM031)
5	Releases (REL) Initiated	ISUP (OPM031)
6	Repeated attempts due to dual seizure (SREP)	ISUP (OPM031)
7	Repeated attempts due to continuity failure (CREP)	ISUP (OPM031)
8	Repeated attempts due to other reasons (OREP)	ISUP (OPM031)
9	Call attempt failures (FAIL)	ISUP (OPM031)
10	Unsuccessful attempts due to equipment congestion (CONG)	ISUP (OPM031)
11	Unsuccessful attempts due to no circuits (NOCT) available	ISUP (OPM031)
12	Unsuccessful attempts due to incomplete addresses (ADDR)	ISUP (OPM031)
13	Unsuccessful attempts due to temporary (TEMP) failures	ISUP (OPM031)
14	Unsuccessful attempts due to unallocated (UNAL) numbers	ISUP (OPM031)
15	Unsuccessful attempts due to busy (BUSY) condition	ISUP (OPM031)
16	Unsuccessful attempts due to out-of-service (OOS) destinations	ISUP (OPM031)
17	Unsuccessful attempts due to other (OTHR) causes	ISUP (OPM031)
18	Second continuity (SCOT) check failures	ISUP (OPM031)
19	Calls performing outgoing continuity (OCOT) checks	ISUP (OPM031)
20	Trunks locally blocked (LBLO)	ISUP (OPM031)

## Line Concentrating Module (LCM) Measurements (AXQ)

Table 2-AJ explains the fields of the Line Concentrating Module (LCM) Measurements data block.

<b>Table 2-AJ: LCM Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00023	NA
2	Site number (0-31)	LCM (OPM033)
3	Bay number (1-32)	LCM (OPM033)
4	Shelf number (1-4)	LCM (OPM033)
5	Plain Old Telephone Service (POTS) origination attempts (POTS-ORIG)	LCM (OPM033)
6	POTS termination attempts (POTS-TERM)	LCM (OPM033)
7	Meridian Digital Centrex (MDC) (non-Meridian Business Sets [MBS]) origination attempts (MDC-ORIG)	LCM (OPM033)
8	MDC (non-MBS) termination attempts (MDC-TERM)	LCM (OPM033)
9	MDC (non-MBS) Multiple Access Directory Number (MADN) origination attempts (MDN-ORIG)	LCM (OPM033)
10	MDC (non-MBS) Multiple Access Directory Number (MADN) termination attempts (MDN-TERM)	LCM (OPM033)
11	MDC (non-MBS) secondary Multiple Access Directory Number (MADN) member termination attempts (SMDN-TERM)	LCM (OPM033)
12	MDC (MBS without display) origination attempts (MBS-ORIG)	LCM (OPM033)
13	MDC (MBS without display) termination attempts (MBS-TERM)	LCM (OPM033)
14	MDC (MBS without display) MADN origination attempts (MMDN-ORIG)	LCM (OPM033)
15	MDC (MBS without display) MADN termination attempts (MMDN-TERM)	LCM (OPM033)
16	MDC (MBS without display) secondary MADN member termination attempts (SMMD-TERM)	LCM (OPM033)
17	MDC (MBS display) origination attempts (DMDC-ORIG)	LCM (OPM033)
18	MDC (MBS display) termination attempts (DMDC-TERM)	LCM (OPM033)
19	MDC (MBS display) MADN origination attempts (DMMD-ORIG)	LCM (OPM033)
20	MDC (MBS display) MADN termination attempts (DMMD-TERM)	LCM (OPM033)
21	MDC (MBS display) secondary MADN member termination attempts (DMSM-TERM)	LCM (OPM033)
22	MDC (MBS display) count of messages sent to illuminate the Busy Lamp Field	LCM (OPM033)
23	Integrated Services Digital Network (ISDN) origination attempts (ISDN-ORIG)	LCM (OPM033)

<b>Table 2-AJ: (Continued)</b> <b>LCM Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
24	Integrated Services Digital Network (ISDN) termination attempts (ISDN-TERM)	LCM (OPM033)

## Multiple Access Directory Number (MADN) Measurements (AXR)

Table 2-AK explains the fields of the Multiple Access Directory Number (MADN) Measurements data block.

The AXR measurement block can be used only when the Duplicate NXX feature is not configured in the switch (prompt NXX = NO, in Overlay CNFG (SYS)). If the Duplicate NXX feature is configured in the switch (prompt NXX = YES, in Overlay CNFG (SYS)), MADN measurements are recorded in the BXE measurement block.

<b>Table 2-AK: MADN Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items per MADN: 0007	NA
2	00NXX - NXX portion of the Multiple Access Directory Number (MADN)	MADN (OPM034)
3	0DEFG - DEFG portion of the MADN	MADN (OPM034)
4	MADN origination attempts (ORIG)	MADN (OPM034)
5	MADN termination attempts (TERM)	MADN (OPM034)
6	MADN secondary member termination attempts (STRM)	MADN (OPM034)
7	Count of answers by the primary MADN member (PANS)	MADN (OPM034)
8	Count of answers by secondary MADN members (SANS)	MADN (OPM034)

## Span Line Errors (SPAN) Measurements (AXS)

Table 2-AL explains the fields of the Span Line Errors (SPAN) Measurements data block.

<b>Table 2-AL: SPAN Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each Digital Carrier Module or Digital Signal Interface: 0007	NA
2	Site number (0-31)	SPAN (OPM035)
3	Bay number (1-32 for PE bay; 33-36 for CE bay)	SPAN (OPM035)
4	Shelf number (1-4 for DCM; 1-5 for DSI)	SPAN (OPM035)
5	Card number for DCM: 2, 5, 8, 12, 15, 18; and for DSI : 4, 6, 8, 10, 12, 14, 16, 18, 20, 22 (link 0); and 104 (card number 4 + 100), 106, 108, 110, 112, 114, 116, 118, 120, 122, (link 1)	SPAN (OPM035)
6	<i>site PE b s p</i> - Digital Carrier Module slips; <i>site CE b s p l</i> - Digital Signal Interface slips.	SPAN (OPM035)
7	<i>site PE b s p</i> - Digital Carrier Module framing errors; <i>site CE b s p l</i> - Digital Signal Interface framing errors.	SPAN (OPM035)
8	<i>site PE b s p</i> - Digital Carrier Module bipolar violation error rate; <i>site CE b s p l</i> - Digital Signal Interface bipolar violation error rate.	SPAN (OPM035)
9	CRC error rate for errors encountered on the DSI link. This field is filled with zeroes for DCM or DSI links that are not configured for ESF.	SPAN (OPM035)

## Outgoing Line Trunk Group Measurements (AXT)

Table 2-AM explains the fields of the Outgoing Line Trunk Group Measurements data block. The DMS-10 switch prints only entries for assigned line trunk groups and does not print entries for unassigned line trunk groups. Table 2-AM explains the data block for one entry. Fields 2 through 6 are repeated for each assigned outgoing line trunk group. The line trunk group numbers in this section are in ascending order.

<b>Table 2-AM: Outgoing Line Trunk Group Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each outgoing line trunk group: 00005	NA
2	Outgoing Line Trunk Group Identification Number	NA
3	Outgoing Line Trunk Group (OGP) Peg Count	TRK (OPM004)
4	Outgoing Line Trunk Group (OGP) Usage	TRK (OPM004)
5	Outgoing Line Trunk Group (OGP) Overflow	TRK (OPM004)
6	Outgoing Line Trunk Group (OGP) Maintenance Usage	TRK (OPM004)

## Incoming Line Trunk Group Measurements (AXU)

Table 2-AN explains the fields of the Incoming Line Trunk Group Measurements data block. The DMS-10 switch prints only entries for assigned line trunk groups and does not print entries for unassigned line trunk groups. Table 2-AN explains the data block for one entry. Fields 2 through 5 are repeated for each assigned incoming line trunk group. The line trunk group numbers in this section are in ascending order.

<b>Table 2-AN: Incoming Line Trunk Group Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each incoming line trunk group: 00004	NA
2	Incoming Line Trunk Group Identification Number	NA
3	Incoming Line Trunk Group (IGP) Peg Count	TRK (OPM004)
4	Incoming Line Trunk Group (IGP) Usage	TRK (OPM004)
5	Incoming Line Trunk Group (IGP) Maintenance Usage	TRK (OPM004)

## Common Peripheral Module (CPM) Measurements (AXV)

Table 2-AO explains the fields of the Common Peripheral Module (CPM) Measurements data block. The AXV block also includes measurements for the SCM-10A feature.

<b>Table 2-AO: CPM Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each CPM (RSC-S, ESMA): 12	NA
2	site number	CPM (OPM036)
3	frame number	CPM (OPM036)
4	shelf number	CPM (OPM036)
5	Tone and Digit Sender PEG count	CPM (OPM036)
6	UTR PEG count	CPM (OPM036)
7	CMR PEG count	CPM (OPM036)
8	Tone and Digit Sender BLK/OVFL count	CPM (OPM036)
9	UTR BLK/OVFL count	CPM (OPM036)
10	CMR BLK/OVFL count	CPM (OPM036)
11	Tone and Digit Sender USE count	CPM (OPM036)
12	UTR USE count	CPM (OPM036)
13	CMR USE count	CPM (OPM036)

## DS-30A Link (D30L) and DS-1 Span Line (D1LK, SRLK) Measurements (AXW)

Table 2-AP explains the fields of the DS-30A Link (D30L) and DS-1 Span Line (D1LK, SRLK) Measurements data block.

<b>Table 2-AP: D30L, D1LK, SRLK Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 24	NA
2	D30L location - site number	CPM (OPM036)
3	D30L location - frame number	CPM (OPM036)
4	D30L location - shelf number	CPM (OPM036)
5	D30L location - link number	CPM (OPM036)
6	D30L PEG count	CPM (OPM036)
7	D30L BLK/OVFL count	CPM (OPM036)
8	D30L USE count	CPM (OPM036)
9	D30L MTCE count	CPM (OPM036)
10	D1LK location - site number (+ 100)	D1LP (OPM018)
11	D1LK location - frame number	D1LP (OPM018)
12	D1LK location - shelf number	D1LP (OPM018)
13	D1LK location - link number	D1LP (OPM018)
14	D1LK PEG count	D1LP (OPM018)
15	D1LK BLK/OVLF count	D1LP (OPM018)
16	D1LK USE count	D1LP (OPM018)
17	D1LK MTCE count	D1LP (OPM018)
18	SRLK location - site number (+ 200)	D1LP (OPM018)
19	SRLK location - network shelf	D1LP (OPM018)
20	SRLK location - interface number	D1LP (OPM018)
21	SRLK location - loop	D1LP (OPM018)
22	SRLK PEG count	D1LP (OPM018)
23	SRLK BLK/OVFL count	D1LP (OPM018)
24	SRLK USE count	D1LP (OPM018)
25	SRLK MTCE count	D1LP (OPM018)

### Common Channel Signaling #7 (CCS7) Linkset Measurements (AXX)

Table 2-AQ explains the fields of the CCS7 Link Measurements data block. Only fields 2 through 10 are output if the office is not configured as an STP.

<b>Table 2-AQ: CCS7 Linkset Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	number of data items for each link: 00009, without STP; 00022, with STP	NA
2	linkset number (1-38; output as part of the OPM header information)	S7L3 (OPM021)
3	duration, in seconds, of signaling linkset unavailability (UNAV)	S7L3 (OPM021)
4	duration, in seconds, of adjacent signaling point inaccessibility (INAC)	S7L3 (OPM021)
5	number of times a transfer prohibited or transfer cluster prohibited message was transmitted due to a link set failure (TRPR)	S7L3 (OPM021)
6	number of times a transfer allowed and transfer cluster allowed message was transmitted due to a link set recovery (TRAL)	S7L3 (OPM021)
7	number of MSUs transmitted (MTX)	S7L3 (OPM021)
8	number of MSUs received (MRX)	S7L3 (OPM021)
9	number of octets transmitted (OTX) (in 100 octets)	S7L3 (OPM021)
10	number of octets received (ORX) (in 100 octets)	S7L3 (OPM021)
11	number of transfer prohibited and transfer cluster prohibited messages transmitted (TPTX)	S7L3 (OPM021)
12	number of transfer prohibited and transfer cluster prohibited messages received (TPRX)	S7L3 (OPM021)
13	number of transfer restricted and transfer cluster restricted messages transmitted (TRTX)	S7L3 (OPM021)
14	number of transfer restricted and transfer cluster restricted messages received (TRRX)	S7L3 (OPM021)
15	number of transfer allowed and transfer cluster allowed messages transmitted (TATX)	S7L3 (OPM021)
16	number of transfer allowed and transfer cluster allowed messages received (TARX)	S7L3 (OPM021)
17	number of signaling route set test messages transmitted (RSTX)	S7L3 (OPM021)
18	number of signaling route set test messages received (RSRX)	S7L3 (OPM021)
19	number of signaling route set congestion test messages transmitted (RCTX)	S7L3 (OPM021)
20	number of signaling route set congestion test messages received (RCRX)	S7L3 (OPM021)
21	number of transfer control messages transmitted (TCTX)	S7L3 (OPM021)
22	number of transfer control messages received (TCRX)	S7L3 (OPM021)

<b>Table 2-AQ: (Continued)</b>		
<b>CCS7 Linkset Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
23	number of signaling link tests messages received (TMRX)	S7L3 (OPM021)

## Advanced Intelligent Network (AIN) Measurements (AXY)

Table 2-AR explains the fields of the Advanced Intelligent Network (AIN) Measurements data block. The table also explains the fields of the Advanced Intelligent Network (AIN) Measurements data block updated with information for the Wireless feature.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AR: AIN Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00030	NA
2	Number of off-hook Immediate triggers encountered (OHI)	AIN (OPM038)
3	Number of off-hook Delay triggers encountered (OHD)	AIN (OPM038)
4	Number of ISDN channel setup PRI triggers encountered (PRI)	AIN (OPM038)
5	Number of shared interoffice trunk triggers encountered (SIT)	AIN (OPM038)
6	Number of ISDN BRI feature activation indicator triggers encountered (BRI)	AIN (OPM038)
7	Number of feature code triggers encountered (FCD)	AIN (OPM038)
8	Number of customized dialing plan triggers encountered (CDP)	AIN (OPM038)
9	Number of Public Office Dialing Plan 3 through 10-digit triggers encountered (DIG)	AIN (OPM038)
10	Number of Public Office Dialing Plan N11 triggers encountered (N11)	AIN (OPM038)
11	Number of automatic flexible routing triggers encountered (AFR)	AIN (OPM038)
12	Number of termination attempt triggers encountered (TA)	AIN (OPM038)
13	Number of LNP queries initiated (LNPQ)	AIN (OPM038)
14	Number of AIN calls that have been received from a subtending end office (SEO)	AIN (OPM038)
15	Network management control blocks calls (NMBL)	AIN (OPM038)
16	Number of time-outs at the SSP awaiting a reply from the SCP/HLR/VLR (TMOT)	AIN (OPM038)
17	Number of invalid SCP/HLR/VLR command messages (for example, bad data) (INCM)	AIN (OPM038)
18	Number of invalid SCP/HLR/VLR command sequences (INCS)	AIN (OPM038)
19	Number of return errors or reject components (REID)	AIN (OPM038)
20	Number of times AMA data arrived in error (that is, without an AMAspID included in the message, or in the wrong package or component type) (WPKG)	AIN (OPM038)
21	Number of times the maximum length of AMA TCAP parameters was exceeded (MAXL)	AIN (OPM038)

<b>Table 2-AR: (Continued)</b>		
<b>AIN Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
22	Number of LNP query failures (LNPF)	LNP (OPM041)
23	Number of LNP queries which result in a response containing an LRN (LNPP)	LNP (OPM041)
24	Number of ISUP REL messages received at the originating exchange indicating mis-routed call to ported number (MISR)	LNP (OPM041)
25	Number of calls which encounter a vacant DN following an LNP query (UNAL)	LNP (OPM041)
26	Number of calls which encountered a vacant DN with the switch's own LRN in the LNP response message from the SCP (LRNI)	LNP (OPM041)
27	Number of "Query on Release" routing attempts (QORA)	LNP (OPM041)
28	Number of failed "Query on Release" routing attempts (QORF)	LNP (OPM041)
29	Number of "Query on Release" routing attempts, initiated by this switch, which encounter interworking (QORI)	LNP (OPM041)
30	Number of originating Called_party_busy EDP triggers armed (OCB)	AIN (OPM038)
31	Number of originating No_answer EDP triggers armed (ONA)	AIN (OPM038)

### ISDN Line (ISLN) Measurements (AXZ)

Table 2-AS explains the fields of the ISDN Line (ISLN) Measurement data block, which provides an ISDN frame transmission and receive count for the D- and Bd-channels of individual ISDN lines.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AS: ISLN Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00007	NA
2	The register or ISLN block number (up to 32)	NA
3	The number of frames transmitted by the D-channel handler (FRTX) Peg Count	ISLN (OPM039)
4	The number of frames received by the D-channel handler (FRRX) Peg Count	ISLN (OPM039)
5	The number of retransmitted frames transmitted by the D-channel handler (FRXT) Peg Count	ISLN (OPM039)
6	The number of Received Not Ready (RNR) frames generated and transmitted by the D-channel handler (RNRT) Peg Count	ISLN (OPM039)
7	The number of RNR frames received by the D-channel handler (RNRR) Peg Count	ISLN (OPM039)
8	The number of RNR frames generated by the packet handler and received through the D-channel handler (RNRR) Peg Count	ISLN (OPM039)

## ISDN Drawer (IDRW) Measurements (SNW)

Table 2-AT explains the fields of the ISDN Drawer (IDRW) Measurement data block, which provides an ISDN frame transmission and receive count for the D- and Bd-channels of an ISDN drawer.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AT: IDRW Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00018	NA
2	The IDRW site number (0-31)	IDRW (OPM040)
3	The IDRW bay number (1-32)	IDRW (OPM040)
4	The IDRW shelf number (1-4)	IDRW (OPM040)
5	The IDRW line subgroup number (0-19)	IDRW (OPM040)
6	Originating setup attempts (ORIG) Peg Count. The number of subscriber attempts to setup circuit-mode calls where the switch receives at least one digit of addressing information.	IDRW (OPM040)
7	Terminating setup attempts (TERM) Peg Count. The number of ISDN call completion attempts terminating in the DMS-10. A count is made when the switch recognizes the intended destination.	IDRW (OPM040)
8	The number of frames transmitted by the D-channel handler (FRTX) Peg Count	IDRW (OPM040)
9	The number of retransmitted frames transmitted by the D-channel handler (FRRX) Peg Count	IDRW (OPM040)
10	The number of frames received by the D-channel handler (FRXT) Peg Count	IDRW (OPM040)
11	The number of Received Not Ready (RNR) frames generated and transmitted by the D-channel handler (RNRT) Peg Count	IDRW (OPM040)
12	The number of RNR frames received by the D-channel handler (RNRR) Peg Count	IDRW (OPM040)
13	The number of frames transmitted to the packet handler on a Bd-type D-channel (FRTX) Peg Count	IDRW (OPM040)
14	The number of frames received from the packet handler on a Bd-type D-channel (FRRX) Peg Count	IDRW (OPM040)
15	The number of retransmitted frames transmitted to the packet handler on a Bd-type D-channel (FRXT) Peg Count	IDRW (OPM040)
16	The number of RNR frames generated by the D-channel handler and transmitted to the packet handler (RNRT) Peg Count	IDRW (OPM040)
17	The number of RNR frames generated by the packet handler and received through the D-channel handler (RNRR) Peg Count	IDRW (OPM040)

<b>Table 2-AT: (Continued)</b>		
<b>IDRW Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
18	The number of NCA_data messages sent (NCAD) by the SSP Peg Count	IDRW (OPM040)
19	The number of NCA_data messages received (NCAR) by the SSP Peg Count	IDRW (OPM040)

## IDT Measurements (CON)

Table 2-AU explains the fields of the IDT (CON) Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AU: IDT Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00022	NA
2	Site number of IDT (1 - 7)	NA
3	Frame number of IDT (1 - 32)	NA
4	Number of POTS origination attempts (POTS) peg count	IDT (OPM042)
5	Number of POTS termination attempts (POTS) peg count	IDT (OPM042)
6	Number of MDC non-MBS origination attempts (MDC) peg count	IDT (OPM042)
7	Number of MDC non-MBS termination attempts (MDC) peg count	IDT (OPM042)
8	Number of MDC non-MBS MADN origination attempts (MDN) peg count	IDT (OPM042)
9	Number of MDC non-MBS MADN termination attempts (MDN) peg count	IDT (OPM042)
10	Number of MDC non-MBS secondary MADN origination attempts (SMDN) peg count	IDT (OPM042)
11	Number of MDC MBS origination attempts (MBS) peg count	IDT (OPM042)
12	Number of MDC MBS termination attempts (MBS) peg count	IDT (OPM042)
13	Number of MDC MBS MADN origination attempts (MMDN) peg count	IDT (OPM042)
14	Number of MDC MBS MADN termination attempts (MMDN) peg count	IDT (OPM042)
15	Number of MDC MBS secondary MADN termination attempts (SMMD) peg count	IDT (OPM042)
16	Number of MDC MBS DISPLAY origination attempts (DMDC) peg count	IDT (OPM042)
17	Number of MDC MBS DISPLAY termination attempts (DMDC) peg count	IDT (OPM042)
18	Number of MDC MBS DISPLAY MADN origination attempts (DMMD) peg count	IDT (OPM042)
19	Number of MDC MBS DISPLAY MADN termination attempts (DMMD) peg count	IDT (OPM042)
20	Number of MDC MBS DISPLAY secondary MADN termination attempts (DMSM) peg count	IDT (OPM042)

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<b>Table 2-AU: (Continued)</b>		
<b>IDT Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
21	Number of MDC MBS DISPLAY DSS/BLF messages (#BLF) peg count	IDT (OPM042)
22	Number of ISDN origination attempts (ISDN) peg count	IDT (OPM042)
23	Number of ISDN termination attempts (ISDN) peg count	IDT (OPM042)

## ISG Measurements (PCK)

Table 2-AV explains the fields of the ISG (PCK) Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AV: ISG Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00010	NA
2	ISG bay number (up to 10)	NA
3	ISG shelf number (up to 3)	NA
4	ISG number (up to 9)	NA
5	Number of origination set-up attempts (ORIG) peg count	ISG (OPM043)
6	Number of termination set-up attempts (TERM) peg count	ISG (OPM043)
7	Number of frames retransmitted by D-channel handler (EDCH) peg count (FRXT)	ISG (OPM043)
8	Number of frames transmitted by D-channel handler (EDCH) peg count (FRTX)	ISG (OPM043)
9	Number of frames received from the packet handler (PH) on a Bd-channel peg count (FRRX)	ISG (OPM043)
10	Number of receiver-not-ready (RNR) frames generated by EDCH and transmitted peg count (RNRT)	ISG (OPM043)
11	Number of receiver-not-ready (RNR) frames received by EDCH peg count (RNRR)	ISG (OPM043)

## Bd Channel Measurements (BXA)

Table 2-AW explains the fields of the Bd Channel (BXA) Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AW: Bd Channel Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00007	NA
2	ISG bay number (up to 10)	NA
3	ISG shelf number (up to 3)	NA
4	ISG number (up to 9)	NA
5	Bd Channel number (up to 32)	NA
6	Number of retransmitted frames transmitted to the packet handler (PH) on a Bd-channel peg count (FRXT)	ISG (OPM043)
7	Number of frames transmitted to the packet handler (PH) on a Bd-channel peg count (FRTX)	ISG (OPM043)
8	Number of frames received from the packet handler (PH) on a Bd-channel peg count (FRRX)	ISG (OPM043)

## Wireless Measurements (BxB)

Table 2-AX explains the fields of the Wireless (BxB) Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AX: Wireless Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00011	NA
2	Number of origination Wireless call attempts (WBASO) peg count	WBAS (OPM044)
3	Number of termination Wireless call attempts (WBAST) peg count	WBAS (OPM044)
4	Number of NCA_Data messages received from the AIN requiring use of the multicasting table (WNCM) peg count	WBAS (OPM044)
5	Number of NCA_Data messages received from the AIN not requiring use of the multicasting table (WNCC) peg count	WBAS (OPM044)
6	Number of invalid ALT messages received from the RPCU (IALM) peg count	WBAS (OPM044)
7	Number of inter-RPCU ALT attempts (IRPA) peg count	WBAS (OPM044)
8	Number of inter-RPCU ALT completions (IRPC) peg count	WBAS (OPM044)
9	Number of ALTs not recorded due to exceeding the limit of allowed ALTs (ARLM) peg count	WBAS (OPM044)
10	Number of ALTs not recorded due to unavailability of ALT-BRs (ARBR) peg count	WBAS (OPM044)
11	Number of ALTs rejected due to unavailability of conference circuits (ARCC) peg count	WBAS (OPM044)
12	Number of ALTs rejected because network path associated with the ALT could not be obtained (ARNP) peg count	WBAS (OPM044)

## Simulated Facility Group Measurements (BXD)

Table 2-AY explains the fields of the Simulated Facility Group (BXD) Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-AY: Simulated Facility Group Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00004	NA
2	SFG identifier number	NA
3	Peg count	SFG (OPM046)
4	Blocking peg count	SFG (OPM046)
5	Usage count	SFG (OPM046)

## Multiple Access Directory Number (MADN) Measurements (BXE)

Table 2-AZ explains the fields of the BXE Multiple Access Directory Number (MADN) Measurements data block. The BXE measurement block can be used only if the Duplicate NXX feature is configured in the switch (prompt NXX = YES, in Overlay CNFG (SYS)).

<b>Table 2-AZ: MADN Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items per MADN: 0008	NA
2	00NPA - NPA portion of the Multiple Access Directory Number (MADN)	MADN (OPM034)
3	00NXX - NXX portion of the Multiple Access Directory Number (MADN)	MADN (OPM034)
4	0DEFG - DEFG portion of the MADN	MADN (OPM034)
5	MADN origination attempts (ORIG)	MADN (OPM034)
6	MADN termination attempts (TERM)	MADN (OPM034)
7	MADN secondary member termination attempts (STRM)	MADN (OPM034)
8	Count of answers by the primary MADN member (PANS)	MADN (OPM034)
9	Count of answers by secondary MADN members (SANS)	MADN (OPM034)

## Primary Rate Interface Measurements (BXF)

Table 2-BA explains the fields of the Primary Rate Interface (BXF) Measurements data block.

Entries for unused fields are given a value of 65530, indicating they are not implemented.

<b>Table 2-BA: Primary Rate Interface Measurements (BXF) data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 00005	NA
2	PRI Line Trunk Group number	NA
3	Number of frames transmitted by D-channel handler	PRI (OPM045)
4	Number of frames received by D-channel handler	PRI (OPM045)
5	Number of frames re-transmitted by D-channel handler	PRI (OPM045)
6	Number of frames received in error by D-channel handler	PRI (OPM045)

## Integrated Billing Storage and Retrieval (IBSR) Measurements (BXG)

Table 2-BB explains the fields of the Integrated Billing Storage and Retrieval (IBSR) Measurement data block, which provides the IBSR data.

<b>Table 2-BB: IBSR Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 0008	NA
2	Created Primary Files (CPRF) Peg Count	IBSR (OPM048)
3	Transferred Primary Files (XPRF) Peg Count	IBSR (OPM048)
4	Received Records (RREC) Peg Count	IBSR (OPM048)
5	Transferred Records (XREC) Peg Count	IBSR (OPM048)
6	AMA Records Stored (STOR) Peg Count	IBSR (OPM048)
7	FTP Authentication Failures (FAUF) Peg Count	IBSR (OPM048)
8	FTP Sessions (FTPS) Peg Count	IBSR (OPM048)
9	FTP File Transfer Faults (XFLT) Peg Count	IBSR (OPM048)

## Simultaneous Ringing Measurements (BXH)

Table 2-BC explains the fields of the Simultaneous Ringing Measurement data block, which provides the Simultaneous Ringing data.

<b>Table 2-BC: Simultaneous Ringing Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items: 0008	NA
2	Screen List Editing for SRNG Peg Count	SRNG (OPM049)
3	Screen List Editing for SRNG Blockage	SRNG (OPM049)
4	Screen List Editing for SRNG 10-second Usage	SRNG (OPM049)
5	SRNG Activations (ACT) Peg Count	SRNG (OPM049)
6	SRNG Deactivations (DACT) Peg Count	SRNG (OPM049)
7	SRNG Terminations (TERM) Peg Count	SRNG (OPM049)
8	SRNG Web Based List Requests (WEBR) Peg Count	SRNG (OPM049)
9	SRNG Web Based List Updates (WEBU) Peg Count	SRNG (OPM049)

## Service Node Trunk Control (BXI)

Table 2-BD explains the fields of the Service Node Trunk Control (SNTC) data block. The DMS-10 switch prints only entries for trunk groups assigned the SNTC feature and does not print entries for trunk groups not assigned SNTC. Fields 2-6 are repeated for each trunk group assigned SNTC. The trunk groups are printed in ascending order.

<b>Table 2-BD: Service Node Trunk Control Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each trunk group: 00007	NA
2	Trunk group number	NA
3	Trunk group type	NA
4	Service Node Trunk Control release requests	SNTC (OPM050)
5	Service Node Trunk Control release requests that failed	SNTC (OPM050)
6	Service Node Trunk Control Barge In requests	SNTC (OPM050)
7	Service Node Trunk Control Barge In requests that failed	SNTC (OPM050)
8	Invalid Facility Request Type	SNTC (OPM050)

**Division of Revenue/Traffic Separations Matrix Measurements (DOR)**

Table 2-BE explains the fields of the Traffic Separations Matrix Measurements data block.

If the number of the assigned TSMS registers in the office is 32 or less, the number of entries under this section is for 32 TSMS registers. However, in an office with the number of assigned TSMS registers ranging from 33 through 64, the entries are for 64 TSMS registers; and so on, up to a maximum of 8 blocks (32 TSMR/block).

Table 2-BE contains the data block explanations for one TSMS register. Fields 2 through 6 are repeated for each entry. The entries for each unassigned or deleted TSMS register within a block are given the value of 65530, indicating they are not implemented.

Each TSMS register number along with its associated measurements are forwarded to the No. 1A EADAS.

<b>Table 2-BE: Traffic Separations Matrix Measurements data items</b>		
<b>Field</b>	<b>Explanation</b>	<b>OPM Block Cross Reference</b>
1	Number of data items for each TSMS register: 00005	NA
2	TSMS Register Identification Number	NA
3	TSMS (REG#) Peg Count	TSMS (OPM014)
4	TSMS Setup (REG#) Usage	TSMS (OPM014)
5	TSMS Connect (REG#) Usage	TSMS (OPM014)
6	TSMS Setup plus Connect (REG#) Usage	TSMS (OPM014)

## Section 3: Data flow

### Data collection

Operational measurements (OPM) are collected by the DMS-10 switch according to data type. These OPMs are collected for designated registers within a designated measurement block. For example, within the network (NTWK) measurement block, data are collected in registers for Multiplex Loop Interface packs, DS-30A Interface packs, and peripheral loops.

For each register, one or several types of data are collected, for example, use, peg, etc. Measurement blocks and the registers found in each block are described in the section entitled "Measurement blocks." Data types are listed in Table 3-A.

Usage data are collected by scanning the system's resources every 10 s or every 100 s in order to determine their busy/idle status. These samples of resource status are accumulated to obtain usage measurements. Usage measurements are expressed in hundred call seconds (ccs) to a precision of 0.1 ccs for the 10-s scan interval and 1 ccs for the 100-s scan interval.

<b>Table 3-A: OPM data types</b>	
<b>Mnemonic</b>	<b>Explanation</b>
PEG	Peg Count—a count of the number of times a particular event occurs.
BLK	Blockage—a count of the number of times call completion is unsuccessful due to the unavailability of some office resource.
USE	Usage—the length of time associated with particular events.
REQ	Request—a count of the number of requests for a particular resource.
OVFL	Overflow—a count of the number of times a request for a particular resource is denied due to an all-resources-busy condition.
%	The percentage of requests for a particular service that are delayed beyond a specified time interval. Percentages are rounded to the nearest tenth of a percent (that is, 0.1 %).

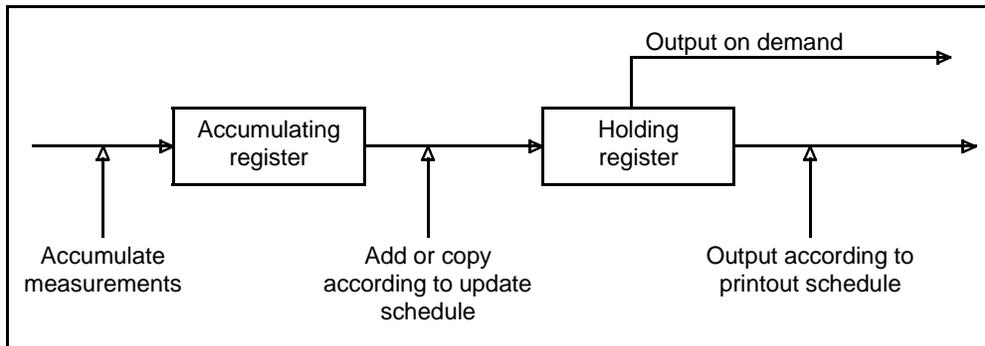
3-2 Data flow

Table 3-A: (Continued) OPM data types	
Mnemonic	Explanation
MTCE	Maintenance-the amount of time that the line circuits being studied are put into a particular maintenance status (for example, faulty, man-made-busy, or system-made-busy status). This measurement excludes instances in which a line circuit is involved in a maintenance call (for example, a line circuit is attached to an Incoming Test Trunk connected to a No. 14 Local Test Desk). Usage starts when a circuit is put into maintenance status and ends when the circuit is returned to service.

**Data storage**

As shown in Figure 3-1, OPM data are stored in accumulating registers and in holding registers. In this double-buffer approach, OPM data are collected and stored in accumulating registers and transferred to holding registers at regular intervals (according to an update schedule). During this transfer, the contents of the accumulating registers are either added to or copied over the contents of the holding registers, depending on the update option. (The update schedule and option are specified by using overlay OMC, as discussed in the section entitled “Data manipulation.”)

**Figure 3-1: OPM data flow**



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Stored OPM data are lost during a System Software Reload (SYSLOAD), which can be invoked either automatically by the system (as a recovery action from a severe system fault) or manually (as a trouble-clearing procedure). A SYSLOAD resets all OPM registers to zero; thus, all OPM data collected since the last printout are lost. A SYSLOAD is indicated when the SYS000 message is printed out at the maintenance terminal(s).

## Data printout

OPM data are printed out automatically at scheduled intervals or in response to operating company personnel request. The commands used to print OPM data are explained in the section entitled “Data manipulation.”

### Scheduled

The contents of the holding registers are printed out at regular intervals, according to a designated printout schedule. After printing, the value in the holding register is either set to zero or left intact, depending on the printout option. Data are printed out on maintenance terminals that belong to a predefined print class. The printout schedule, option, and print class are specified by using overlay OMC (see Section 5).

*Note: If a holding register overflows (that is, if the value it contains exceeds 65,535), the value printed out for the register is \*\*\*\*\*. The five asterisks indicate a value in excess of 99,999 for a particular OPM register.*

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OPM data may also be printed out on demand. The user may obtain a printout of the data stored in the holding registers of all (or selected) measurement blocks at the time of the last scheduled update of the holding registers. After printing by request, the value in the holding registers is left intact.

### Printout format

OPM data are printed out in the form of measurement blocks. Each measurement block contains OPM data on a service provided or a function performed by the DMS-10 system. The printout format for the traffic measurement block is shown in Figure 3-2. The format is similar for all measurement blocks. The various OPM measurement blocks and their contents are detailed in the section entitled “Measurement blocks.”

*Note: The Central Office Identification (COID) mnemonic contained in the printout is the mnemonic that has been previously declared in the SITE prompting sequence of overlay CNFG, in the NTP entitled Data Modification Manual (297-3401-311).*

3-4 Data flow

Figure 3-2: OPM measurement block printout format

	Measurement block code	Mnemonic	Central office identification mnemonic	Update day	Update date	Update time	Update period
Control line <	OPM001	TRAF	COID	SUN	01/04/79	00:30:00	QTRT
Column headers (data types) <			PEG	BLK	USE		
Line labels (registers) {	ORTM		00000	00000	00000		
	OROG		00000	00000	00000		
	ORNC		00000				
	RVRT		00000				
	INTM		00000	00000	00000		
	INOG		00000	00000	00000		
	INNC		00000				

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## Section 4: Measurement blocks

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### Introduction

The measurement blocks and the registers included in each are discussed in detail in this section. Blocks are presented in numerical sequence in this section, in order of their assigned code numbers.

For information on OPM data flow, refer to the section entitled “Data flow.” For information on the manipulation of OPM data blocks, refer to the section entitled “Data manipulation.”

### Traffic (TRAF measurement block - OPM001)

The Traffic (TRAF) measurement block (Figure 4-1 and Table 4-A) provides information on the traffic load handled by the DMS-10 switch. Maintenance calls are excluded from the data. Usage data are collected at 100-s scan intervals. One TRAF block is provided in each office.

All calls that are initiated on a DMS-10 switch are classified one time at the beginning of the call as either Originating or Incoming. If the call originates from a line that is assigned on the DMS-10 switch (for example, POTS, MBS, Coin, ISDN, or VoIP), the call is classified as Originating. DMS-10 calls that invoke features such as Three-Way Calling, Ring Again, Automatic Call Back, and Automatic Recall are also classified as Originating. Each Originating call has the possibility of scoring the ORTM, OROG, or ORNC TRAF registers. If the call originates from a trunk (including analog, digital, CCS7, PRI, and packet trunks) coming into the DMS-10 switch, the call is classified as Incoming. Each Incoming call has the possibility of scoring the INTM, INOG, or INNC TRAF registers.

Calls that terminate on a line assigned to a DMS-10 switch (for example, POTS, MBS, Coin, ISDN, or VoIP) are classified as Terminating. Each Terminating call on the DMS-10 switch has the possibility of scoring the ORTM or INTM TRAF registers, depending on the initial classification of the call.

Calls that terminate to a trunk assigned to a DMS-10 switch (including analog, digital, CCS7, PRI, and packet trunks) are classified as Outgoing. Each Outgoing call on the DMS-10 switch has the possibility of scoring the OROG or INOG TRAF registers, depending on the initial classification of the call.

Calls that neither terminate to a line nor terminate to a trunk are classified as Non-completing. Calls originating on a DMS-10 line that do not complete score the ORNC TRAF register. Calls originating from an incoming trunk that do not complete score the INNC TRAF register.

The ORNC and INNC registers are also scored when a subscriber has dialed incorrectly (see prompts VCDN and VCCO in Overlay CNFG (GCON), in 297-3401-311, *Data Modification Manual*), has not dialed quickly enough (see prompt PDAL in Overlay CNFG (GCON)), or has dialed a changed DN (see prompt DNIC in Overlay CNFG (GCON)). The ORNC and INNC registers can also be scored due to other conditions, as defined in Overlay CNFG (GCON).

The following four conditions cause the ORTM, OROG, INTM, and INOG BLK registers to be scored followed by scoring of the INNC or ORNC registers:

- insufficient amount of software resources
- no network path available
- ringing problem
- outgoing call is routed to an alternate announcement or tone

For Voice over IP (VoIP) calls, the DMS-10 switch has the possibility of scoring the ORTM, OROG, ORNC, INTM, INOG, and INNC TRAF registers. In addition to the existing call classification, all VoIP calls will be classified as either Packet-to-Packet (P2P), Packet-to-Circuit (P2C), Circuit-to-Packet (C2P), or Packet-Non completing (PNC).

For VoIP trunk calls, there is a limited number of packet trunk connections allowed per office (reference Overlay CNFG (FEAT)). If a call fails to originate from or terminate to a packet trunk group because of this office-wide limit being reached, the packet trunk overflow (PTOV) register is scored.

Depending upon the initial classification of the call, the P2P, P2C, and C2P TRAF registers are scored at the same time the ORTM, OROG, INTM, and INOG TRAF registers are scored. The PNC TRAF register is scored at the same time the ORNC and INNC TRAF registers are scored. The PTOV register is scored at the same time the OROG, ORNC, INOG, and INNC are scored. Table 4-B describes the relationship between the initial classification of the call and the VoIP TRAF registers.

**Note 1:** For selected changes made to the TRAF block, flow charts showing the sequence of events that cause selected TRAF registers to be incremented are shown in Figures 4-1 through 4-7.

**Note 2:** The determination as to whether OROG BLK and INOG BLK measurements are scored is made through Overlay ROUT (ROUT) prompt PGNC, for specific route types.

**Figure 4-1: TRAF measurement block (OPM001)**

OPM001	TRAF	CAPA	FRI	09/09/88	11:00:00	HRHR
	PEG	BLK	USE			
ORTM	00000	00000	00000			
OROG	00000	00000	00000			
ORNC	00000					
RVRT	00000		00000			
INTM	00000	00000	00000			
INOG	00000	00000	00000			
INNC	00000					
DRRA	00000					
UTOU	00000					
CPSP	00000					
CPSD	00000					
P2P	00000	00000	00000			
P2C	00000	00000	00000			
C2P	00000	00000	00000			
PNC	00000					
PTOV	00000					

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-A: TRAF measurement block (OPM001) registers</b>		
<b>Mnemonic</b>	<b>Meaning</b>	<b>Description</b>
ORTM	Originating - Terminating	<p>PEG - a count of all successful originating-terminating calls, including calls to busy numbers, but excluding revertive calls. The count is incremented for each call for which ringing begins and for each call to a busy number.</p> <p>BLK - a count of all originating-terminating calls that cannot terminate due to lack of some office resource (for example, no line register, network blockage, ringing plant overload).</p> <p>USE - a usage measurement for all successful originating-terminating calls. Usage starts when ringing or busy tone begins, and ends when the call disconnects.</p>

4-4 Measurement blocks

<b>Table 4-A: (Continued) TRAF measurement block (OPM001) registers</b>		
<b>Mnemonic</b>	<b>Meaning</b>	<b>Description</b>
OROG	Originating - Outgoing	<p>PEG - a count of all successful originating-outgoing calls. An OROG call is regarded as successful when all resources are obtained and signaling is completed on the outgoing trunk. The necessary resources include a seized trunk, a network path, and (usually) a digit sender.</p> <p>BLK - a count that is incremented for each originating-outgoing call for which a network path is not available on the initial attempt to connect to an outgoing trunk. Subsequent unsuccessful attempts do not increment the OROG BLK count.</p> <p><b>Note:</b> A call that is routed to overflow-busy condition and scores the OGP# OVFL register in the Trunk Groups (TRK) measurement block (OPM004) may also score the OROG BLK register.</p> <p>USE - a usage measurement for all successful originating-outgoing calls. Usage starts when signaling is completed on the outgoing trunk and ends when the call disconnects.</p>
ORNC	Originating - Noncompleting	<p>PEG - a count of all originating calls that are routed to generic, tone, or announcement routes before being classified as successful ORTM or OROG calls. Other conditions recorded in this count are: vacant-code, directory-number-intercept, and not-enough-digits-dialed-before-time-out.</p>
RVRT	Revertive	<p>PEG, USE - same as for ORTM, but data are collected on revertive calls, including those with distinctive ringing.</p>
INTM	Incoming -Terminating	<p>PEG - a count of all successful incoming-terminating calls, including calls to busy numbers. The count is incremented for each call for which ringing begins and for each call to a busy number.</p> <p>BLK - a count of all incoming-terminating calls that cannot terminate due to lack of some office resource (for example, no line register, network blockage, ringing plant overload).</p> <p>USE - a usage measurement for all successful incoming-terminating calls. Usage starts when ringing or busy tone begins, and ends when the call disconnects.</p>

<b>Table 4-A: (Continued)</b> <b>TRAF measurement block (OPM001) registers</b>		
<b>Mnemonic</b>	<b>Meaning</b>	<b>Description</b>
INOG	Incoming -Outgoing	<p>PEG - a count of all successful incoming-outgoing calls. An INOG call is regarded as successful when all resources are obtained and signaling is completed on the outgoing trunk. The necessary resources include a seized trunk, a network path, and (usually) a digit sender.</p> <p>BLK - a count that is incremented for each incoming-outgoing call for which a network path is not available on the initial attempt to connect to an outgoing trunk. Subsequent unsuccessful attempts do not increment the INOG BLK count.</p> <p><b>Note:</b> A call that is routed to overflow-busy condition and scores the OGP# OVFL register in the Trunk Groups (TRK) measurement block (OPM004) may also score the INOG BLK register. For example, if a DID call overflows (incoming outgoing call), this may also score the INOG BLK register.</p> <p>USE - a usage measurement for all successful incoming-outgoing calls. Usage starts when signaling is completed on the outgoing trunk and ends when the call disconnects.</p>
INNC	Incoming - Noncompleting	PEG - as for ORNC, but data are collected on incoming calls.
DRRA	Revertive calls with distinctive ringing	PEG - a peg count of every revertive call with distinctive ringing.
UTOU	User to User	PEG - a peg count of every ISDN level-3 message received from a subscriber line containing user-to-user data.
CPSP	Calling Party Subaddress Provided	PEG - a peg count of every instance where CPS was provided by an ISDN subscriber.
CPSD	Calling Party Subaddress Delivered	PEG - a peg count of every instance where CPS was delivered to an ISDN subscriber.
P2P	Packet-to-Packet	<p>PEG - a count of all successful packet-to-packet calls.</p> <p>BLK - a count of all packet-to-packet calls that cannot terminate due to lack of some office resource (for example, no line register, packet gateway interface port).</p> <p>USE - a usage measurement for all successful packet-to-packet calls.</p>
P2C	Packet-to-Circuit	<p>PEG - a count of all successful packet-to-circuit calls.</p> <p>BLK - a count of all packet-to-circuit calls that cannot terminate due to lack of some office resource (for example, no line register, network blockage, ringing plant overload).</p> <p>USE - a usage measurement for all successful packet-to-circuit calls.</p>

4-6 Measurement blocks

<b>Table 4-A: (Continued) TRAF measurement block (OPM001) registers</b>		
<b>Mnemonic</b>	<b>Meaning</b>	<b>Description</b>
C2P	Circuit-to-Packet	PEG - a count of all successful circuit-to-circuit calls.  BLK - a count of all circuit-to-packet calls that cannot terminate due to lack of some office resource (for example, no line register, packet gateway interface port).  USE - a usage measurement for all successful circuit-to-packet calls.
PNC	Packet - Noncompleting	PEG - a count of all originating packet calls that are routed to generic, tone, or announcement routes before being classified as successful P2P or P2C calls.
PTOV	Packet Trunk Overflow	PEG - a count of all calls that failed to obtain a packet trunk connection because the office-wide packet trunk limit has been reached.

<b>Table 4-B: Relationship between TRAF registers and VoIP registers</b>		
<b>Initial Classification Register</b>	<b>Voice over IP (VoIP) Register</b>	<b>Description</b>
ORTM	P2P	When a call originates from a VoIP line that is assigned on the DMS-10 switch and terminates to another VoIP line assigned on the DMS-10 switch, the call is classified as Packet-to-Packet (P2P).
	P2C	When a call originates from a VoIP line that is assigned on the DMS-10 switch and terminates to a TDM line assigned on the DMS-10 switch, the call is classified as Packet-to-Circuit (P2C).
	C2P	When a call originates from a TDM line that is assigned on the DMS-10 switch and terminates to a VoIP line assigned on the DMS-10 switch, the call is classified as Circuit-to-Packet (C2P).
OROG	P2C	When a call originates from a VoIP line that is assigned on the DMS-10 switch and terminates to a TDM trunk assigned on the DMS-10 switch, the call is classified as Packet-to-Circuit (P2C).
	PTOV	The PTOV count is incremented when a call originates from a line that is assigned on the DMS-10 switch, fails to terminate out a VoIP trunk because of the office-wide limit, but does successfully terminate out an alternate non-VoIP route.
ORNC	PNC	When a call originates from a VoIP line that is assigned on the DMS-10 switch that does not complete, the call is classified as Packet-Noncompleting.
	PTOV	The PTOV count is incremented when a call originates from a line that is assigned on the DMS-10 switch, fails to terminate out a VoIP trunk because of the office-wide limit and the call fails to complete.

<b>Table 4-B: (Continued)</b>		
<b>Relationship between TRAF registers and VoIP registers</b>		
<b>Initial Classification Register</b>	<b>Voice over IP (VoIP) Register</b>	<b>Description</b>
INTM	C2P	When a call originates from a TDM trunk that is assigned on the DMS-10 switch and terminates to a VoIP line assigned on the DMS-10 switch, the call is classified as Circuit-to-Packet (C2P).
INOG	PTOV	The PTOV count is incremented when a call originates from a TDM or VoIP trunk that is assigned on the DMS-10 switch, fails to terminate out a VoIP trunk because of the office-wide limit, but does successfully terminate out an alternate non-VoIP route.
INNC	PTOV	The PTOV count is incremented when a call originates from a TDM or VoIP trunk that is assigned on the DMS-10 switch, fails to terminate out a VoIP trunk because of the office-wide limit and the call fails to complete.

Figure 4-2: TRAF measurement block (OPM001) flow chart - INOG/OROG BLK register scoring

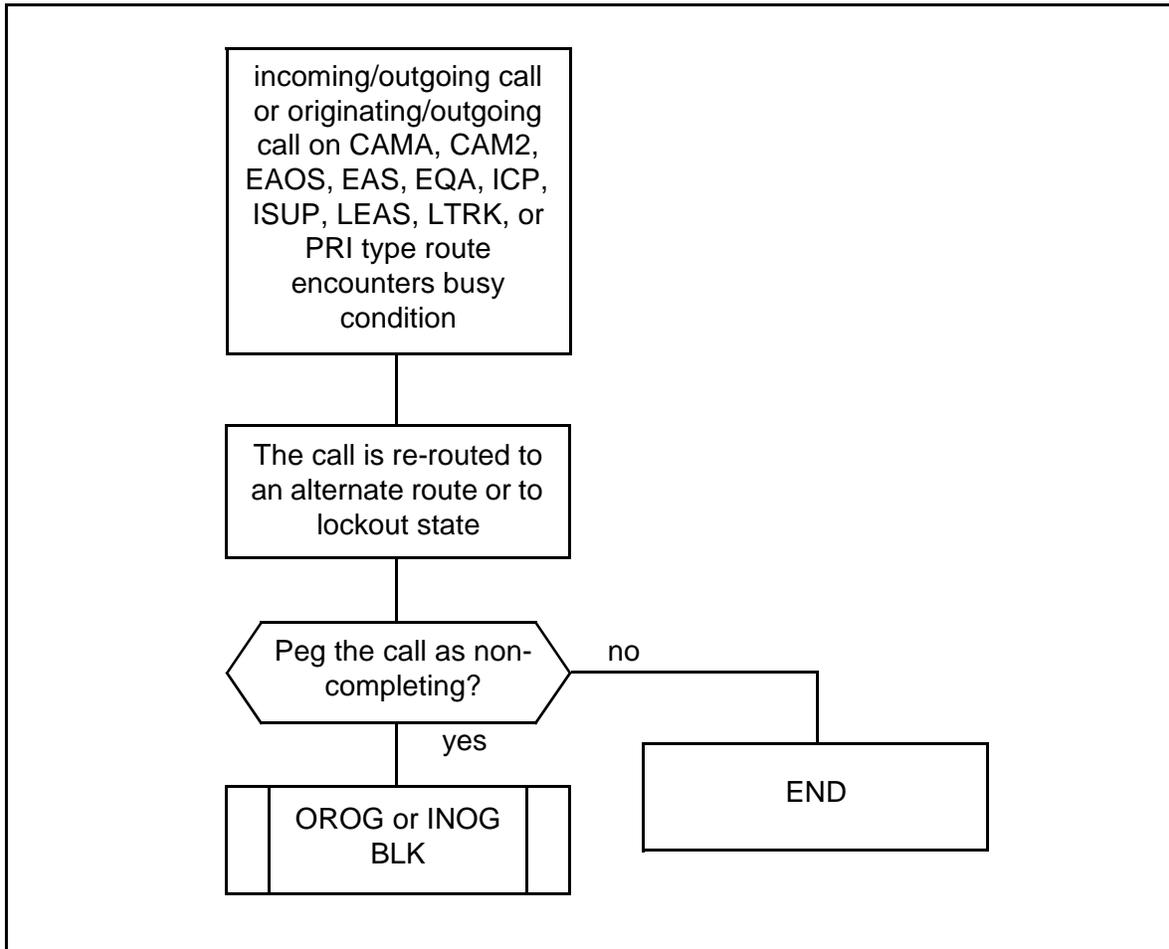


Figure 4-3: TRAF measurement block (OPM001) flow chart - call processing for incoming call

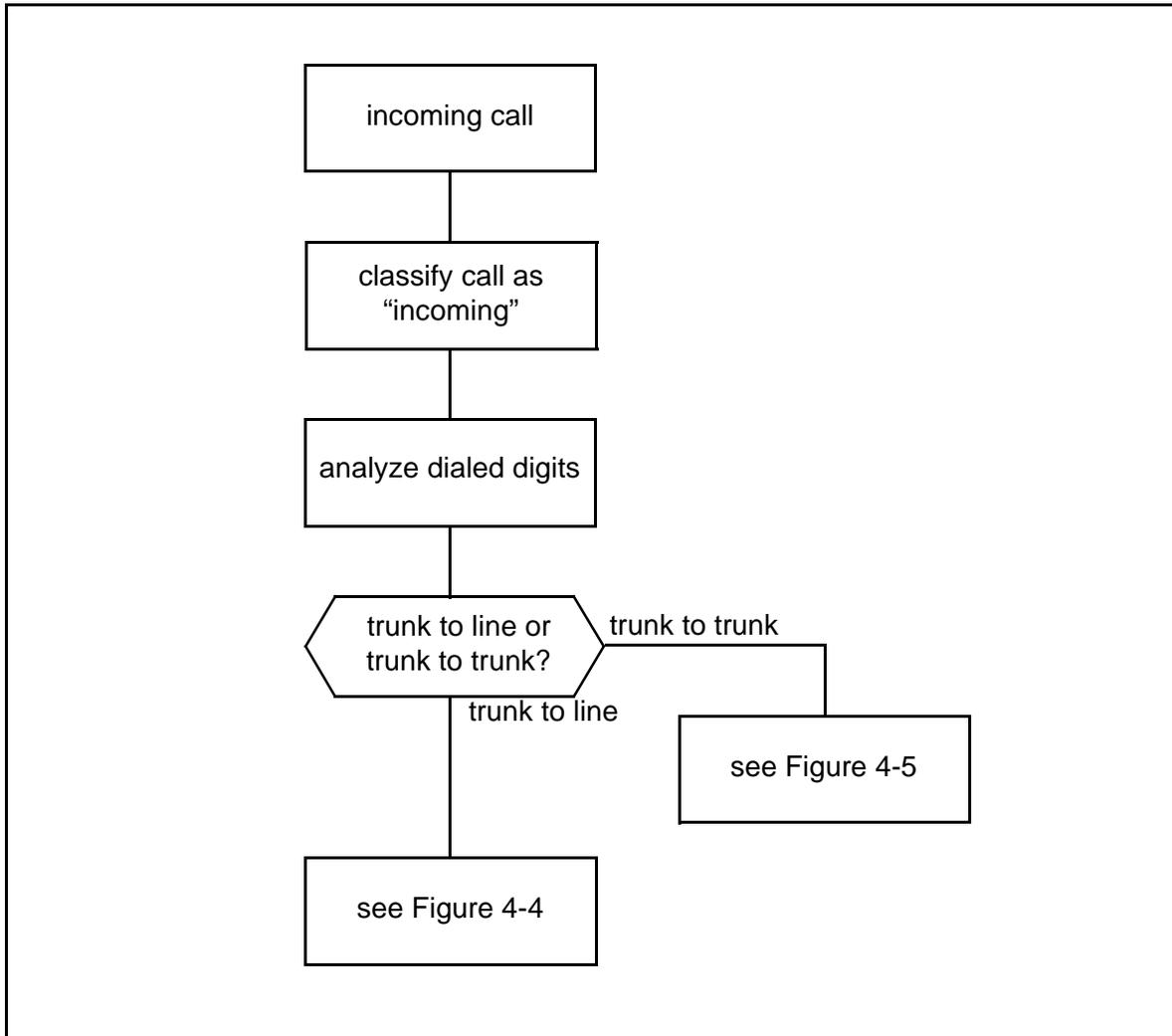


Figure 4-4: TRAF measurement block (OPM001) flow chart - incoming call (trunk to line)

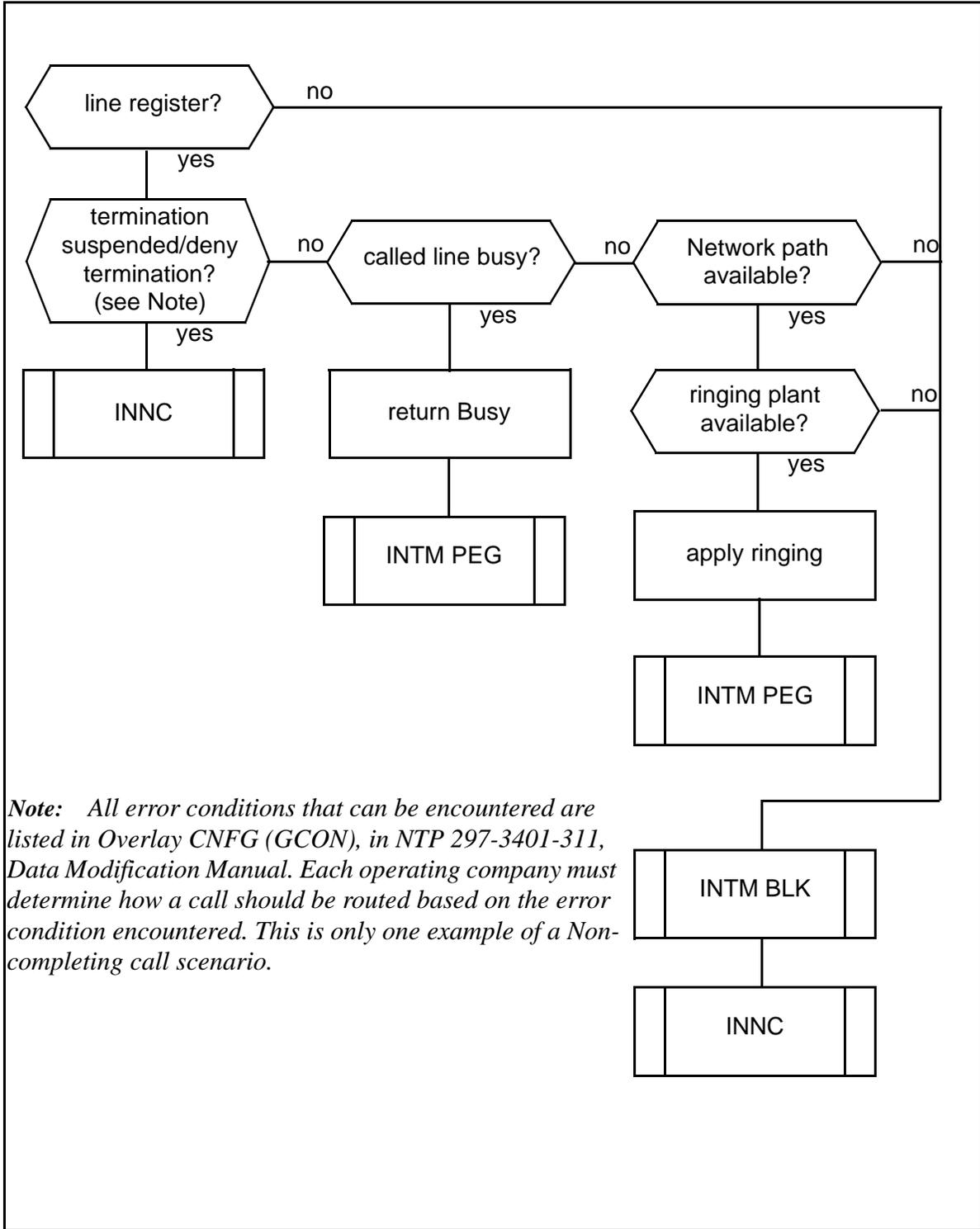


Figure 4-5: TRAF measurement block (OPM001) flow chart - incoming call (trunk to trunk)

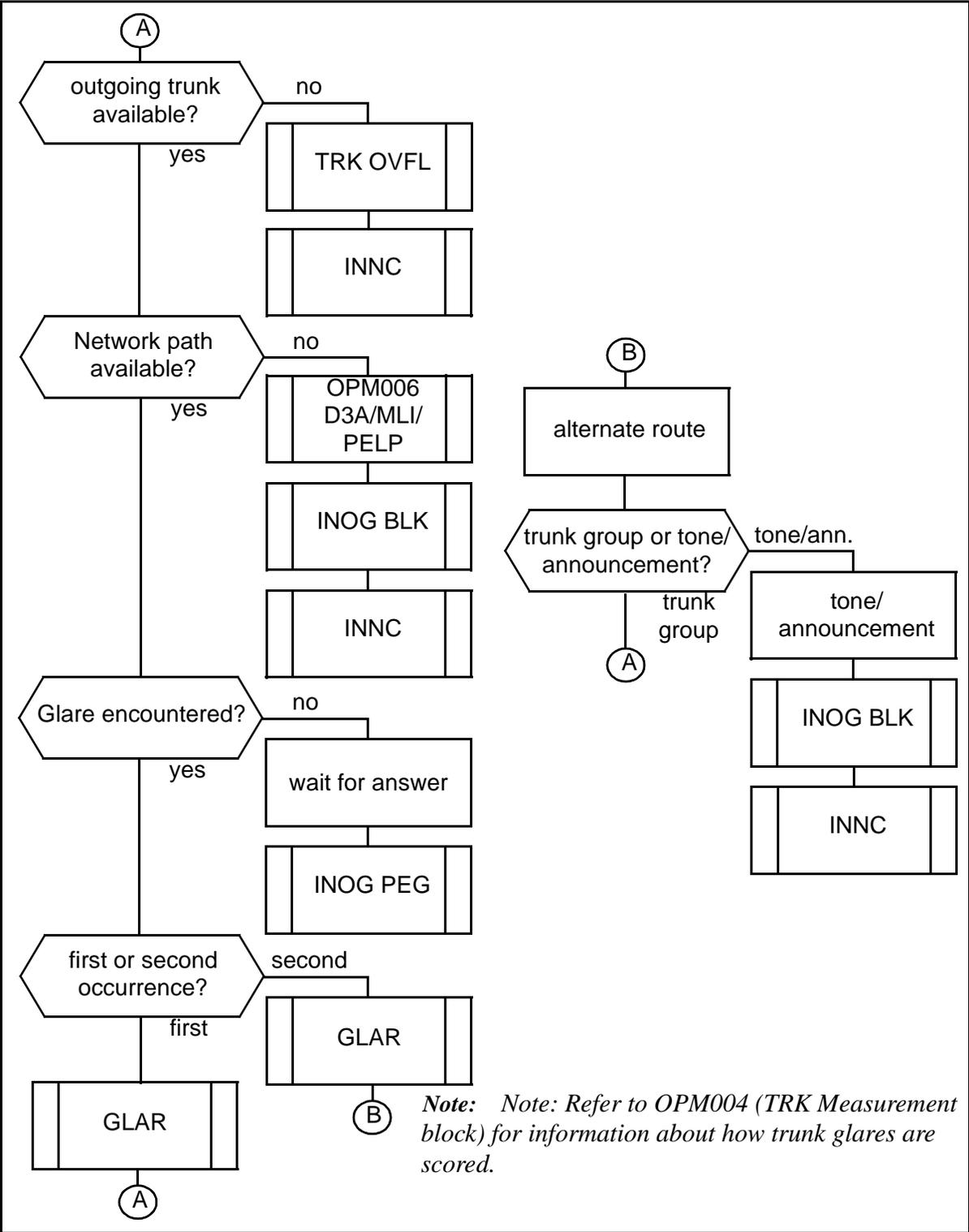


Figure 4-6: TRAF measurement block (OPM001) flow chart - call processing for originating call

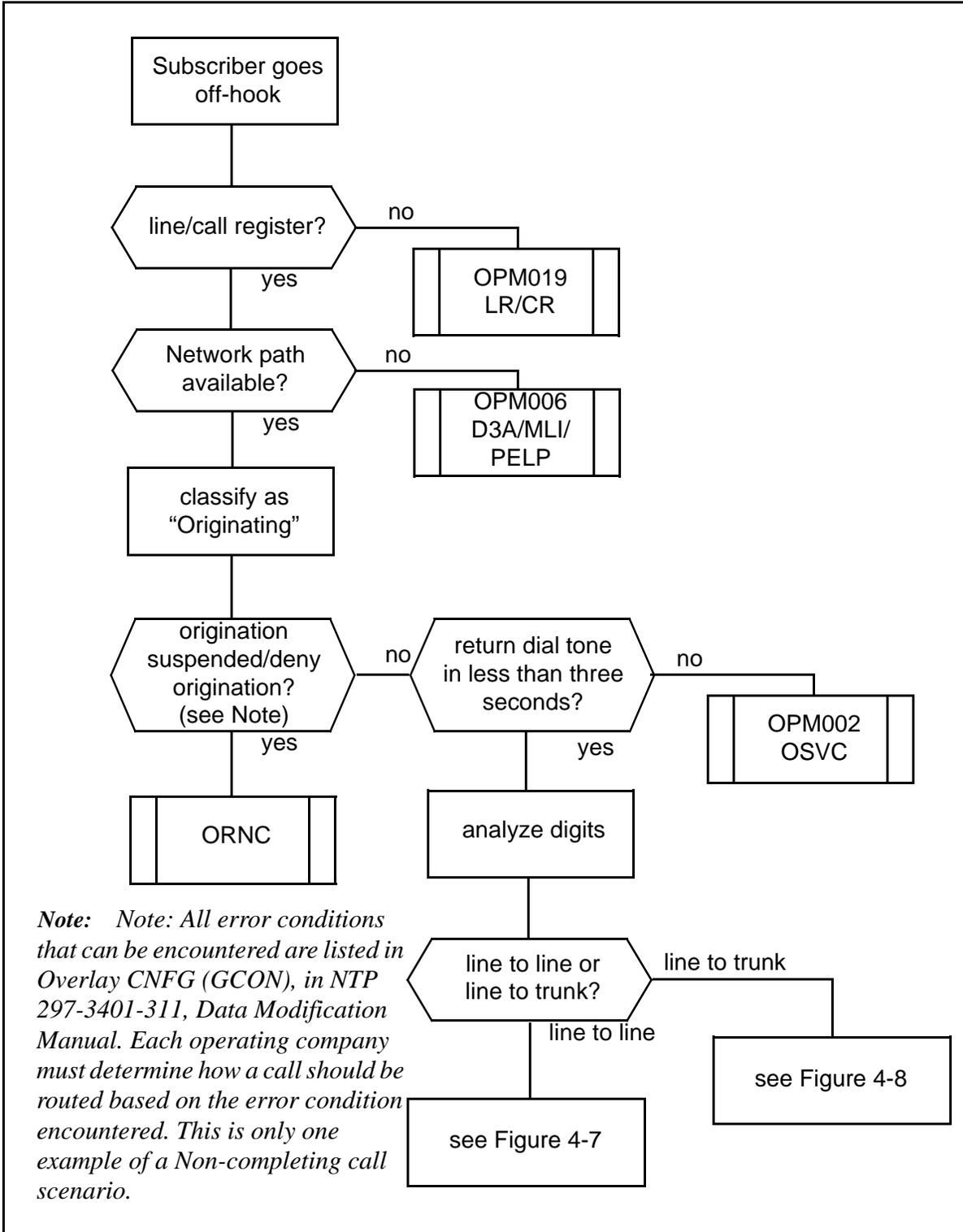


Figure 4-7: TRAF measurement block (OPM001) flow chart - originating call (line to line)

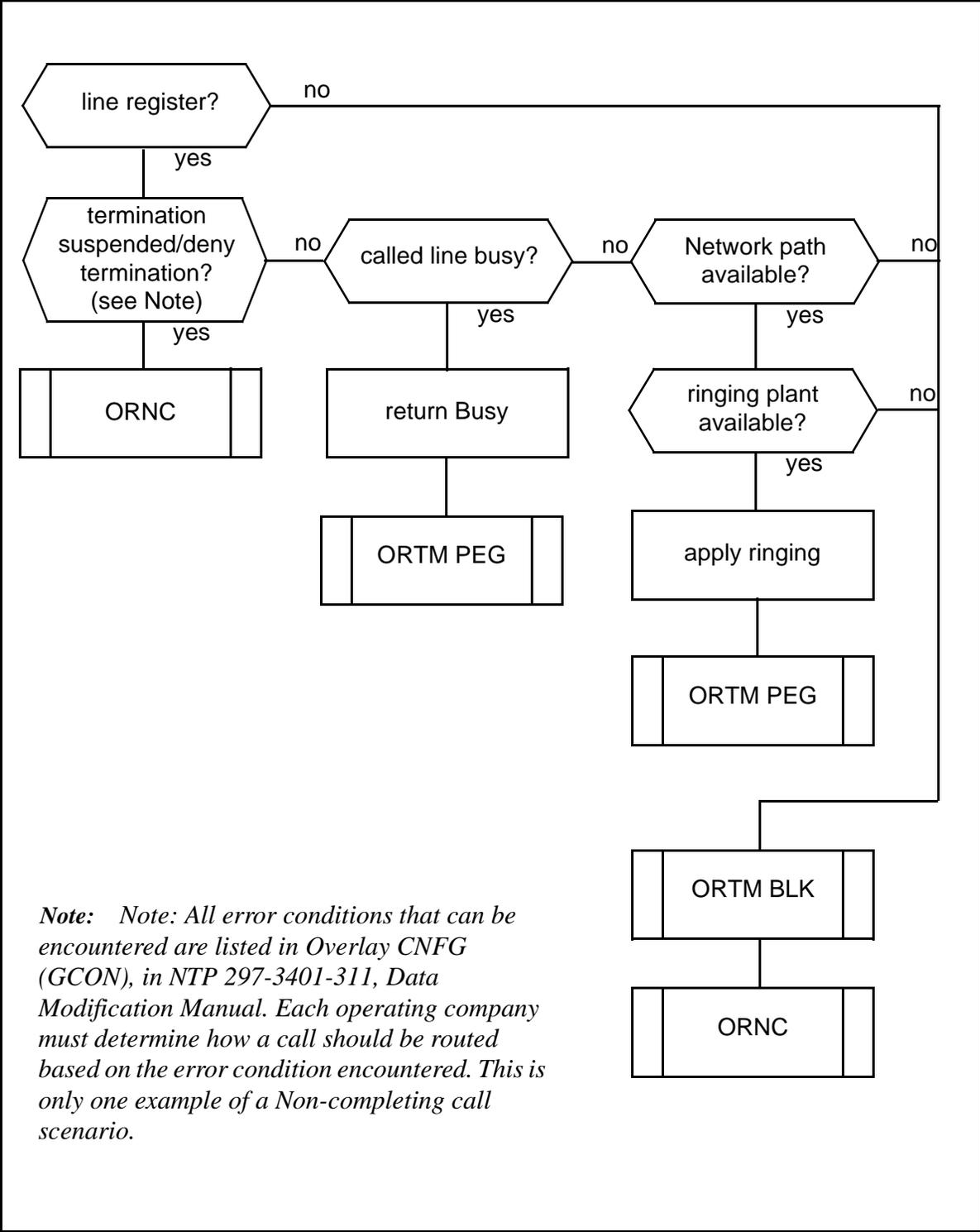
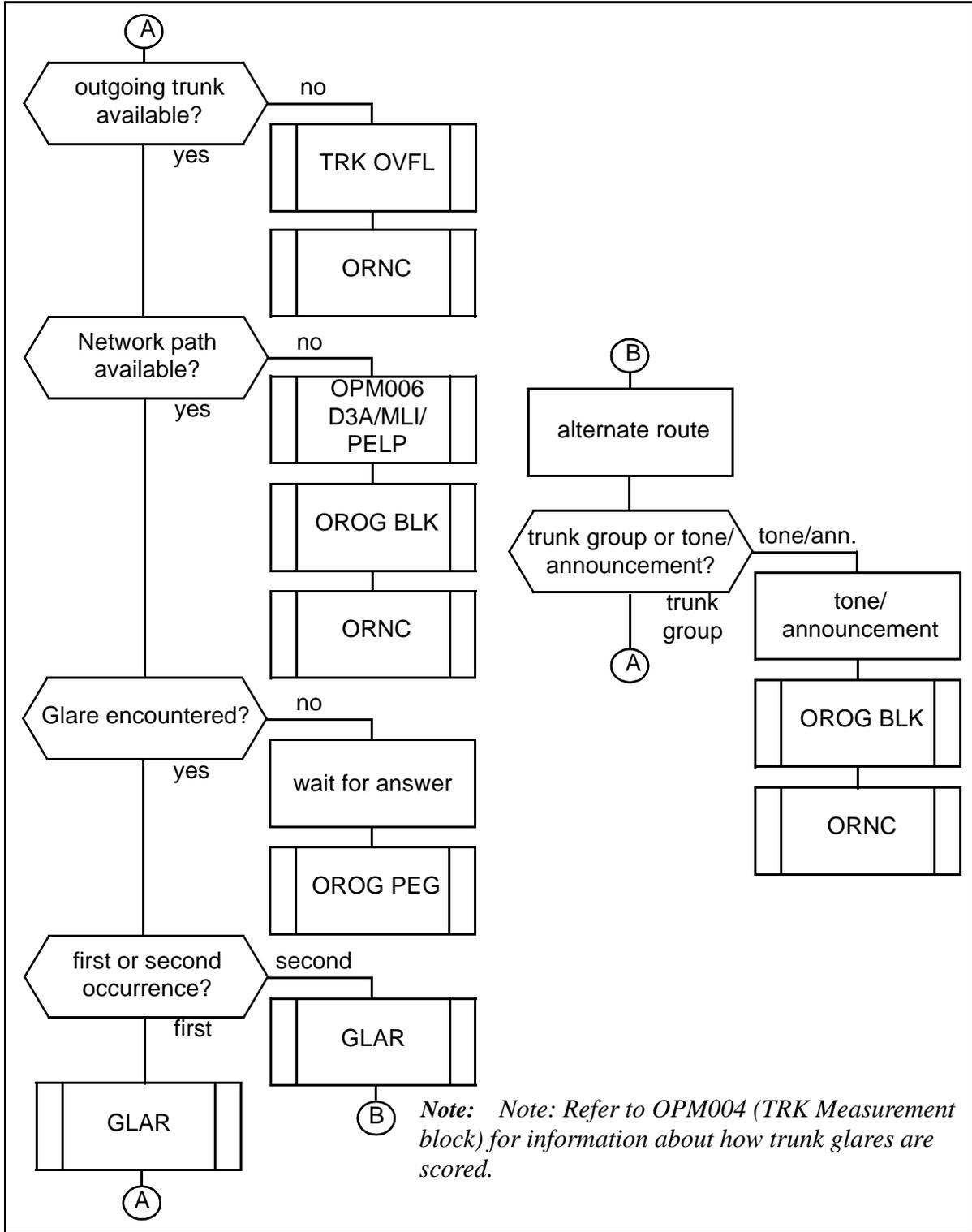


Figure 4-8: TRAF measurement block (OPM001) flow chart - originating call (line to trunk)



## Originating Service (OSVC measurement block - OPM002)

The Originating Service (OSVC) measurement block (Figure 4-9 and Table 4-C) provides information on the service provided to calls originating on subscriber lines of the office being considered. Maintenance calls are excluded. One OSVC block is provided per office.

**Figure 4-9: OSVC measurement block (OPM002)**

OPM002	OSVC	MON	30/05/90	04:00:00HRHR
	PEG			
PSIG	00000			
PDTO	00000			
PABN	00000			
FSTR	00000			
DGTC	00000			
DPC	00000			
ISDN	00000			
TOTC	00000			
	%			
DGTS	000.0			
DPS	000.0			
PLTS	000.0			
TOTS	000.0			

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

Mnemonic	Explanation	Description
PSIG	Permanent Signal	PEG - a count of calls in which the first digit is not dialed within the dial-tone time-out (DTTO) period. DTTO is defined by call type characteristic or is specified in the GCON section of Overlay CNFG, in the NTP entitled <i>Data Modification Manual</i> (297-3401-311).
PDTO	Partial Dial Time-out	PEG - a count of calls in which an interdigital timeout occurs with an insufficient number of digits is dialed.
PABN	Partial Dial Abandon	PEG - a count of calls in which disconnect occurs before a sufficient number of digits is dialed.
FSTR	False Start	PEG - a count of calls in which disconnect occurs before the first digit is dialed.
DGTC	Digitone Calls	PEG - the number of originations from Digitone service.
DPC	Dial-Pulse Calls	PEG - the number of originations from lines that have dial-pulse service.
ISDN	Integrated Services Digital Network Calls	PEG - the number of originations from lines that have ISDN service.

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<b>Table 4-C: (Continued)</b>		
<b>OSVC measurement block (OPM002) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
TOTC	Total Calls	<p>PEG - the total number of originations from lines served by the office being considered.</p> <p><i>Note:</i> DGTC and DPC include calls that receive dial tone. TOTC includes all call originations, whether they receive dial tone, special dial tone, or no tone (manual or automatic). Consequently, TOTC may not equal DGTC plus DPC.</p>
DGTS	Digitone Dial Tone Speed	% - the percentage of calls from lines that have Digitone service and do not receive dial tone within 3 s off-hook.
DPS	Dial-Pulse Dial Tone Speed	% - the percentage of calls from lines that have dial-pulse service and do not receive dial tone within 3 s off-hook.
PLTS	Peripheral Loop Timeslot Speed	% - the percentage of originating calls that do not obtain a peripheral loop timeslot within 3 s of off-hook.
TOTS	Total Dial Tone Speed	<p>% - the percentage of all calls that do not receive dial tone or a peripheral loop timeslot within 3 s of off-hook.</p> <p><i>Note 1:</i> DGTS, DPS, and TOTS may be used with DGTC, DPC, and TOTC, respectively, to calculate the absolute number of dial-tone-delayed calls (for example, <math>DPS \times DPC =</math> number of calls from dial-pulse lines that involved dial-tone delay during the measurement period).</p> <p><i>Note 2:</i> The OPM program detects a dial-tone-speed condition by monitoring call registers. When a call register is in the request-for-dial-tone state, a timing function is performed. If the register is still in this state after 3 s, OPM records that the call has involved dial-tone delay.</p>

## Incoming Service (ISVC measurement block - OPM003)

The Incoming Service (ISVC) measurement block (Figure 4-10 and Table 4-D) provides information on the service provided to calls originating on incoming trunks. Maintenance calls are excluded from the data. One ISVC block is provided per office.

**Figure 4-10: ISVC measurement block (OPM003)**

OPM003	ISVC	CAPA	MON	30/05/90	04:00:00	HRHR
	PEG					
PSIG	00000					
PDTO	00000					
PABN	00000					
HITS	00000					
DGTC	00000					
MFRC	00000					
TOTC	00000					
	%					
DGTS	000.0					
MFRS	000.0					
PLTS	000.0					

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

Mnemonic	Explanation	Description
PSIG	Permanent Signal	PEG - a count of calls in which the first digit is not received within a specified time interval following trunk seizure. The time interval is specified for each incoming trunk group as the "trunk-timing entry number" register for the trunk group.
PDTO	Partial Dial Timeout	PEG - a count of calls in which an interdigital timeout occurs before a sufficient number of digits is received.
PABN	Partial Dial Abandon	PEG - a count of calls in which disconnect occurs before a sufficient number of digits is received.
HITS	Hits	PEG - a count of calls in which disconnect occurs before the first digit has been received.
DGTC	Digitone Receiver Calls	PEG - a count of calls requiring Digitone Receiver service.
MFRC	Multifrequency Receiver Calls	PEG - a count of calls requiring Multifrequency Receiver service.
TOTC	Total Calls	PEG - total number of trunk originations.
DGTS	Digitone Receiver Speed	% - the percentage of calls that are not connected to a Digitone Receiver within a 3-s period.

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<b>Table 4-D: (Continued)</b>		
<b>ISVC measurement block (OPM003) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
MFERS	MF Receiver Speed	<p>% - the percentage of calls that are not connected to an MF Receiver within a 3-s period.</p> <p><i>Note 1:</i> DGTS and MFERS may be used with DGTC and MFRC, respectively, to calculate the absolute number of receiver-attachment-delay calls (for example, DGTS DGTC = number of incoming Digitone calls that involved a receiver-attachment delay during the measurement period).</p> <p><i>Note 2:</i> The OPM program detects a receiver-attachment-delay condition by monitoring call registers. When a call register is in the “request-for-receiver” state, a timing function is performed. If the register is still in this state after 3 s, OPM records that the call has involved a receiver-attachment delay.</p>
PLTS	Peripheral Loop Timeslot Speed	% - the percentage of calls that do not obtain a peripheral loop timeslot within 3 s of trunk seizure.

## Trunk Groups (TRK measurement block - OPM004)

The Trunk Groups (TRK) measurement block (Figures 4-11, 4-12 and Table 4-E) provides information on the distribution of traffic among trunk groups (TGs) with two-way TG data appearing in both sections of the block. The measurement block is divided into outgoing trunk groups (TGs) and incoming trunk groups (TGs). Data are collected on each trunk. Usage data are collected by using a 100-s scan. One TRK block is provided per office.

If Facility Name printing in OPMs (FNOM prompt in DMO CNFG (SYS)) is enabled, a new line for the TG name will be added after each TG peg line prints.

**Note 1:** Data for two-way trunk groups appear in both parts of the measurement block—the outgoing portion in the outgoing trunk group part and the incoming portion in the incoming trunk group part. The outgoing and incoming portions of a two-way trunk group have the same trunk group number.

**Note 2:** Flow charts showing the sequence of events that cause selected measurement block registers to be incremented and the relationship between the registers within the block are provided for new features and enhancements, in Figures 4-12 through 4-16.

**Note 3:** For SIP VoIP trunks, if the number of active calls for the TG equals the TG call limit (reference Overlay TG (2WAY) prompt CLIM), any subsequent origination attempts will fail. The OGP OVFL register is scored for this failure.

**Figure 4-11: TRK measurement block (OPM004)**

OPM004	TRK	CAPA	MON	23/11/99	04:00:00	QRTR
OGP#	PEG	OVFL	USE	MTCE	GLAR	
0004	00000	00000	00000	00000	00000	
0005	00000	00000	00000	00000	00000	
IGP#	PEG	USE	MTCE			
0002	00000	00000	00000			
0003	00000	00000	00000			
0013	00000	00000	00000			
OLTG	PEG	OVLFL	USE	MTCE		
0001	00000	00000	00000	00000		
0002	00000	00000	00000	00000		
ILTG	PEG	USE	MTCE			
0040	00000	00000	00000			
0041	00000	00000	00000			
0042	00000	00000	00000			

**Note 4:** For all OPM block changes due to Facility Identification by Name, in all modified sections facility names will only appear in OPM printouts if CNFG (SYS) PRFN = YES and CNFG (SYS) FNOM = YES.

An example of the modified OPM block printout is shown below, with the new output lines:

Figure 4-12: TRK measurement block when CNFG SYS) FNOM = YES (OPM004)

```

OPM004   TRK   TUES 13/08/02   00:00:00   QRTR
  OGP# PEG   OVFL   USE   MTCE       GLAR
  0001 000000 000000 0000000000000 000000
  TG NAME      PIVL_OUT_TG_1
  0002 000000 000000 0000000000000 000000
  TG NAME      PIVL_OUT_TG2
  0003 000000 000000 0000000000000 000000
  TG NAME
  0004 000000 000000 0000000000000 000000
  TG NAME      PIVL_OUT_TG 3
  IGP# PEG   USE   MTCE
  0020 000000 000000 000000
  TG NAME      PIVL_INC_TG_20
  0021 000000 000000 000000
  TG NAME      PIVL_INC_TG_20
  0045 000000 000000 000000
  TG NAME
  OLTG PEG   OVLF   USE   MTCE
  0001 000000 000000 0000000000046
  TG NAME
  ILTG PEG   USE   MTCE
  0001 000000 000000 000046
  TG NAME      PIVL_INC_LTG 1
  
```

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-E: TRK measurement block (OPM004) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
OGP#	Outgoing Trunk Group Number	<p>PEG - For non-Music on Hold (MOH) trunk groups, a count of calls that are routed to this trunk group. For MOH trunk groups, a count of successful attempts to provide MOH to holding subscribers.</p> <p>OVFL - For non-Music on Hold (MOH) trunk groups, a count of attempts to select a trunk in this trunk group that fail because no trunk is available. For MOH trunk groups, a count of unsuccessful attempts to provide MOH to holding subscribers.</p> <p><i>Note: A call that is routed to overflow-busy condition and scores the OGP# OVFL register may also score either the OROG BLK register or the INOG BLK register in the Traffic (TRAF) measurement block (OPM001).</i></p>
		<p>USE - For non-Music on Hold (MOH) trunk groups, a usage measurement for all trunks in this trunk group. Usage starts when a trunk is software-busy and ends when the trunk returns to idle. A CAMA trunk with an unoccupied operator position is regarded as an idle trunk. For MOH trunk groups, usage starts when the first held party connects to the music trunk and continues until the last held party disconnects from the music source.</p> <p>MTCE - the amount of time a trunk (including Music on Hold trunks) is in maintenance status (that is, faulty, man-made-busy, system-made-busy). Maintenance calls are excluded. Usage starts when a trunk is put into maintenance status and ends when it is returned to service.</p> <p>GLAR - On a per-trunk group basis, pegs the number of times a trunk glare condition is encountered during call processing. The register is pegged whether the office keeps the trunk resource or gives up the resource after relinquishing control. The register is also pegged when a glare condition occurs during Remote Office Test Line (ROTL) or TLT testing. The GLAR register applies only to outgoing trunks in a two-way trunk group.</p>
IGP#	Incoming Trunk Group Number	<p>PEG - a count of incoming calls that seize a trunk in this trunk group.</p> <p>USE - same as for OGP#.</p> <p>MTCE - same as for OGP#.</p>
OLTG	Outgoing Line Trunk Group Number	<p>PEG - a count of calls that are routed to this trunk group.</p> <p>OVFL - a count of attempts to select a trunk in this trunk group that fail because no trunk is available.</p>

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Table 4-E: (Continued) TRK measurement block (OPM004) registers		
Mnemonic	Explanation	Description
		USE - a usage measurement for all trunks in this trunk group. Usage starts when a trunk is software-busy and ends when the trunk returns to idle.
		MTCE - the amount of time a trunk is in maintenance status (that is, faulty, man-made-busy, system-made-busy). Maintenance calls are excluded. Usage starts when a trunk is put into maintenance status and ends when it is returned to service.
ILTG	Incoming Line Trunk Group Number	PEG - a count of incoming calls that seize a trunk in this trunk group. USE - same as for OLTG. MTCE - same as for OLTG.

Figure 4-13: TRK measurement block (OPM004) flow chart - Digital PX trunk feature ILTG PEG register

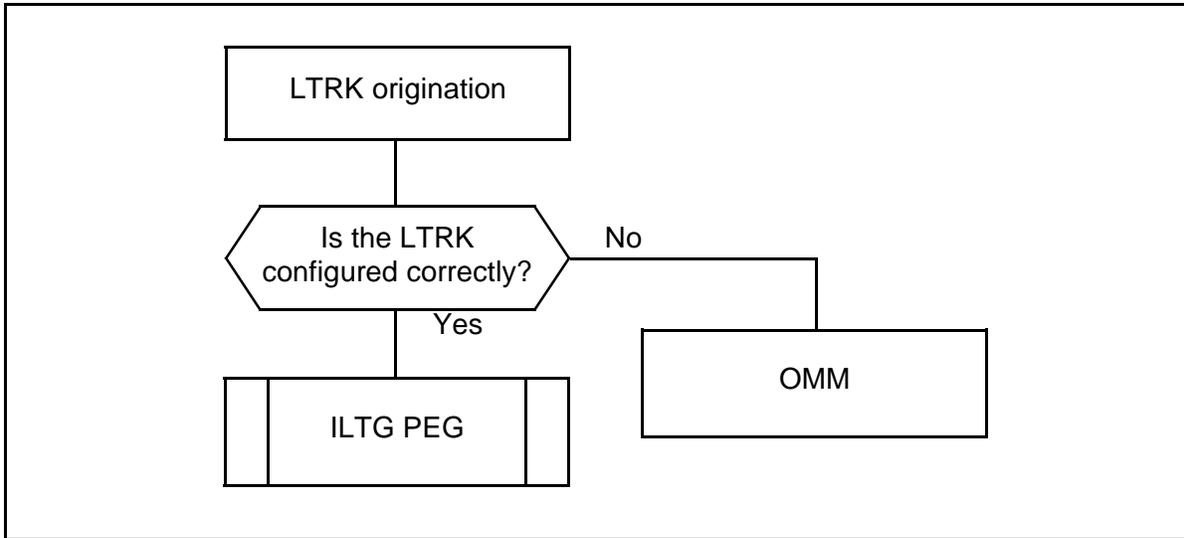


Figure 4-14: TRK measurement block (OPM004) flow chart - Digital PX trunk feature OLTG PEG and OVFL registers

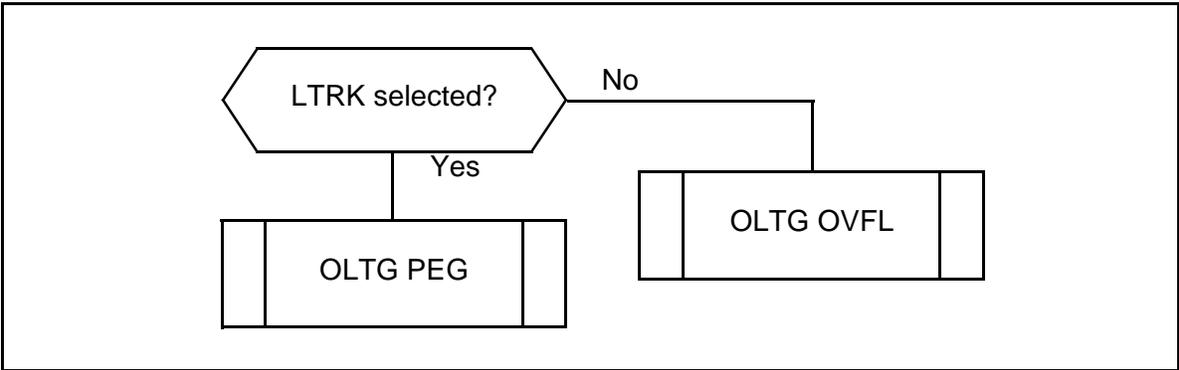


Figure 4-15: TRK measurement block (OPM004) flow chart - Digital PX trunk feature ILTG/OLTG USE and MTCE registers

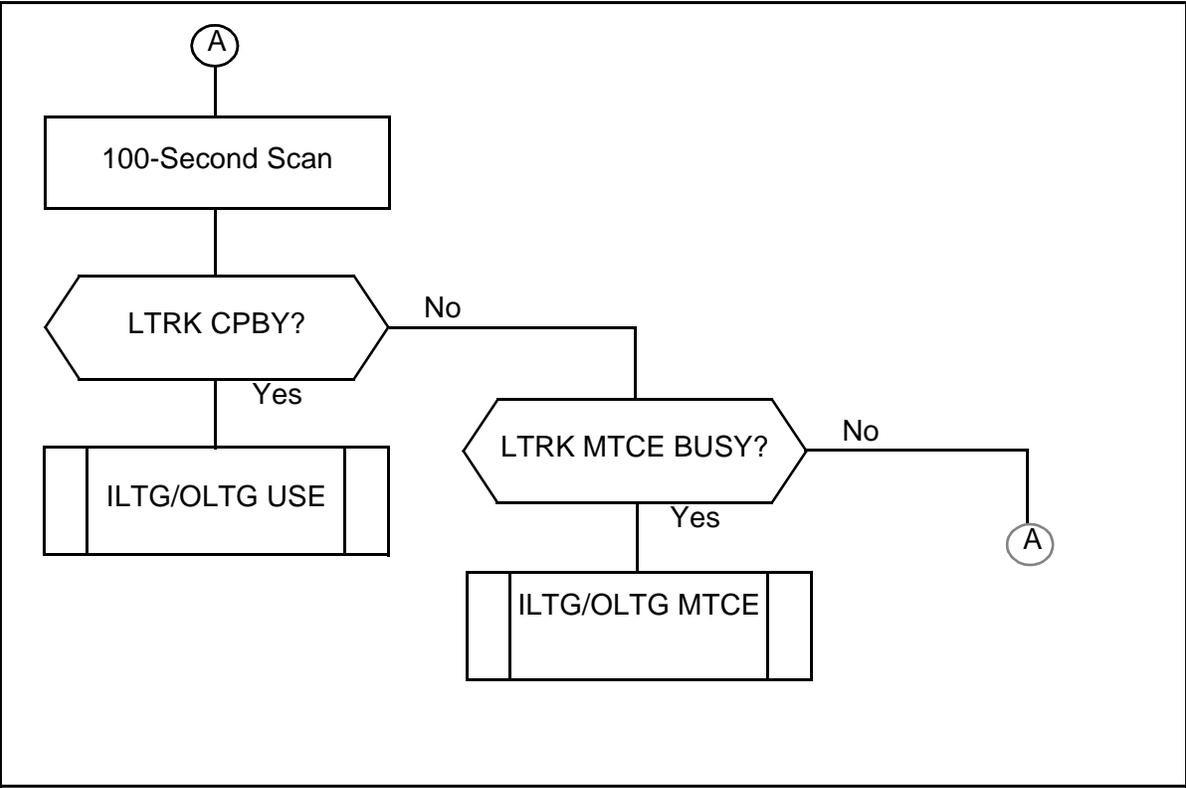


Figure 4-16: TRK measurement block (OPM004) flow chart - Outgoing Trunk Group glare register (call processing)

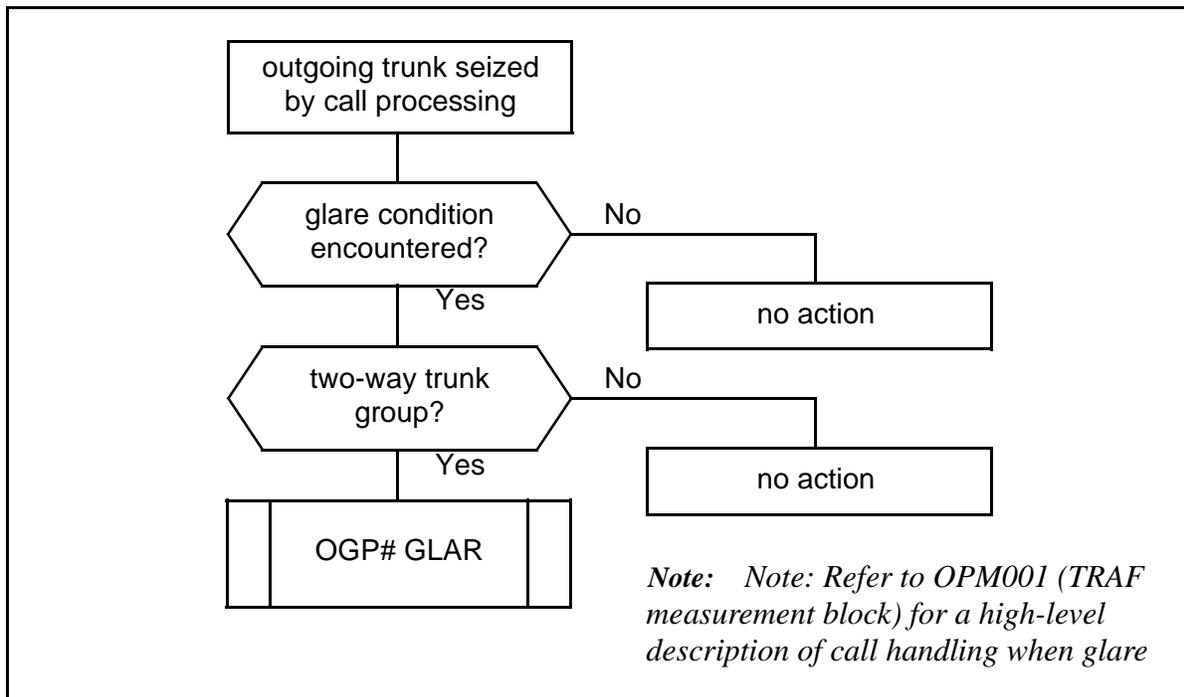
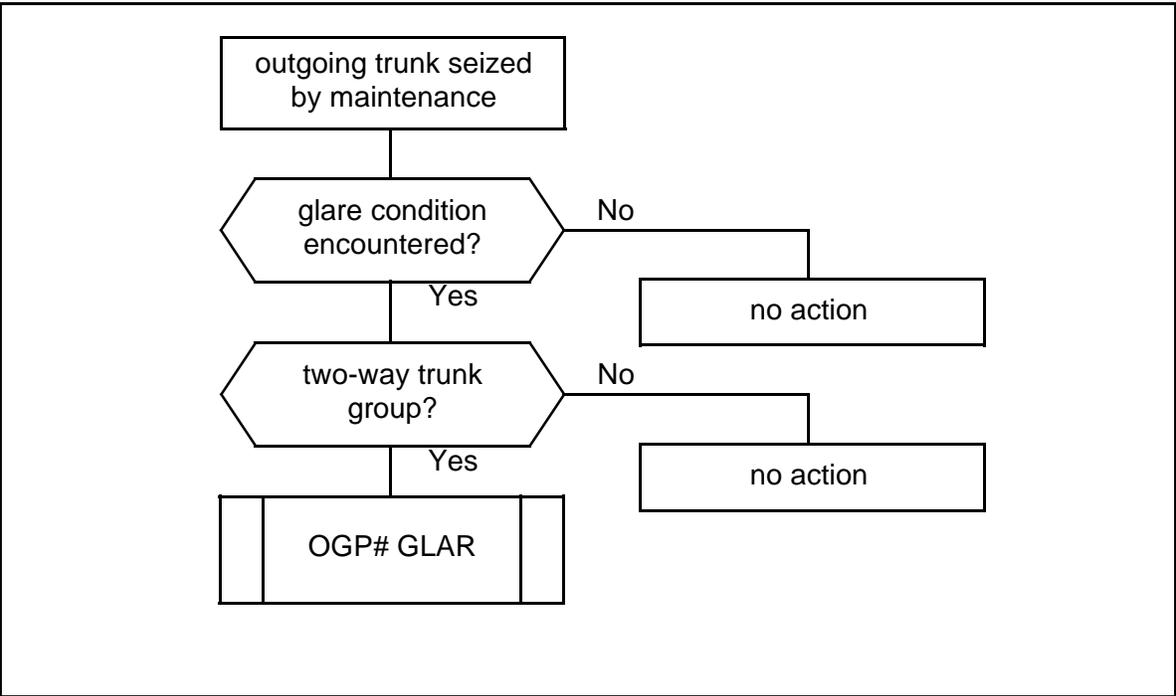


Figure 4-17: TRK measurement block (OPM004) flow chart - Outgoing Trunk Group glare register (maintenance processing)



**Service Circuits (SVCE measurement block - OPM005)**

The Service Circuits (SVCE) measurement block (Figures 4-18 and 4-19, and Table 4-F) provides information about demand for, provisioning of, and use of service circuits and Global Tone Services (GTS) channels. Usage data are collected using a 10 s scan. One SVCE block is provided per office.

*Note: For selected changes made to the SVCE block, flow charts showing the sequence of events that cause the measurement block registers to be incremented and the relationship between the registers within the block are provided in Figures 4-19 through 4-21.*

**Figure 4-18: SVCE measurement block (OPM005) for a DMS-10 Classic Network configuration**

OPM005	SVCE	CAPB	TUES	11/01/97	13:30:00	HRHF
	REQ	PEG	USE	OVFL	MTCE	
DGTR	00004	00004	0000.4	00000	00000	
PDTR	00004	00004	0000.4	00000	00000	
MFR	00000	00000	0000.0	00000	00000	
PMFR	00000	00000	0000.0	00000	00000	
TDS	00040	00040	0026.3			
DSND	00000	00000	0000.0			
BUSY	00000	00000	0000.0			
RNGB	00020	00020	0026.1			
RORD	00016	00016	0000.0			
DIAL	00004	00004	0000.2			
HOWL	00000	00000	0000.0			
HIGH	00000	00000	0000.0			
LOW	00000	00000	0000.0			
SPDT	00000	00000	0000.0			
CFMT	00000	00000	0000.0			
CWT	00000	00000	0000.0			
DCBI	00000	00000	0000.0			
CLID	00000	00000	0000.0			
CONT	00000	00000	0000.0			
CUTR	00000	00000	0000.0			
MWIL	00000	00000	0000.0			
WARB	00000	00000	0000.0			
N2N0	0000	00000	0000.0			
UDTR	00000	00000	0000.0	00000	00000	
UMFR	00000	00000	0000.0	00000	00000	
CWID	00001	00001	0001.0			

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

**Figure 4-19: SVCE measurement block (OPM005) for a DMS-10EN network configuration**

OPM005	SVCE	CAPB	TUES	11/02/99	12:30:00	HRHF
REQ	PEG	USE	OVFL	MTCE		
PDTR	00004	00004	0000.4	00000	00000	
PMFR	00000	00000	0000.0	00000	00000	
GTS	00000	00000	0000.0			
DSND	00000	00000	0000.0			
BUSY	00000	00000	0000.0			
RNGB	00020	00020	0026.1			
RORD	00016	00016	0000.0			
DIAL	00004	00004	0000.2			
HOWL	00000	00000	0000.0			
HIGH	00000	00000	0000.0			
LOW	00000	00000	0000.0			
SPDT	00000	00000	0000.0			
CFMT	00000	00000	0000.0			
CWT	00000	00000	0000.0			
DCBI	00000	00000	0000.0			
CLID	00000	00000	0000.0			
CONT	00000	00000	0000.0			
CUTR	00000	00000	0000.0			
MWIL	00000	00000	0000.0			
WARB	00000	00000	0000.0			
N2N	00000	00000	0000.0			
UDTR	00000	00000	0000.0	00000	00000	
UMFR	00000	00000	0000.0	00000	00000	
CWID	00001	00001	0001.0			
CTN1	00000	00000	0000.0			
CTN2	00000	00000	0000.0			
CTN3	00000	00000	0000.0			
CTN4	00000	00000	0000.0			
CTN5	00000	00000	0000.0			

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

Table 4-F: SVCE measurement block (OPM005) registers		
Mnemonic	Explanation	Description
DGTR	Digitone Receiver	<p>REQ - in a DMS-10 Classic Network, a count of requests to connect to Digitone Receivers, or Universal Tone Receivers, and associated circuits necessary for providing Digitone trunk and line service. A queued request is counted only once. However, multiple requests in the same call are all counted.</p> <p>PEG - in a DMS-10 Classic Network, a count of Digitone Receiver or Universal Tone Receiver requests that are satisfied, either immediately or after delay in the queue. Failure to satisfy a Digitone Receiver or Universal Tone Receiver request can be due to network blocking, or unavailable dial tone (caused by a "no timeslots available for dial tone" condition). Therefore, this measurement provides information about the total performance of Digitone service and not about the adequacy of the engineering of Digitone Receiver or Universal Tone Receiver circuits. Availability of Digitone Receivers or Universal Tone Receivers can be inferred from the OVFL measurements.</p> <p><i>Note: Because there can be a time delay between a request for a service and its provisioning, the REQ count for a given service may be incremented in one measurement period and the PEG count for that service in the next.</i></p> <p>USE - in a DMS-10 Classic Network, a usage measurement for all Digitone Receivers or Universal Tone Receivers. Use starts when a receiver is obtained and ends when it is released.</p> <p>OVFL - in a DMS-10 Classic Network, a count of requests to connect to Digitone Receivers or Universal Tone Receivers that cannot be satisfied on the first attempt, because all Digitone Receivers or Universal Tone Receivers are busy. If a request is queued, multiple attempts to satisfy one request are not counted.</p> <p>MTCE - in a DMS-10 Classic Network, the amount of time a receiver is placed into maintenance status (that is, faulty, man-made-busy, system-made-busy). Maintenance calls are excluded. MTCE use starts when a receiver is put into maintenance status and ends when it is restored to service.</p>
PDTR	Digitone Receiver	<p>The operational measurements for PE-based NT2T11 Digitone Receiver packs (PDTR) are separated from those for the NT4T02 Universal Tone Receiver packs (UDTR) and the Network Interface packs (NT8T04).</p> <p>REQ - a count of requests to connect to Digitone Receivers and associated circuits necessary for providing Digitone trunk and line service. A queued request is counted only once. However, multiple requests in the same call are all counted.</p>

**Table 4-F: (Continued)**  
**SVCE measurement block (OPM005) registers**

Mnemonic	Explanation	Description
		<p>PEG - a count of Digitone Receiver requests that are satisfied, either immediately or after delay in the queue. Failure to satisfy a Digitone Receiver request can be due to network blocking, or unavailable dial tone (caused by a "no timeslots available for dial tone" condition). Therefore, this measurement provides information about the total performance of Digitone service and not about the adequacy of the engineering of Digitone Receiver circuits. Availability of Digitone Receivers can be inferred from the OVFL measurements.</p> <p><i>Note: Because there can be a time delay between a request for a service and its provisioning, the REQ count for a given service may be incremented in one measurement period and the PEG count for that service in the next.</i></p> <p>USE - a usage measurement for all Digitone Receivers. Use starts when a receiver is obtained and ends when it is released.</p> <p>OVFL - a count of requests to connect to Digitone Receivers that cannot be satisfied on the first attempt, because all Digitone Receivers are busy. If a request is queued, multiple attempts to satisfy one request are not counted.</p> <p>MTCE - the amount of time a receiver is placed into maintenance status (that is, faulty, man-made-busy, system-made-busy). Maintenance calls are excluded. MTCE use starts when a receiver is put into maintenance status and ends when it is restored to service.</p>
MFR	Multifrequency Receiver	REQ, PEG, USE, OVFL, MTCE - in a DMS-10 Classic Network, same as for DGTR, but data are collected for MF Receivers and Universal Tone Receivers.
PMFR	Multifrequency Receiver	<p>The operational measurements for PE-based NT2T10 Multifrequency Receiver packs (PMFR) are separated from those for the NT4T02 Universal Tone Receiver packs (UMFR) and Network Interface packs (NT8T04).</p> <p>REQ, PEG, USE, OVFL, MTCE - same as for PDTR, but data are collected for MF Receivers.</p>
GTS	Global Tone Services	<p>REQ - a count of requests for services that require Global Tone Services (GTS)</p> <p>PEG - a count of GTS requests that are satisfied</p> <p>USE - a usage measurement for all GTS channels</p>
TDS	Tone and Digit Sender	REQ - in a DMS-10 Classic Network, a count of requests for services that require a digit sender or a tone source.

<b>Table 4-F: (Continued) SVCE measurement block (OPM005) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
		<p>PEG - in a DMS-10 Classic Network, a count of TDS requests that are satisfied, either immediately or after a delay in the queue.</p> <p>USE - in a DMS-10 Classic Network, a usage measurement for all TDS circuits. Use starts when a circuit is seized and ends when it is released.</p>
DSND	Digit Sender	<p>REQ - a count of the number of requests for digit sending</p> <p>PEG - a count of the number of requests for digit sending that were satisfied</p> <p>USE - a usage measurement for resources used for digit sending</p>
BUSY	Busy Tone	<p>REQ - a count of the number of requests for busy tone</p> <p>PEG - a count of the number of requests for busy tone that were satisfied</p> <p>USE - a usage measurement for resources used for busy tone</p>
RNGB	Ring-Back Tone	REQ, PEG, USE - same as for BUSY, but data are collected for ring-back tone
RORD	Reorder Tone	REQ, PEG, USE - same as for BUSY, but data are collected for reorder tone
DIAL	Dial Tone	REQ, PEG, USE - same as for BUSY, but data are collected for dial tone
HOWL	Howler Tone	REQ, PEG, USE - same as for BUSY, but data are collected for howler tone
HIGH	High Tone	REQ, PEG, USE - same as for BUSY, but data are collected for high tone
LOW	Low Tone	REQ, PEG, USE - same as for BUSY, but data are collected for low tone
SPDT	Special Dial Tone	REQ, PEG, USE - same as for BUSY, but data are collected for special dial tone
CFMT	Confirmation Tone	REQ, PEG, USE - same as for BUSY, but data are collected for confirmation tone
CWT	Call-Wait Tone	REQ, PEG, USE - same as for BUSY, but data are collected for call-wait tone
DCBI	Directed Call Pickup Barge-In Tone	REQ, PEG, USE - same as for BUSY, but data are collected for directed call pickup barge-in tone

<b>Table 4-F: (Continued) SVCE measurement block (OPM005) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CLID	Calling Number Delivery and/or Calling Name Delivery	<p>REQ - a count of the number of attempts to use a resource (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) to perform CND and CNAM.</p> <p>PEG - a count of the number of resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used to perform CND or CNAM.</p> <p>USE - a usage measurement for resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network). Use starts when a circuit is seized and ends when it is released.</p>
CONT	Continuity Test	<p>REQ - a count of the number of attempts to use a resource (TDS/UTR in DMS-10 Classic Network or NT8T04 in DMS-10EN network) to perform a ISUP continuity test.</p> <p>PEG - a count of the number of resources (TDS/UTR in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used to perform an ISUP continuity test.</p> <p>USE - a usage measurement for resources (TDS/UTR in DMS-10 Classic Network or NT8T04 in DMS-10EN network). Use starts when a circuit is seized and ends when it is released.</p>
CUTR	Coin Tone Detection	<p>REQ - a count of the number of attempts to use a resource (UTR in DMS-10 Classic Network or NT8T04 in DMS-10EN network) to perform coin detection.</p> <p>PEG - in a DMS-10 Classic Network, a count of the number of resources (UTR in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used to perform coin detection.</p> <p>USE - in a DMS-10 Classic Network, a usage measurement for resources (UTR in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used for coin detection. Use starts when a circuit is seized and ends when it is released.</p>
MWIL	Message Waiting Indicator Lamp	<p>REQ - a count of the number of Message Waiting Indicator Lamp status change requests</p> <p>PEG - a count of the number of Message Waiting Indicator Lamp status changes</p> <p>USE - a usage measurement for Message Waiting Indicator Lamp status changes</p>

<b>Table 4-F: (Continued) SVCE measurement block (OPM005) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
WARB	Warble Tone	<p>REQ - a count of the number of attempts to use a resource (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) to perform warble tone.</p> <p>PEG - a count of the number of resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used to perform warble tone.</p> <p>USE - a usage measurement for resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used for warble tone. Use starts when a circuit is seized and ends when it is released.</p>
N2N	End-to-end DTMF	<p>REQ - a count of the number of attempts to use a resource (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) to perform end-to-end DTMF; the count is incremented both for the originating end and for the terminating end.</p> <p>PEG - a count of the number of resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used to perform end-to-end DTMF; the count is incremented both for the originating end and for the terminating end.</p> <p>USE - a usage measurement for resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used for end-to-end DTMF; the count is incremented both for the originating end and for the terminating end. Use starts when a circuit is seized and ends when it is released.</p>
UDTR	Universal Tone Receiver	<p>In a DMS-10 Classic Network, the operational measurements for PE-based NT2T11 Digitone Receiver packs (PDTR) are separated from those for the NT4T02 Universal Tone Receiver packs (UDTR). The UDTR register also applies to the DMS-10EN network configuration.</p> <p>REQ - in a DMS-10 Classic Network, a count of requests to connect to Universal Tone Receivers and associated circuits necessary for providing Digitone trunk and line service. A queued request is counted only once. However, multiple requests in the same call are all counted.</p>

Table 4-F: (Continued) SVCE measurement block (OPM005) registers		
Mnemonic	Explanation	Description
		<p>PEG - in a DMS-10 Classic Network, a count of Universal Tone Receiver requests that are satisfied, either immediately or after delay in the queue. Failure to satisfy a Universal Tone Receiver request can be due to network blocking, or unavailable dial tone (caused by a "no timeslots available for dial tone" condition). Therefore, this measurement provides information about the total performance of Universal Tone Receiver service and not about the adequacy of the engineering of Universal Tone Receiver circuits. Availability of Universal Tone Receivers can be inferred from the OVFL measurements.</p> <p><i>Note: Because there can be a time delay between a request for a service and its provisioning, the REQ count for a given service may be incremented in one measurement period and the PEG count for that service in the next.</i></p> <p>USE - in a DMS-10 Classic Network, a usage measurement for all Universal Tone Receivers. Use starts when a receiver is obtained and ends when it is released.</p> <p>OVFL - in a DMS-10 Classic Network, a count of requests to connect to Universal Tone Receivers that cannot be satisfied on the first attempt, because all Universal Tone Receivers are busy. If a request is queued, multiple attempts to satisfy one request are not counted.</p> <p>MTCE - in a DMS-10 Classic Network, the amount of time a receiver is placed into maintenance status (that is, faulty, man-made-busy, system-made-busy). Maintenance calls are excluded. MTCE use starts when a receiver is put into maintenance status and ends when it is restored to service.</p>
UMFR	Universal Tone Receiver	<p>The operational measurements for PE-based NT2T10 Multifrequency Receiver packs (PMFR) are separated from those for the NT4T02 Universal Tone Receiver packs (UMFR).</p> <p>REQ, PEG, USE, OVFL, MTCE - same as for UDTR, but data are collected for Multifrequency tones.</p>

4-34 Measurement blocks

<b>Table 4-F: (Continued) SVCE measurement block (OPM005) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CWID	Calling Identity on Call Waiting	REQ - a count of the number of attempts to use a resource (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) to perform CWID tone. PEG - a count of the number of resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used to perform CWID tone. USE - a usage measurement for resources (TDS in DMS-10 Classic Network or NT8T04 in DMS-10EN network) used for CWID tone. Use starts when a circuit is seized and ends when it is released.
CTN1	Customer assignable Tone 1	REQ, PEG, USE - same as for BUSY, but data are collected for customer-assignable tone 1
CTN2	Customer assignable Tone 2	REQ, PEG, USE - same as for BUSY, but data are collected for customer-assignable tone 2
CTN3	Customer assignable Tone 3	REQ, PEG, USE - same as for BUSY, but data are collected for customer-assignable tone 3
CTN4	Customer assignable Tone 4	REQ, PEG, USE - same as for BUSY, but data are collected for customer-assignable tone 4
CTN5	Customer assignable Tone 5	REQ, PEG, USE - same as for BUSY, but data are collected for customer-assignable tone 5

Figure 4-20: SVCE measurement block (OPM005) flow chart - Meridian Business Sets WARB register

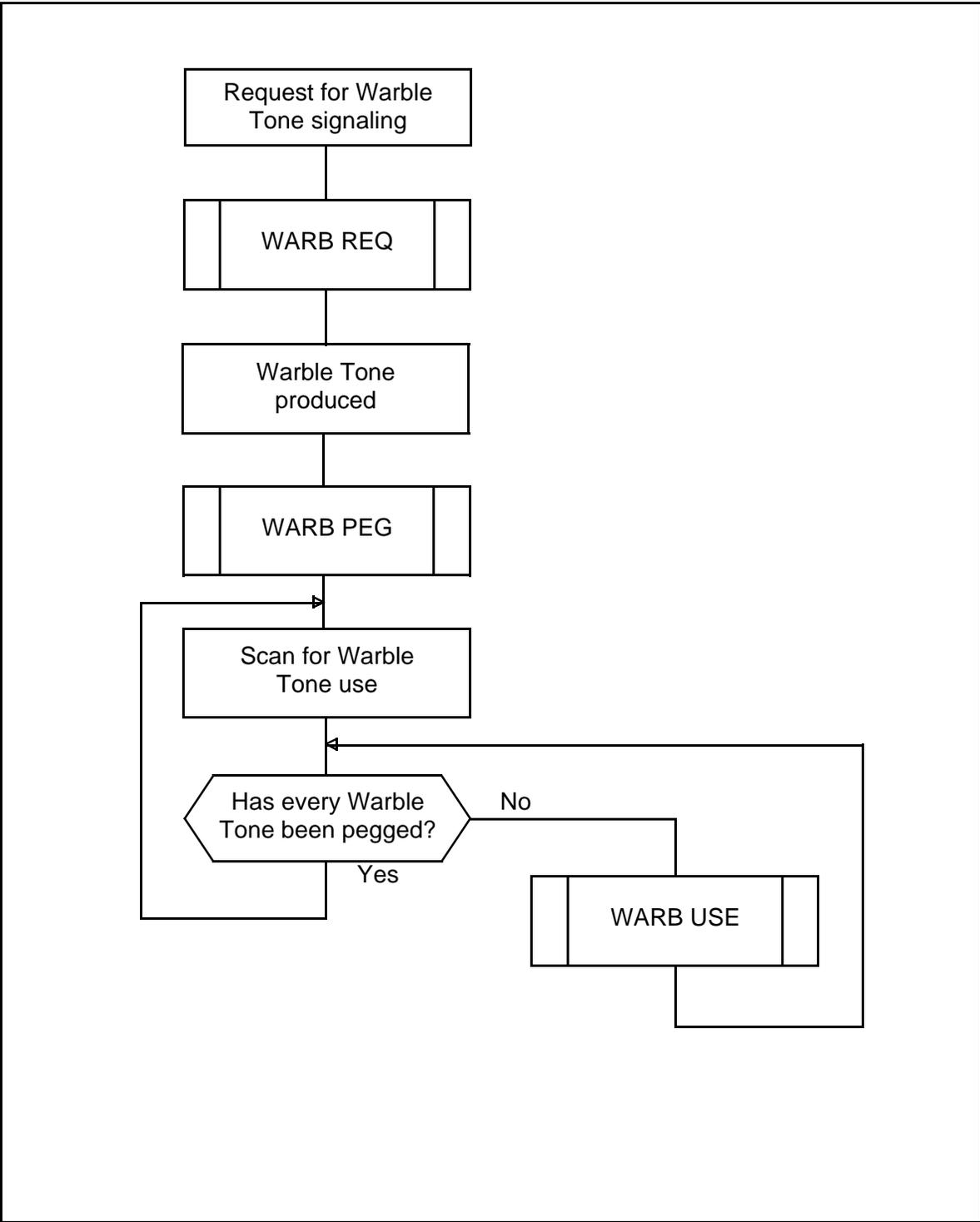


Figure 4-21: SVCE measurement block (OPM005) flow chart - Meridian Business Sets N2N register

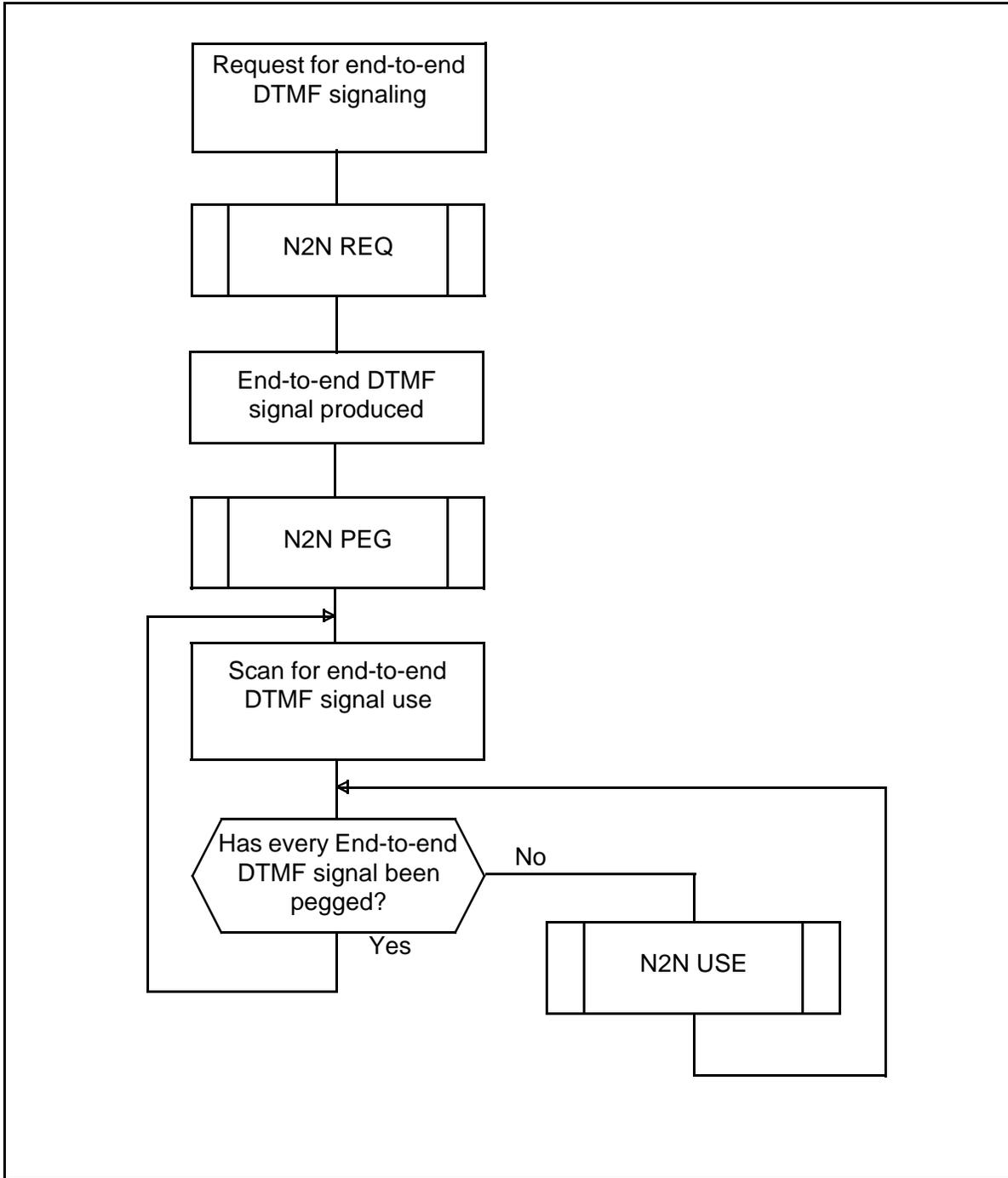


Figure 4-22: SVCE measurement block (OPM005) flow chart - Calling Identity on Call Waiting (CWID) register

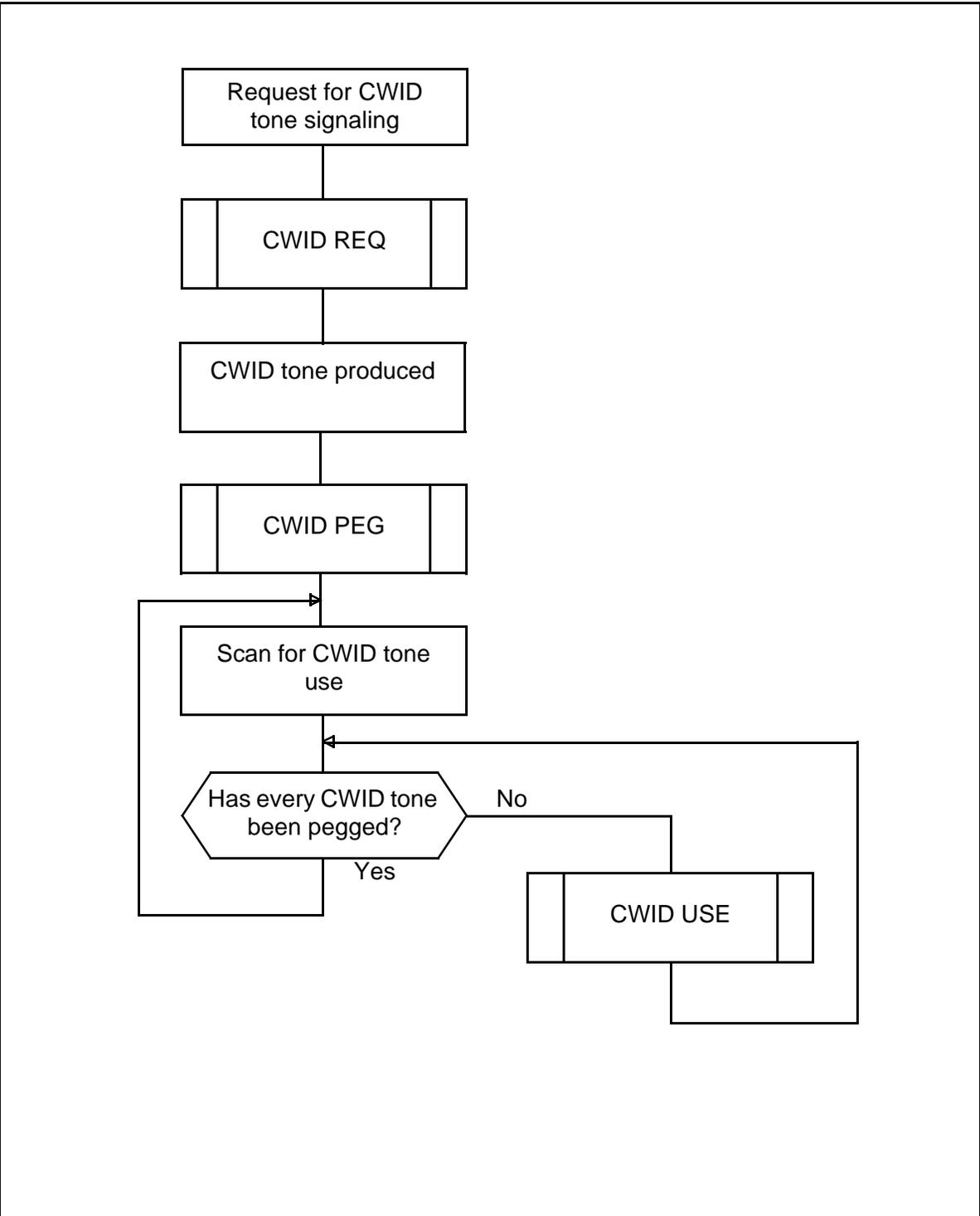


Figure 4-23: SVCE measurement block (OPM005) flow chart - Global Tone Services (GTS) PEG and REQ registers

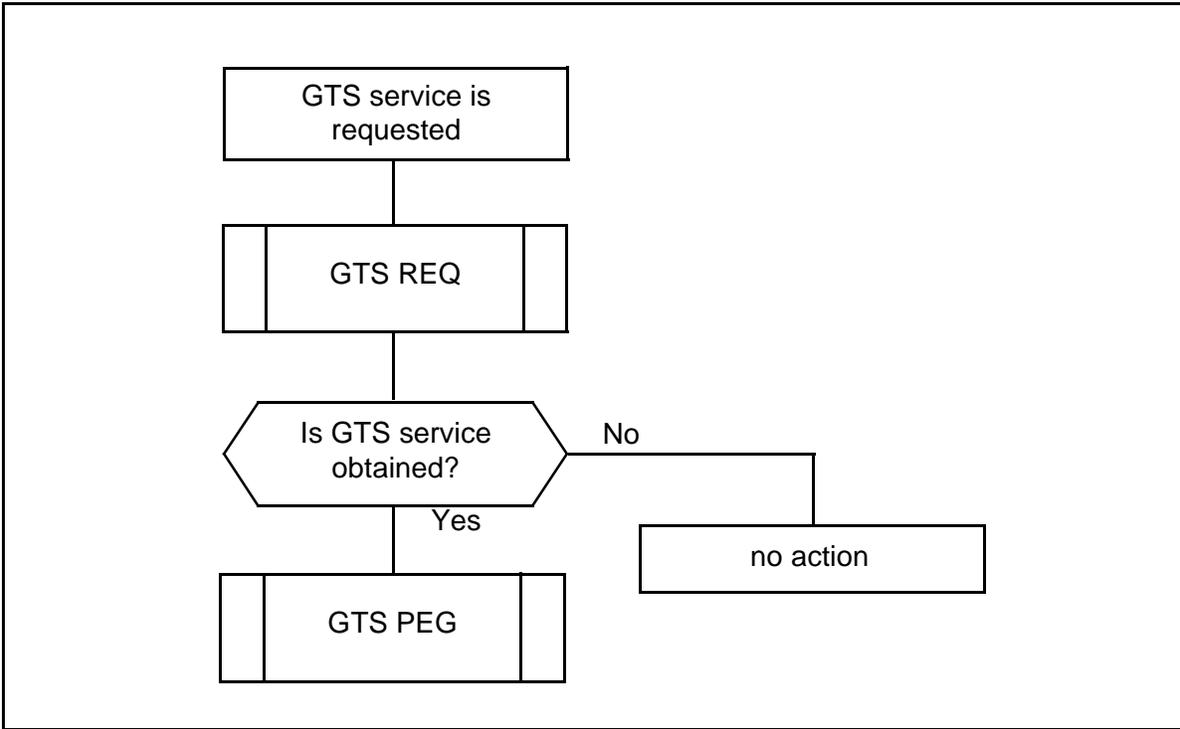


Figure 4-24: SVCE measurement block (OPM005) flow chart - Global Tone Services (GTS) USE register

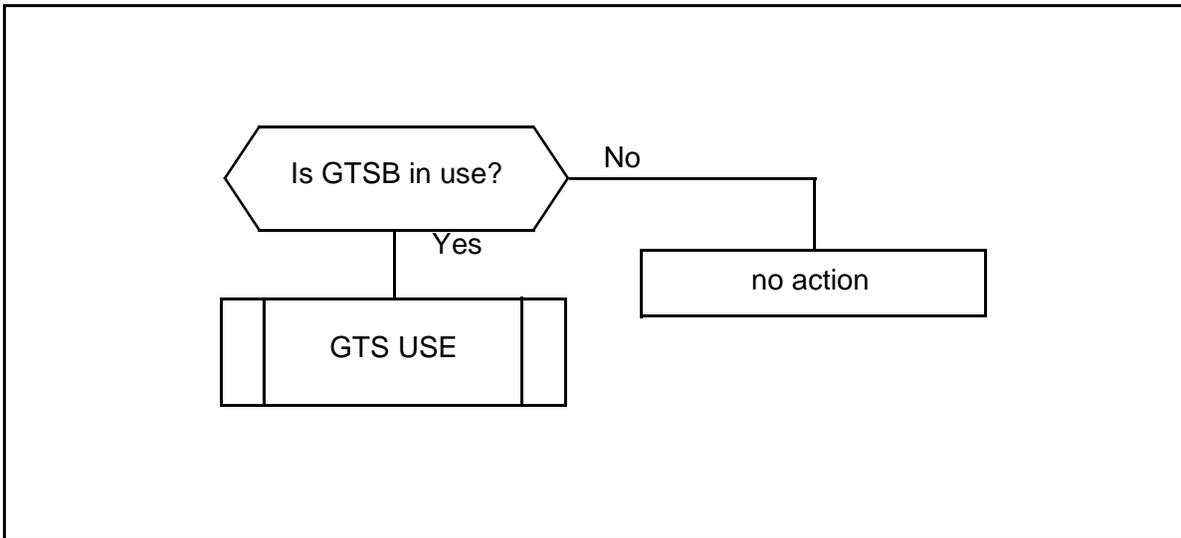


Figure 4-25: SVCE measurement block (OPM005) flow chart - Customer Assignable Tone (CTN1 - CTN4) PEG and REQ registers

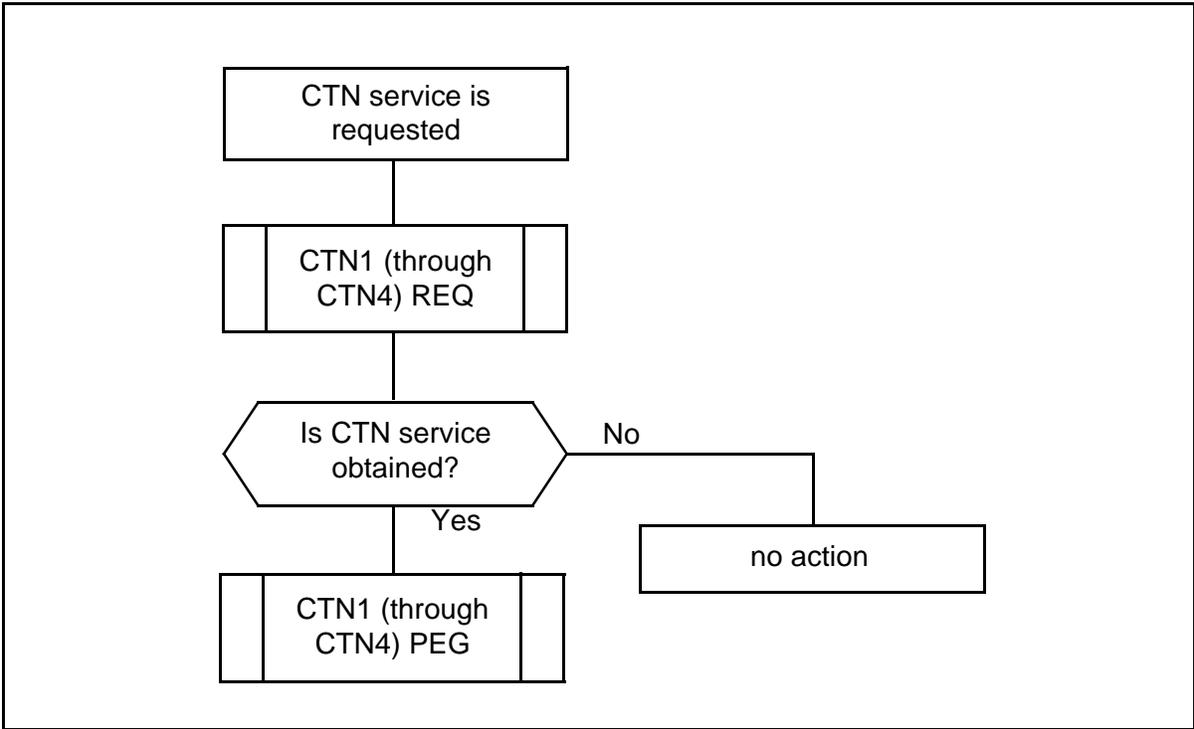
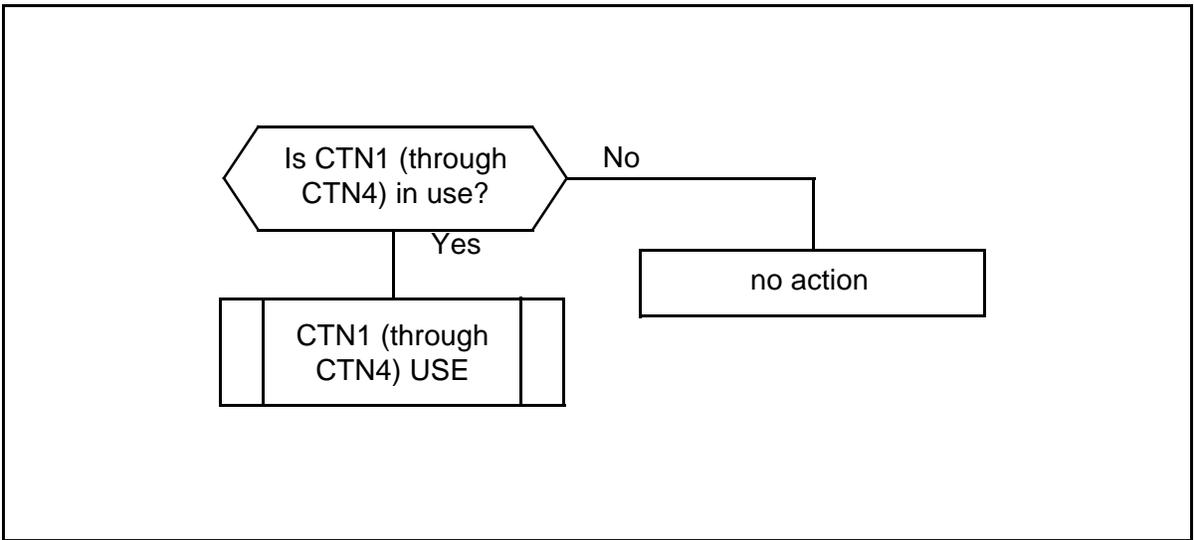


Figure 4-26: SVCE measurement block (OPM005) flow chart - Customer Assignable Tone (CTN1 - CTN4) USE register



## Network (NTWK measurement block - OPM006)

The Network (NTWK) measurement block (Figures 4-27 and 4-28, and Table 4-G) provides information on the performance of network interface packs and the peripheral loops associated with each interface pack.

Multiplex Loop Interface (MLI) and DS-30A (D3A) interfaces are identified by physical address (*CE b s p*). Usage and maintenance data on interface packs are collected using a 100-s scan.

Peripheral loop (PELP) measurements are provided for each MLI and for each DS-30A interface; eight PELP measurements are displayed for every NT4T04 and NT4T05 interface pack that is provisioned in a switch configured with the DMS-10 Classic Network and 32 PELP measurements are displayed for every NT8T04 Network Interface pack provisioned in a switch configured with the DMS-10EN network. PELPs are identified by the physical address of the interface packs (*CE b s p*) and the peripheral loop (*lp*) number on the pack. Usage and maintenance data on PELPs are collected using a 100-s scan.

A Global Tone Services Bank (GTSB) measurement is displayed for switches configured with the DMS-10EN network and NT8T04 Network Interface packs. A conference bridge (CONF) measurement is provided for each GTSB measurement.

**Note 1:** The peg count for an interface pack is not the sum of the peg counts for the associated peripheral loops. The relationship between peg counts varies according to the office configuration.

**Note 2:** If a customer places a call from an RSC-S connected to the DMS-10 switch, a peripheral loop (PELP) will be pegged but a D3A pack will not be pegged; this is due to dial tone being supplied by the RSC-S and not by the host DMS-10 switch.

**Note 3:** For selected changes made to the NTWK block, flow charts showing the sequence of events that cause the measurement block registers to be incremented and the relationship between the registers within the block are provided in Figures 4-28 through 4-32.

Figure 4-27: NTWK measurement block (OPM006) format for a DMS-10 Classic Network configuration

OPM006	NTWK	CAPB	TUES	11/01/90	13:00:00	HRHF
		PEG	BLK	USE	MTCE	
MLI	CE b s p	00000	00000	00000	00000	
PELP	CE b s p lp	00000	00000	00000	00000	
.						
D3A	CE b s p	00000	00000	00000	00000	
PELP	CE b s p lp	00001	00000	00000	00000	
.						
TDS	CE b s p	00000	00000	00000	00000	
CNF	CE b s p	00000	00000	00000	00000	
MLI	CE b s p	00000	00000	00000	00000	

Figure 4-28: NTWK measurement block (OPM006) format for a DMS-10EN network configuration

OPM006	NTWK	CAPB	TUES	11/02/99	13:00:00	HRHF
		PEG	BLK	USE	MTCE	
MLI	CE b s p	00000	00000	00000		
GTSB0		00000	00000	00000		
CONF		00000	00000	00000		
GTSB1		00000	00000	00000		
CONF		00000	00000	00000		
PELP	CE b s p lp	00000	00000	00000	00000	
.						
D3A	CE b s p	00000		00000	00000	
GTSB0		00000	00000	00000		
CONF		00000	00000	00000		
GTSB1		00000	00000	00000		
CONF		00000	00000	00000		
PELP	CE b s p lp	00001	00000	00000	00000	
.						

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-G: NTWK measurement block (OPM006) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
MLI	Multiplex Loop Interface	<p>PEG - a count of the number of attempts to establish a connection either to or from the MLI pack (NT4T05) or Network Interface pack (NT8T04) acting as an MLI interface, including both successful and unsuccessful attempts. Both the “to” and “from” interface packs are pegged. Where multiple attempts are made, only the first attempt is pegged.</p> <p>BLK - a count of the number of attempts to establish a connection between NT4T05 packs that have failed due to not obtaining a diloop timeslot. Both the “to” and “from” NT4T05 packs are pegged. The count is incremented when this interface pack is included in the connection. This register does not apply to the NT8T04 Network Interface pack.</p> <p>USE - a usage measurement for this NT4T05 or NT8T04 pack. Use starts when software reserves a diloop timeslot for a network connection and ends when it is returned to the idle state.</p> <p>MTCE - the amount of time this NT4T05 or NT8T04 pack is placed in the maintenance status (faulty, man-made-busy, system-made-busy, indirectly out-of-service, etc.). Maintenance calls are excluded. Use starts when this pack is put into the maintenance status and ends when it is returned to service.</p>
GTSB	Global Tone Services Bank	<p>PEG - a count of the number of times a general use channel on a GTSB is used.</p> <p>BLK - a count of the number of requests to use a general use channel on a GTSB when none is available.</p> <p>USE - the amount of time that a general use channel on a GTSB is in use.</p>
CONF	Conference Bridge	<p>PEG - a count of the number of times a conference bridge on a GTSB was obtained.</p> <p>BLK - a count of the number of failures to obtain a conference bridge on a GTSB.</p> <p>USE - the amount of time that a conference bridge on a GTSB is in use.</p>
PELP	Peripheral Loop	<p>PEG - a count of the number of attempts to obtain a peripheral loop timeslot on this peripheral loop. The count includes both successful and unsuccessful attempts. Where multiple attempts are made to obtain a peripheral loop timeslot, only the first attempt is pegged.</p>

<b>Table 4-G: (Continued)</b> <b>NTWK measurement block (OPM006) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
		<p>BLK - a count of the number of attempts to obtain a peripheral loop timeslot that fail due to not finding an idle timeslot on this peripheral loop.</p> <p>USE - a usage measurement for this peripheral loop. Use starts when software reserves a peripheral loop timeslot and ends when it returns to idle state.</p> <p>MTCE - the amount of time this peripheral loop is placed in the maintenance status (faulty, man-made-busy, system-made-busy, indirectly out-of-service, etc.). Maintenance calls are excluded. Use starts when this peripheral loop is put into the maintenance status and ends when it is returned to service.</p>
D3A	DS-30A Interface	<p>PEG - a count of the number of attempts to establish a connection either to or from the DS-30A pack (NT4T04) or Network Interface pack (NT8T04) acting as a DS-30A interface, including both successful and unsuccessful attempts. Both the "to" and "from" NT4T04 and NT8T04 packs are pegged. Where multiple attempts are made, only the first attempt is pegged.</p> <p>BLK - a count of the number of attempts to establish a connection between NT4T04 packs that have failed due to not obtaining a diloop timeslot. Both the "to" and "from" interface packs are pegged. The count is incremented when this NT4T04 pack is included in the connection. This register does not apply to the NT8T04 pack.</p> <p>USE - a usage measurement for this NT4T04 or NT8T04 pack. Use starts when software reserves a diloop timeslot for a network connection and ends when it is returned to the idle state.</p> <p>MTCE - the amount of time this NT4T04 or NT8T04 pack is placed in the maintenance status (faulty, man-made-busy, system-made-busy, indirectly out-of-service, etc.). Maintenance calls are excluded. Use starts when this pack is put into the maintenance status and ends when it is returned to service.</p>
TDS	Tone and Digit Sender	<p>PEG - when the switch is configured with the DMS-10 Classic network, a count of the number of attempts to establish a connection either to or from the TDS pack, including both successful and unsuccessful attempts. Where multiple attempts are made, only the first attempt is pegged.</p> <p>BLK - when the switch is configured with the DMS-10 Classic network, a count of the number of attempts to establish a connection between an interface pack (MLI or DS-30A) and this TDS pack that has failed due to not obtaining a diloop timeslot. Both the interface and TDS packs are pegged.</p>

<b>Table 4-G: (Continued) NTWK measurement block (OPM006) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
		<p>USE - when the switch is configured with the DMS-10 Classic network, a usage measurement for this TDS pack. Use starts when software reserves a diloop timeslot for a network connection and ends when it is returned to the idle state.</p> <p>MTCE - when the switch is configured with the DMS-10 Classic network, the amount of time this TDS pack is placed in the maintenance status (faulty, man-made-busy, system-made-busy, indirectly out-of-service, etc.). Maintenance calls are excluded. Use starts when this TDS pack is put into the maintenance status and ends when it is returned to service.</p>
CNF	Three-Way Conference Pack	<p>PEG - when the switch is configured with the DMS-10 Classic network, a count of the number of attempts to establish a connection either to or from the CNF pack, including both successful and unsuccessful attempts. Where multiple attempts are made, only the first attempt is pegged.</p> <p>BLK - when the switch is configured with the DMS-10 Classic network, a count of the number of attempts to establish a connection between interface packs that have failed due to not obtaining a diloop timeslot. Both the “to” and “from” interface packs are pegged. The count is incremented when this CNF pack is included in the connection.</p> <p>USE - when the switch is configured with the DMS-10 Classic network, a usage measurement for this CNF pack. Use starts when software reserves a diloop timeslot for a network connection and ends when it is returned to the idle state.</p> <p>MTCE - when the switch is configured with the DMS-10 Classic network, the amount of time this CNF pack is placed in the maintenance status (faulty, man-made-busy, system-made-busy, indirectly out-of-service, etc.). Maintenance calls are excluded. Use starts when this CNF pack is put into the maintenance status and ends when it is returned to service.</p>

Figure 4-29: NTKW measurement block (OPM006) flow chart - Global Tone Services (GTSB) PEG and REQ registers

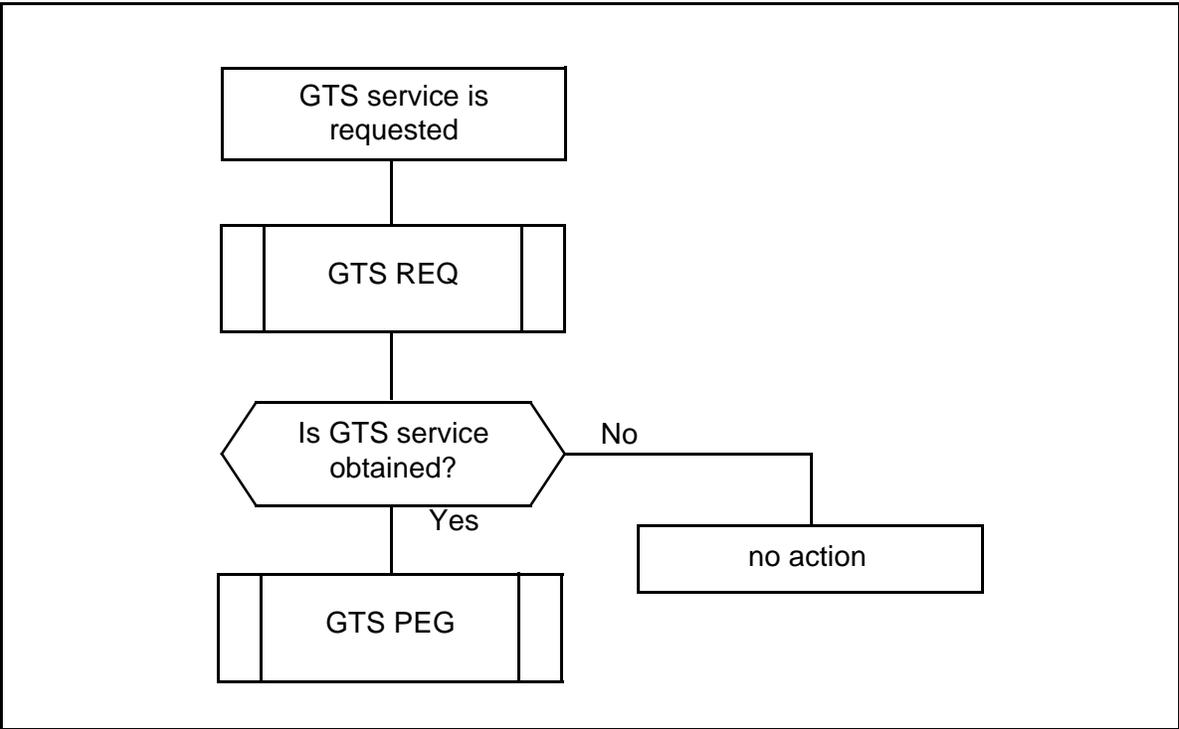


Figure 4-30: NTKW measurement block (OPM006) flow chart - Global Tone Services (GTSB) USE register

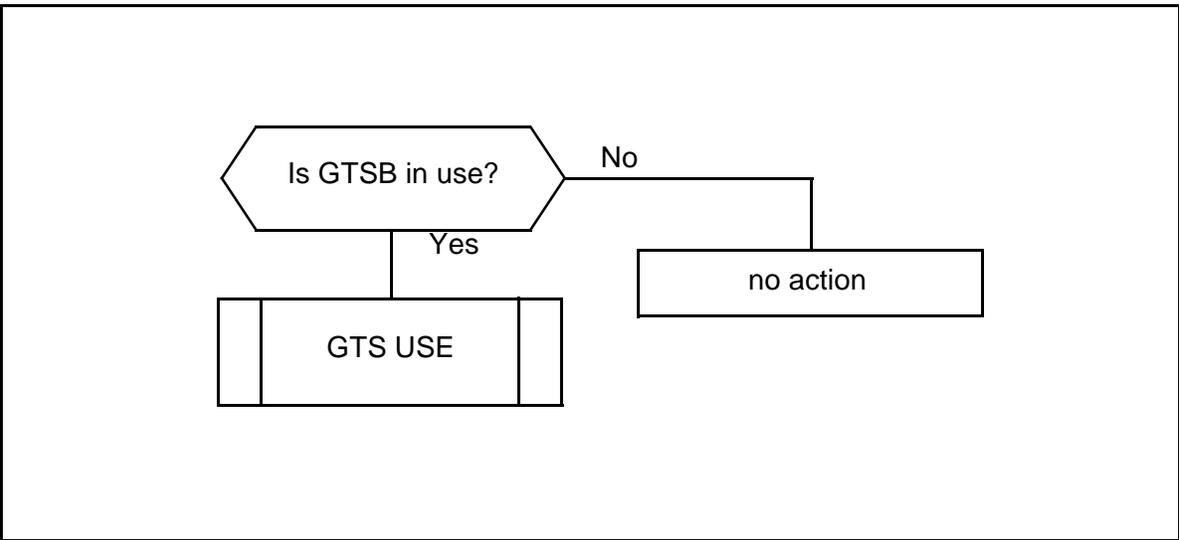


Figure 4-31: NTKW measurement block (OPM006) flow chart - Global Tone Services (GTSB) PEG and BLK registers

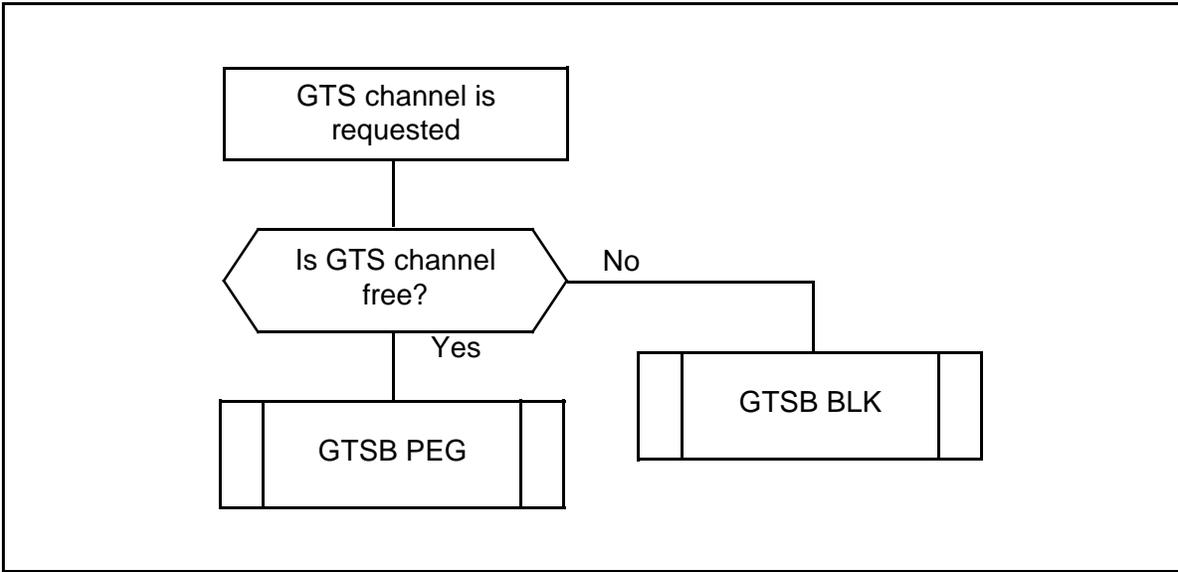


Figure 4-32: NTKW measurement block (OPM006) flow chart - Conference Bridge (CONF) PEG and BLK registers

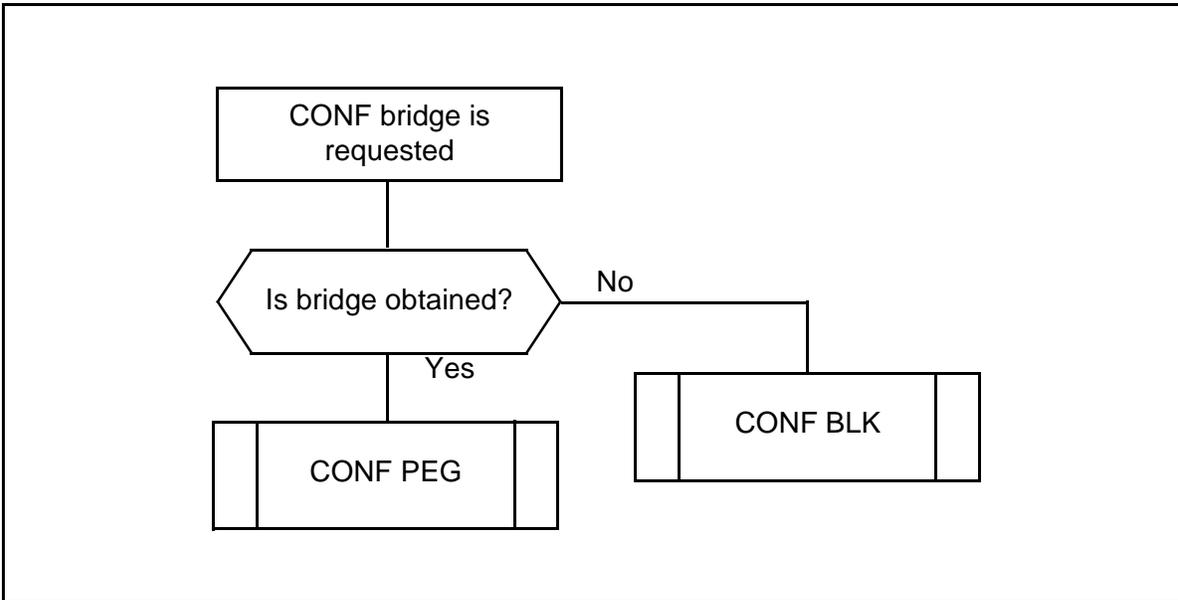
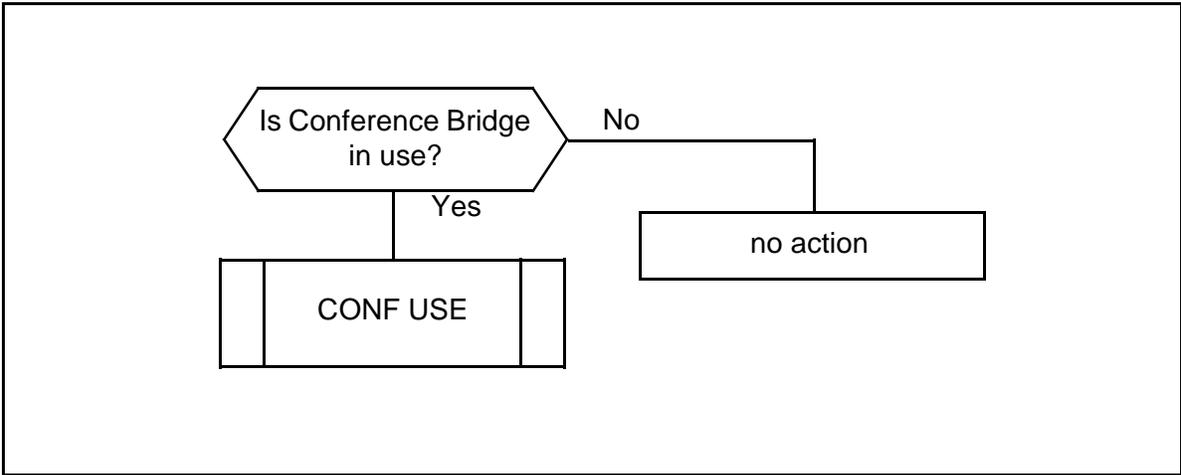


Figure 4-33: -NTWK measurement block (OPM006) flow chart - Conference Bridge (CONF) USE register



## Study Registers (SREG measurement block - OPM007)

The Study Register (SREG) measurement block provides information on the traffic load handled by individual line and trunk circuits. Usage data are collected using a 100-s scan. One SREG block is provided per office and up to 128 SREG can be configured per block. (To change the number of study registers, see Overlay CNFG (OPMS), in NTP 297-3401-311, *Data Modification Manual*.)

Study registers are added to individual line and trunk circuits on an as-required basis. Circuit information (including, as appropriate, line number, trunk group number, circuit location) is identified in the measurement block printout as follows:

- single-party line circuit-entries beginning with “DN”
- two-party or multiparty line circuit-entries beginning with “DN MUL”
- analog and digital trunk circuit-entries beginning with “TG”
- Meridian Business Sets line circuit -entries beginning with “DN MBS”
- line trunk circuit -entries beginning with “LT”
- ISDN Primary Rate Interface line trunk circuit -entries beginning with “LT PRI”
- ISDN basic rate interface line circuit -entries beginning with “DN BRI”
- Star Hub line circuit -entries beginning with “DN HUBE”

For additional information about the different types of line circuits shown in the report, see NTP 297-3401-150, *Equipment Identification*.

The SREG measurement block records peg count and usage information:

- PEG-a count of the number of times a line or trunk circuit goes from idle to busy. The count is incremented once for each successful or unsuccessful call attempt. This includes both calls originating from and terminating to the line or trunk circuit. Transitions from idle to the maintenance-busy state (that is, man-made-busy, diagnostic testing, maintenance calls, or circuit-found-faulty) and to the lockout state are not counted.
- USE-the amount of time a line or trunk is in the busy state. Maintenance-busy time is not included in the USE measurement.

If Facility Name printing in OPMs (FNOM prompt in DMO CNFG (SYS)) is enabled, a new line for the TG name will be added after each TG peg line prints.

**Note 1:** An ISDN basic rate interface (BRI) line circuit can support multiple DNs, however peg count and usage are monitored for both B-channels on the entire BRI line and not for the individual directory numbers that may be associated with the line. Peg count and usage are not monitored for B-channels on the BRI interface that are configured for semi-permanent (nailed-up) access for high speed data transfer.

**Note 2:** For Meridian Business Sets line circuits, usage is the amount of time the M5000-Series business set is in a busy state. The set is in a busy state if one or more keys are in use.

**Note 3:** For Meridian Business Sets line circuits, the count is incremented once for each key on an M5000-Series business set that goes from an idle to busy state.

### Overflow Registers for Busy Lines

The Overflow Registers for Busy Lines feature modifies the SREG measurement block to include separate peg counts for call originations and call terminations, and an overflow peg count for calls terminating to a busy line or line trunk that has special studies activated. The modified SREG measurement block is shown in Figure 4-34.

In the new SREG format, peg counts for call originations appear under the ORIG column. A new column, TERM, shows call terminations. Another new column, OVFL, shows the number of times a call is terminated to a non-idle line or line trunk that has special studies activated; the column does not, however, show overflow counts for regular trunks. In addition, line trunks are treated as lines rather than as regular trunks in the new format: the DN associated with the line trunk is displayed instead of the line trunk group number and type (LT xxx xxxx (*site*) PE b s p u). The new OUSE and TUSE columns contain, respectively, the total usage time for call originations and the total usage time for call terminations.

The Overflow Registers for Busy Lines feature provides the operating company with the ability to calculate the percentage of calls that do not terminate due to a busy line condition. With this information, the operating company can illustrate to subscribers their need for custom calling features or additional lines. The following formula is used to calculate the percentage of overflow calls, utilizing measurements from the SREG measurement block:

$$\% \text{ Overflow} = [(\text{OVFL}) / (\text{TERM} + \text{OVFL})] \times 100$$

**Figure 4-34: SREG measurement block (OPM007)**

```

OPM007SREG  CAPA          SUN          11/05/9504:15:00QRTR

                                ORIG  OUSE  OVFL   TERM  TUSE
DN 210 1234 SITE PE 01 1 06 1    00000 00000 00000 00000 00000
DN 291 1115 SITE PE 01 1 07 1    00000 00000 00000 00000 00000
DN 291 1717 SITE LCE 01 1 18 30 00000 00000 00000 00000 00000
DN 291 1818 SITE SLE 01 1 24     00000 00000 00000 00000 00000
DN MUL          SITE PE 01 1 10 1 00000 00000 00000 00000 00000
TG 020 INC     SITE PE 01 1 01 1 00000 00000 00000 00000 00000
DN MBS          SITE LCE 01 1 01 1 00000 00000 00000 00000 00000
DN BRI          SITE LCE 01 3 08 1 00000 00000 00000 00000 00000
LT 291 2024 SITE PE 01 1 03 1    00000 00000 00000 00000 00000
DN HUBE        SITE HUBE 01 3 01 1 00000 00000 00000 00000 00000
DN RLDS                - (Not operational) -
    
```

**Note 1:** Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

**Note 2:** DNs displayed contain ten digits.

**Note 3:** For all OPM block changes due to Facility Identification by Name, in all modified sections facility names will only appear in OPM printouts if CNFG (SYS) PRFN=YES and CNFG (SYS) FNOM=YES.

An example of the modified OPM block printout is shown below, with the new output lines:

**Figure 4-35: SREG measurement block when CNFG (SYS) FNOM=YES (OPM007)**

```

OPM007      SREG  NSS4  WED   31/07/02  03:45:00  QRTR

                                ORIG  OUSE  OVFL   TERM  TUSE
DN 226 3000  NSS4   LCE 01 3 00    00000 00000 00000 00000 00000
DN 235 4810  RSCS   RSC 01 4 18 1 00000 00000 00000 00000 00000
TG 020 INC   NSS4   PE 01 1 01 1 00000 00000 00000 00000 00000
TG NAME PIVL INC TG 20
    
```

**Maintenance (MTCE measurement block - OPM008)**

The Maintenance (MTCE) measurement block (Figure 4-36 and Table 4-H) provides information on equipment unavailability caused by system faults or by the performance of maintenance activities. Usage data are collected using a 100-s scan. One MTCE block is provided per office.

Figure 4-36: MTCE measurement block (OPM008)

OPM008	MTCE	CAPA	MON	30/05/90	04:00:00	HRHR
CNTL	PEG	USE				
CPU	00000	00000				
MEM	00000	00000				
INI	00000					
NTWK						
MLI	00000	00000				
D3A	00000	00000				
GTSB	00000	00000				(PRINTED ONLY FOR DMS-10EN)
TDS	00000	00000				(NOT PRINTED FOR DMS-10EN)
CNF	00000	00000				(NOT PRINTED FOR DMS-10EN)
UTR	00000	00000				(NOT PRINTED FOR DMS-10EN)
UTRC	00000	00000				(NOT PRINTED FOR DMS-10EN)
PEQP						
SCM	00000	00000				
PSHF	00000	00000				
DCM	00000	00000				
TRK	00000	00000				
LINE	00000	00000				
RCVR	00000	00000				
PEPR	00000	00000				
LCMC	00000	00000				
LSG	00000	00000				
PELP	00000	00000				
SLCS	00000	00000				
SCSC	00000	00000				
RLSG	00000	00000				
RLCM	00000	00000				
SCUC	00000	00000				
RCUC	00000	00000				
ULSG	00000	00000				
HAZL	00000	00000				
OVLТ	00000	00000				
RSCC	00000	00000				
DSI	00000	00000				
DSLK	00000	00000				
IDLA	00000					
IDLF	00000					
ESMC	00000	00000				
IDT	00000	00000				
EDCH	00000	00000				
HUBC	00000	00000				
RLD	-	NOT OPERATIONAL	-			

For selected changes made to the MTCE block, flow charts showing the sequence of events that cause the MTCE registers to be incremented and the relationship between the registers within the block are shown in Figures 4-38 through 4-42.

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-H: MTCE measurement block (OPM008) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CNTL	Control Equipment	The following measurements are for Control Equipment.
CPU	Central Processing Unit	PEG - a count of the number of initializations caused by a fault in the active CPU.  USE - the amount of time the inactive CPU is faulty. Usage starts when the CPU is marked "faulty" and ends when the fault condition is cleared.
MEM	Memory Controller	PEG - a count of the number of initializations caused by a fault in system memory. Applies to the Memory Controller pack in a typical configuration or to the System Memory pack in the three-bay configuration.  USE - the amount of time a memory controller is not in service. Usage starts when the memory controller is removed from service and ends when the memory controller is returned to service.
INI	Initialization	PEG - a count of the total number of initializations.
NTWK	Network Equipment	The following measurements are for Network Equipment.
MLI	Multiplex Loop Interface	PEG - a count of the number of times previously enabled MLI packs or NT8T04 Network Interface packs with MLI application are disabled. Data for all MLI packs are contained in one count.  USE - the amount of time MLI packs or NT8T04 Network Interface packs with MLI application are disabled. Use starts when a pack is disabled and ends when the pack is returned to service.
D3A	DS-30A Interface	PEG - a count of the number of times previously enabled DS-30A packs or NT8T04 Network Interface packs with DS-30A application are disabled. Data for all DS-30A packs are contained in one count.  USE - the amount of time DS-30A packs or NT8T04 Network Interface packs with DS-30A application are disabled. Use starts when a pack is disabled and ends when pack is enabled.
GTSB	Global Tone Services Banks	PEG - a count of the number of times previously enabled GTSBs are disabled. Data for all GTSBs on all NT8T04 packs is contained in one count.  USE - the amount of time GTSBs are in maintenance state.

<b>Table 4-H: (Continued) MTCE measurement block (OPM008) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
TDS	Tone and Digit Sender	PEG - a count of the number of times previously enabled TDS packs are disabled. Data for all TDS packs are contained in one count.  USE - the amount of time TDS packs are disabled. Use starts when a pack is disabled and ends when the pack is enabled.
CNF	Conference	PEG - a count of the number of times previously enabled CONF packs are disabled. Data for all CONF packs are contained in one count.  USE - the amount of time CONF packs are disabled. Use starts when a pack is disabled and ends when the pack is enabled.
UTR	Universal Tone Receiver (UTR)	PEG - a count of the number of times a UTR goes from an in-service to an out-of-service state.  USE - the amount of time the UTR remains out of service
UTRC	Universal Tone Receiver (UTR) Channel	PEG - a count of the number of times a UTR channel goes from an in-service to an out-of-service state.  USE - the amount of time the UTR channel remains out of service
PEQP	Peripheral Equipment	The following measurements are for Peripheral Equipment.
SCM	Subscriber Carrier Module	PEG - a count of the number of times a previously in-service SCM is removed from service. The count is incremented each time a complete SCM becomes either system- or man-made-busy. One count is provided for all SCMs.  USE - the total amount of time an SCM(s) is not in service. Use starts when the SCM(s) is removed from service and ends when the SCM(s) is returned to service.
PSHF	Peripheral Shelf	PEG - a count of the number of times previously enabled PSHFs are disabled. The count is also incremented when the peripheral loop controlling a PSHF is disabled and the mate of the loop cannot assume control of the shelf. One count is provided for all PSHFs, but shelves containing DCMs are excluded.  USE - the amount of time PSHFs are disabled and/or are not controlled by a peripheral loop. Use starts when a PSHF is disabled or is not controlled and ends when it is returned to service.
DCM	Digital Carrier Module	PEG - a count of the number of times previously enabled DCMs are disabled. The count is also incremented if the network loop controlling a DCM is disabled. Data for all DCMs are contained in one count.

<b>Table 4-H: (Continued) MTCE measurement block (OPM008) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
		USE - the amount of time a DCM(s) is disabled or out of service due to a disabled network loop. Use starts when the DCM(s) is disabled or put out of service and ends when the DCM (s) is returned to service.
TRK	Trunks	PEG - a count of the number of times trunk circuits are taken out of service by being switched, disabled, man-made-busy, or system-made-busy. Trunk circuits placed on lockout are not counted. Data for all trunk circuits are contained in one count  USE - the amount of time trunk circuits are out of service. Usage starts when a trunk is removed from service and ends when the trunk is returned to service.
LINE	Lines	PEG, USE - same as for TRK, but data are collected on line circuits.
RCVR	Receivers	PEG, USE - same as for TRK, but data are collected on receiver circuits (both multifrequency and Digitone).
PEPR	Peripheral Processor Pack	PEG - a count incremented each time a peripheral processor is either system-made-busy or man-made-busy.  USE - the amount of time a peripheral processor is out of service. Use starts when a peripheral processor is removed from service and ends when it is returned to service.
LCMC	Line Concentration Module Controller	PEG - a count of the number of times previously enabled LCMCs are disabled.  USE - the amount of time LCMCs are disabled.
LSG	Line Subgroup	PEG - a count of the number of times previously enabled LSGs are disabled.  USE - the amount of time LSGs are disabled.
PELP	Peripheral Loop	PEG - a count of the number of times previously in-service PELPs are disabled. One count is provided for all PELPs on all the interface packs.  USE - the amount of time PELPs are out-of-service.
SLCS	SLC-96 Shelf	PEG - a count of the number of times SLC-96 shelves go from in-service to out-of-service state.  USE - the amount of time SLC-96 shelves are out-of-service.
SCSC	SCM-10S Controller	PEG - a count of the number of times an SCM-10S controller goes from in-service to out-of-service state.  USE - the amount of time an SCM-10S processor is out-of-service.
RLSG	Remote Line Subgroup	PEG - a count of the number of times the RLSG goes from an in-service to an out-of-service state.  USE - the amount of time the RLSG remains out of service

<b>Table 4-H: (Continued) MTCE measurement block (OPM008) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
RLCM	Remote Line Concentrating Module	PEG - a count of the number of times the RLCM goes from an in-service to an out-of-service state. USE - the amount of time the RLCM remains out of service
SCUC	SCM-10U Controller	PEG - a count of the number of times an SCM-10U controller goes from in-service to out-of-service state. USE - the amount of time the SCM-10U controller is out-of-service.
RCUC	Remote Carrier Urban (RCU) Controller	PEG - a count of the number of times an RCU controller goes from an in-service to an out-of-service state.  USE - the amount of time the RCU controller remains out of service
ULSG	Remote Carrier Urban (RCU) Line Sub-group	PEG - a count of the number of times a ULSG goes from an in-service to an out-of-service state. USE - the amount of time the ULSG remains out of service
HAZL	Hazard Line	PEG - a count of the number of times that lines were marked hazardous through automatic testing. The count does not include the number of times that lines were marked hazardous through Overlay LIT commands. USE - a 100-second scan which counts the number of lines marked hazardous during <u>each</u> scan.
OVLT	Over-voltage Line	PEG - a count of the number of World Line Cards (NT6X17BA/NT6X18BA) that were marked as having an over-voltage condition. USE - a 100-second scan which counts the number of World Line Cards (NT6X17BA/NT6X18BA) marked as having an over-voltage condition during <u>each</u> scan.
RSCC	RSC-S Controller	PEG - a count of the number of times that an RSC-S controller goes from an in-service to an out-of-service state. USE - the amount of time that an RSC-S controller remains out of service.
DSI	Digital Signal Interface	PEG - a count of the number of times that a Digital Signal Interface goes from an in-service to an out-of-service state. USE - the amount of time that a Digital Signal Interface remains out of service.
DSLK	Digital Signal Interface link	PEG - a count of the number of times that a Digital Signal Interface link goes from an in-service to an out-of-service state. USE - the amount of time that a Digital Signal Interface link remains out of service.

<b>Table 4-H: (Continued) MTCE measurement block (OPM008) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
IDLA	Integrated Services Digital Network Download Attempts	PEG - a count of the number of times that an ISDN download was requested.
IDLF	Integrated Services Digital Network Download Failures	PEG - a count of the number of times that a requested ISDN download failed.
ESMC	ESMA controller maintenance	PEG - a count of the number of times that an ESMA controller goes from an in-service state to an out-of-service state. USE - the amount of time that an ESMA controller remains out of service.
IDT	Integrated Digital Terminal maintenance	PEG - a count of the number of times that IDT maintenance was requested. USE - the total amount of IDT maintenance time used.
EDCH	EDCH maintenance	PEG - a count of the number of times that EDCH maintenance was requested. USE - the total amount of EDCH maintenance time used.
HUBC	Star Hub controller maintenance	PEG - a count of the number of times that a Star Hub controller goes from an in-service state to an out-of-service state. USE - the total amount of time that a Star Hub controller remains out of service.
RLD	Not operational	

**Figure 4-37: MTCE measurement block (OPM008) flow chart - GTSB PEG register**

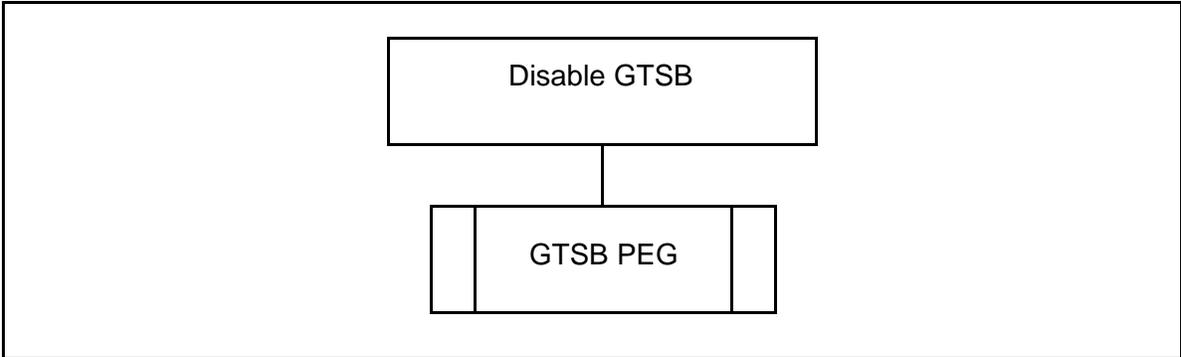


Figure 4-38: MTCE measurement block (OPM008) flow chart - GTSB USE register

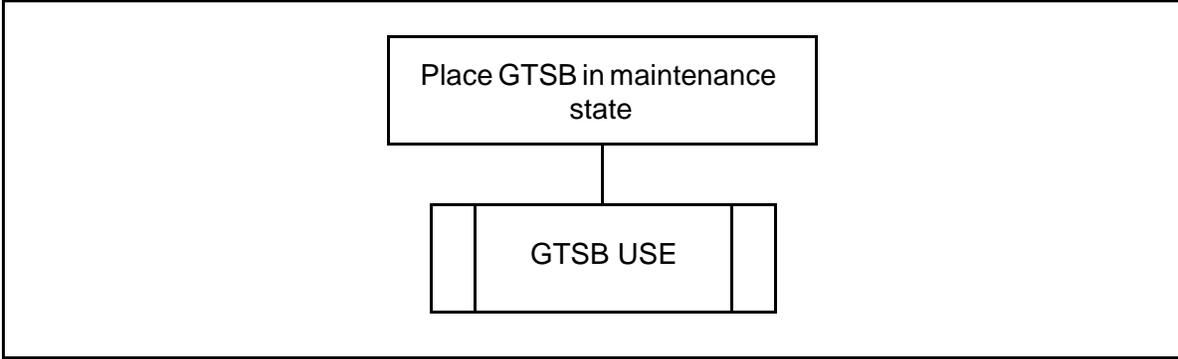


Figure 4-39: MTCE measurement block (OPM008) flow chart - RSCS PEG register

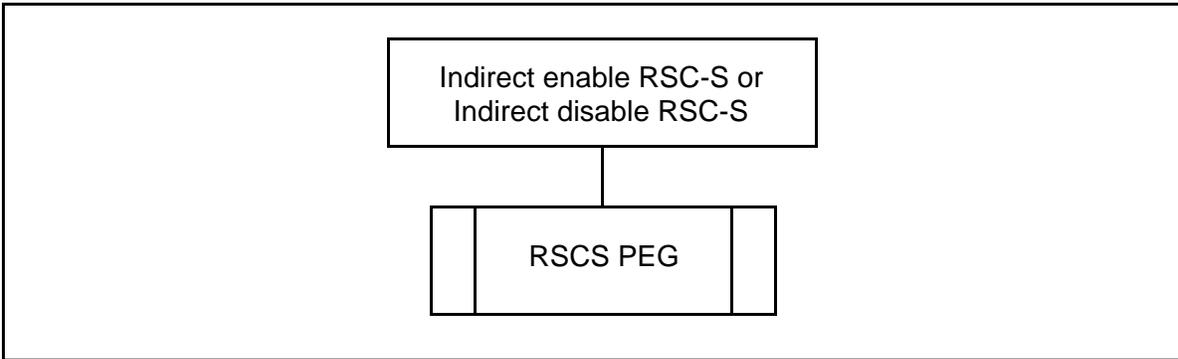


Figure 4-40: MTCE measurement block (OPM008) flow chart - RSCS USE register

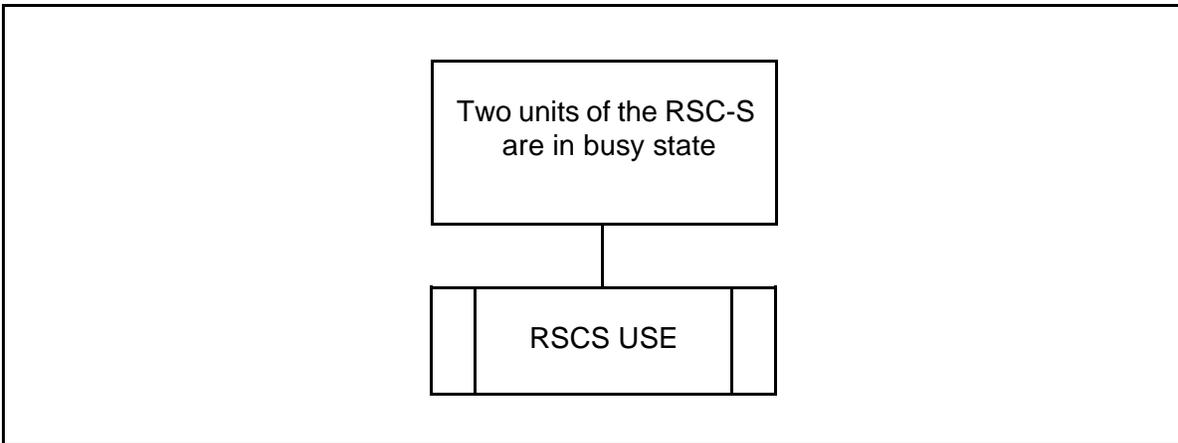


Figure 4-41: MTCE measurement block (OPM008) flow chart - DSI PEG register

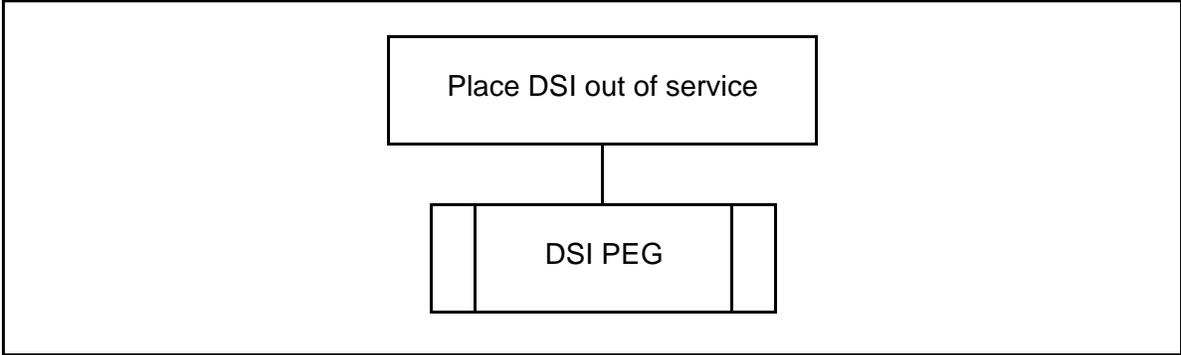


Figure 4-42: MTCE measurement block (OPM008) flow chart - DSLK PEG register

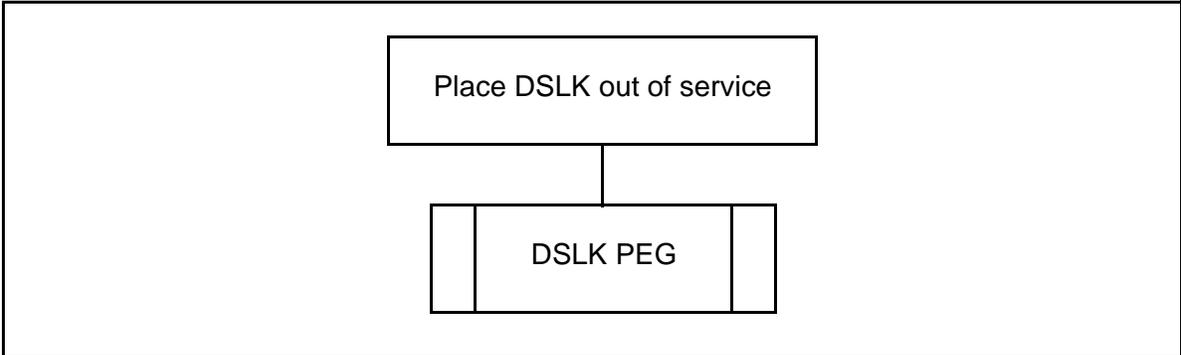
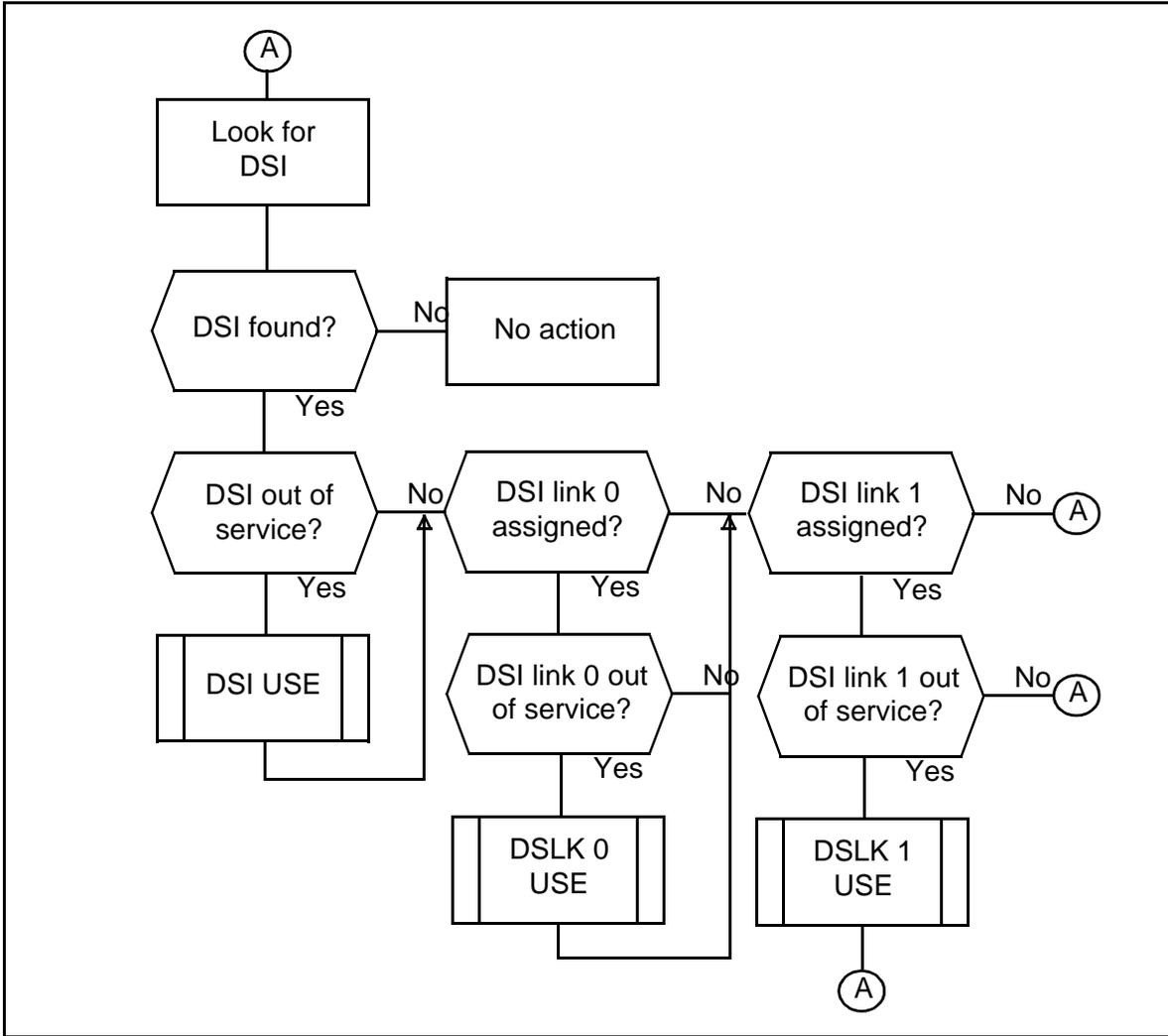


Figure 4-43: MTCE measurement block (OPM008) flow chart - DSI USE and DSLK USE registers



## CAMA (CAMA measurement block - OPM009)

The Centralized Automatic Message Accounting (CAMA) measurement block (Figure 4-44 and Table 4-I) provides information on incoming CAMA traffic and on the CAMA-operator function. This includes originating LAMA calls requiring operator assistance (that is, ONI-fail or ANI-fail calls), but excludes LAMA-ANI calls. Maintenance calls are excluded from the data. One CAMA block is provided per office.

*Note:* In offices not equipped with CAMA recording, printing of the CAMA block can be suppressed by specifying NOPR (no print) for the CAMA block PRNT (printout) option in Overlay OMC, OMC prompting sequence.

**Figure 4-44: CAMA measurement block (OPM009)**

OPM009	CAMA	THUR	08/02/90	10:00:00	HRHR
	PEG				
ANI	00000				
ANFL	00000				
ANFC	00000				
ONI	00000				
PDIS	00000				
MCKF	00000				
CLGF	00000				

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-I: CAMA measurement block (OPM009) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
ANI	Automatic Number Identification Calls	PEG - the number of incoming ANI calls on CAMA or combined trunk groups, including ANI failure by the subtending local office, but excluding multiparty and special billings.
ANFL	ANI Failure by Subtending Local Office	PEG - the number of incoming ANI calls with an ANI-fail information digit, which must therefore be routed to the CAMA operator.
ANFC	ANI Failure by CAMA Recording Office	PEG - the number of incoming ANI calls in which an invalid ANI spill has been received, which must therefore be routed to the CAMA operator.
ONI	Operator Number Identification Calls	PEG - the number of incoming calls that are marked ONI or ANI (indicating multiparty or special billing). These calls require CAMA-operator identification.

<b>Table 4-I: CAMA measurement block (OPM009) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
PDIS	CAMA-Position Disconnects	PEG - the number of calls that the CAMA operator releases before completion of the CAMA function. This includes calls that are disconnected from the CAMA position during fatigue timing, but that may subsequently be validated and go through.
MCKF	Match-Check Failures	PEG - the number of times that the number keyed in by the operator is not the same as the called number. This PEG may be incremented more than once per call.
CLGF	Calling Code Failures	PEG - the number of times that the number keyed in by the operator is not a valid office code. This PEG may be incremented more than once per call.

**Hunt Groups (HUNT measurement block - OPM010)**

The Hunt Groups (HUNT) measurement block (Figure 4-45 and Table 4-J) provides information on the service provided by Directory Number Hunt (DNH) groups. Data are collected on each DNH group individually. Maintenance calls are excluded from the data. One HUNT block is provided per office and up to 2047 DNH groups may be configured per block.

*Note: Data for any given hunt group are collected and printed out only if the OPM system has been so instructed through Overlay OMC (HUNT).*

**Figure 4-45: HUNT measurement block (OPM010)**

OPM010	HUNT	THUR	08/02/90	10:00:00	HRHR
	HTGP	PEG	OVFL		
	001	00000	00000		
	002	00000	00000		
	003	00000	00000		

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-J: HUNT measurement block (OPM010) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
HTGP	Hunt Group Number (1 through 2047)	PEG - a count of all calls that are routed to this hunt group. The count includes both successful and unsuccessful attempts to terminate on a line in the group.
		<p>OVFL - a count of all calls that are routed to this hunt group but terminate according to the overflow treatment specified for the group. The count is incremented only when a call is given overflow treatment because no idle line is available in the group. If an "idle" line exists but cannot be accessed because it is faulty and/or disabled, or because of network blockage, the count is not incremented. Thus, the OVFL measurement indicates the importance of the size of the hunt group as a limiting factor in call completion.</p> <p><i>Note: A DNH call that encounters the overflow condition may also score other TRAF measurement block (OPM001) registers based on how the hunt overflow condition is defined and the call type.</i></p>

## **Custom Calling Features (CCF measurement block - OPM011)**

The Custom Calling Features (CCF) measurement block (Figure 4-46 and Table 4-K) provides information on traffic generated by means of custom calling features. Usage data are collected by using a 100-s scan. One CCF block is provided per office. CCF measurements are kept in addition to TRAF measurements. For example, a three-way call will appear as two calls in the TRAF block and as one call in the CCF block. Call Forward Remote Access (CFRA) measurements are recorded in this block, regardless of whether the CFRA call is an EBS, IBS or Custom Calling Feature use of CFRA.

For selected changes made to the CCF block, low charts showing the sequence of events that cause the measurement block registers to be incremented and the relationship between the registers within the blocks appear in Figures 4-47 through 4-51.

Figure 4-46: CCF measurement block (OPM011)

OPM011	CCF	CAPA	MON	02/14/93	15:00:00	HRHR
	PEG	BLK	USE			
CWAT	00000					
CWAA	00000					
CFWA	00000					
CFWD	00000		00000			
SCLL	00000					
SCSL	00000					
SPCL	00000		00000			
SPCS	00000		00000			
3WC	00000	00000	00000			
RCFW	00000	00000	00000			
CCWT	00000					
UCWA	00000	00000				
UCFA	00000					
UCFD	00000					
U3WA	00000	00000				
RAG	00000					
UTFC	00000					
UTFH	00000					
CFRA	00000					
CFRS	00000					
CFRH	00000					
CFRP	00000					
CFBA	00000					
CFDA	00000					
UCBA	00000					
UCBD	00000					
UCDA	00000					
UCDD	00000					
CFFA	00000					
UFFA	00000					
UFFD	00000					
ACCO	00000					
ACCA	00000					
DCWT	00000					
UTFF	00000					
IHCA	00000					
IHCR	00000					
LRG	00000					
LRGA	00000					
LCW	00000					
LCWA	00000					
SCLU	00000					
SCSU	00000					

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-K: CCF measurement block (OPM011) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CWAT	Call-Wait Attempts	PEG - a count of the number of calls interrupted either by call-wait tone or by Calling Identity on Call Waiting (CWID) tone.
CWAA	Call-Wait Attempts Answered	PEG - a count of the number of times that a subscriber responds either to a call-wait tone or to a Calling Identity on Call Waiting (CWID) tone with a switchhook flash.
CFWA	Call-Forward Activations	PEG - a count of the number of times call forwarding is activated by subscribers. Deactivations are not counted.
CFWD	Calls Forwarded	PEG - a count of the number of times call forwarding is used to route a call.  USE - a usage measurement for calls forwarded. Usage begins with ringing and ends with disconnect.
SCLL	Speed Call, Long-List Changes	PEG - a count of changes to speed-call lists by subscribers with long-list speed calling.
SCSL	Speed Call, Short-List Changes	PEG - as for SCLL, but for short-list speed calling.
SPCL	Speed Calls, Long-List	PEG - a count of the number of times that long-list speed calling is used to route a call.  USE - usage measurement for long-list speed calls. Usage begins with ringing and ends with disconnect.
SPCS	Speed Calls, Short-List	PEG, USE - as for SPCL, but for short-list speed calls.
3WC	Three-Way Calling	PEG - a count of the number of times that a conference circuit (Conference pack (NT4T03), in DMS-10 Classic Network) or conference channel (Network Interface pack (NT8T04), in DMS-10EN network) is used for a three-way or usage-sensitive three-way call.  BLK - a count of the number of times a subscriber flashes to establish a three-way call and does not receive special dial tone, which occurs due to blockage in the conference circuit or conference channel.  USE - usage measurement for three-way calls. Usage begins when special dial tone is returned after a switchhook flash and ends when the call reverts to a two-way state or disconnects completely.
RCFW	Remote Call Forwarding	PEG - a count of the number of times remote call forwarding is used to route a call.  BLK - a count of the number of times a remote call is about to be forwarded and the forwarded call count exceeds the maximum number allowed.  USE - a usage measurement for remote forwarded calls. Usage begins with ringing and ends with disconnect.

<b>Table 4-K: (Continued) CCF measurement block (OPM011) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CCWT	Cancel Call Waiting	PEG - a count of the number of times cancel call waiting is activated by subscribers.
UCWA	Usage Sensitive Call Waiting Activated	PEG - a count of the number of times subscribers respond to call waiting tones by flashing switchhook. BLK - a count of the number of times UCWT call completion is unsuccessful due to unavailability of some office resource.
UCFA	Usage Sensitive Call Forwarding Activation	PEG - a count of the number of times UCFA is activated by subscribers.
UCFD	Usage Sensitive Call Forwarding Deactivation	PEG - a count of the number of times UCFA is deactivated by subscribers.
U3WA	Usage Sensitive Three-Way Calling Answered	PEG - a count of the number of times subscribers with U3WC or O3WC flash the switchhook in order to establish a three-way call, receive special dial tone and a third party is successfully connected. BLK - a count of the number of times U3WC or O3WC call completion is unsuccessful due to unavailability of billing registers.
RAG	Ring Again	PEG - a count of the number of times that Ring Again is activated by subscribers.
UTFC	Residential User Transfer From Conference	PEG - a count of the number of times Residential User Transfer is successfully completed from a three way call state.
UTFH	Residential User Transfer from Consultation Hold	PEG - a count of the number of attempts to transfer a party who has been placed on consultation hold.
CFRA	Call Forward Remote Access Activation	PEG - a count of the number of times Call Forward Remote Access is used by a subscriber.
CFRS	Call Forward Remote Access Software Block	PEG - a count of the number of times Call Forward Remote Access cannot proceed due to a lack of software resources.
CFRH	Call Forward Remote Access Hardware Block	PEG - a count of the number of times Call Forward Remote Access cannot proceed due to a lack of hardware resources.
CFRP	Call Forward Remote Access PIN/DN Block	PEG - a count of the number of times Call Forward Remote Access cannot proceed due to an incorrect PIN or an incorrect DN.
CFBA	Call Forward Busy Activation count	PEG - a count of the number of times user programmable call forward busy is activated

<b>Table 4-K: (Continued) CCF measurement block (OPM011) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CFDA	Call Forward Busy Don't Answer	PEG - a count of the number of times user programmable call forward busy don't answer is used by a subscriber
UCBA	Usage Sensitive Call Forward Busy Activation count	PEG - a count of the number of times usage sensitive user programmable call forward busy is activated
UCBD	Usage Sensitive Call Forward Busy Deactivation count	PEG - a count of the number of times usage sensitive user programmable call forward busy is deactivated
UCDA	Usage Sensitive Call Forward Don't Answer activation	PEG - a count of the number of times usage sensitive user programmable call forward don't answer is activated
UCDD	Usage Sensitive Call Forward Don't Answer deactivation	PEG - a count of the number of times usage sensitive user programmable call forward don't answer is deactivated
CFFA	Fixed Destination Call Forwarding activation	PEG - a count of the number of times fixed destination call forwarding is activated
UFFA	Usage Sensitive Fixed Destination Call Forwarding activation	PEG - a count of the number of times usage sensitive fixed destination call forwarding is activated
UFFD	Usage Sensitive Fixed Destination Call Forwarding deactivation	PEG - a count of the number of times usage sensitive fixed destination call forwarding is deactivated
ACCO	Additional Call Offering, Calls Offered	PEG - a count of the number of times ISDN ACO calls were presented.
ACCA	Additional Call Offering, Calls Accepted	PEG - a count of the number of times ISDN ACO calls were accepted.
DCWT	Dial Call Waiting	PEG - a count of the number of times DCWT, on ISDN voiceband call type lines, was activated.
UTFF	User Transfer From Flexible Calling	PEG - a count of the number of ISDN flexible calling transfer requests.
IHCA	ISDN Hold Capability Activation	PEG - a count of the number of subscriber ISDN hold capability activations.
IHCR	ISDN Hold Capability Rejection	PEG - a count of the number of subscriber ISDN hold capability rejected attempts.
LRG	Long Distance Alert (LDA) ringing	PEG - a count of the number of LDA ringing attempts.

<b>Table 4-K: (Continued)</b>		
<b>CCF measurement block (OPM011) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
LRGA	Long Distance Alert (LDA) ringing	PEG - a count of the number of successful LDA ringing attempts.
LCW	Long Distance Alert (LDA) call waiting	PEG - a count of the number of LDA call waiting attempts.
LCWA	Long Distance Alert (LDA) call waiting	PEG - a count of the number of successful LDA call waiting attempts.
SCLU	Long Speed Calling Web Based Update	PEG - a count of the number of web based long speed calling update requests.
SCSU	Short Speed Calling Web Based Update	PEG - a count of the number of web based short speed calling update requests.

Figure 4-47: CCF measurement block (OPM011) flow chart - Fixed Destination Call Forwarding feature CFFA/UFFA/UFFD registers

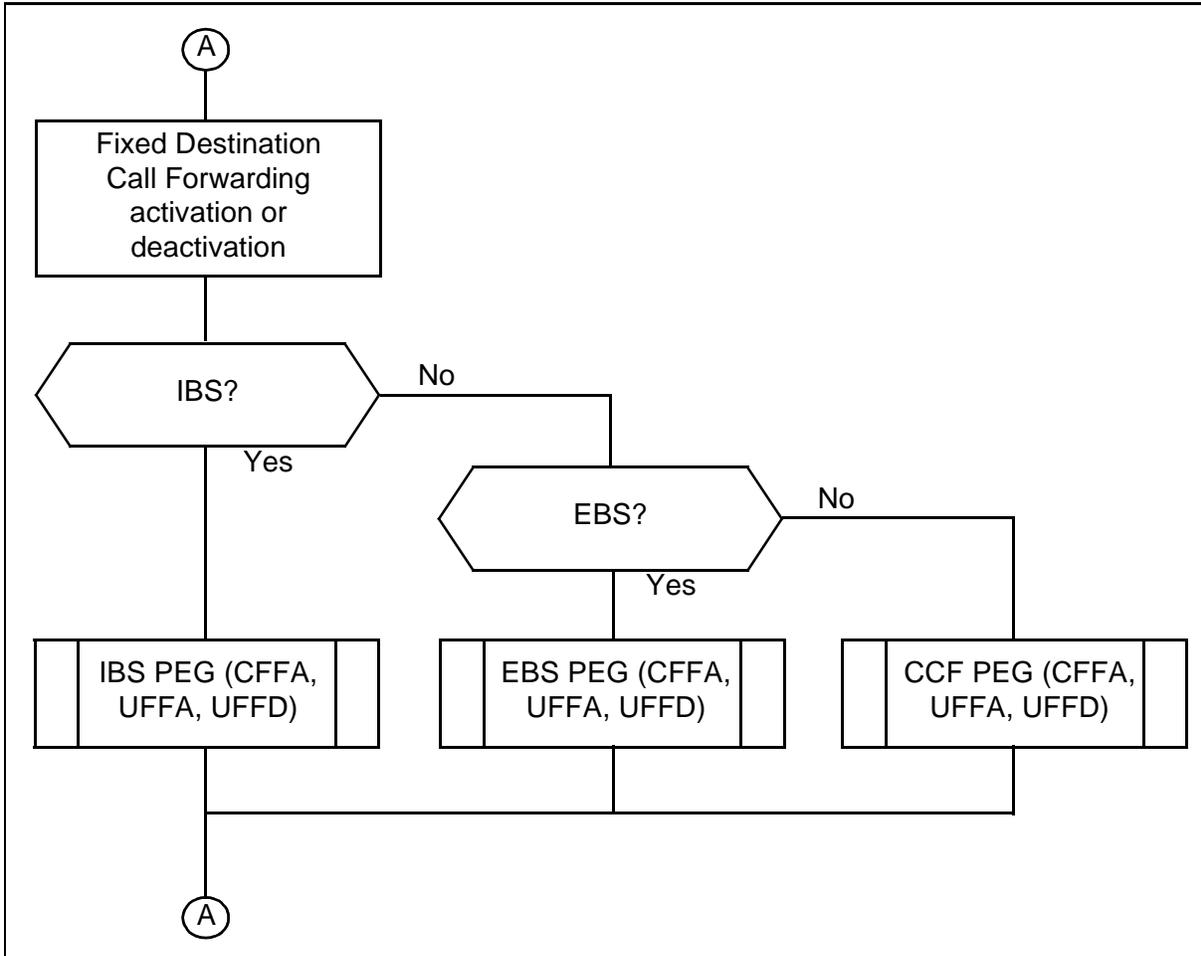


Figure 4-48: CCF measurement block (OPM011) flow chart - ISDN User Transfer from Flexible Calling feature (UTFF) register

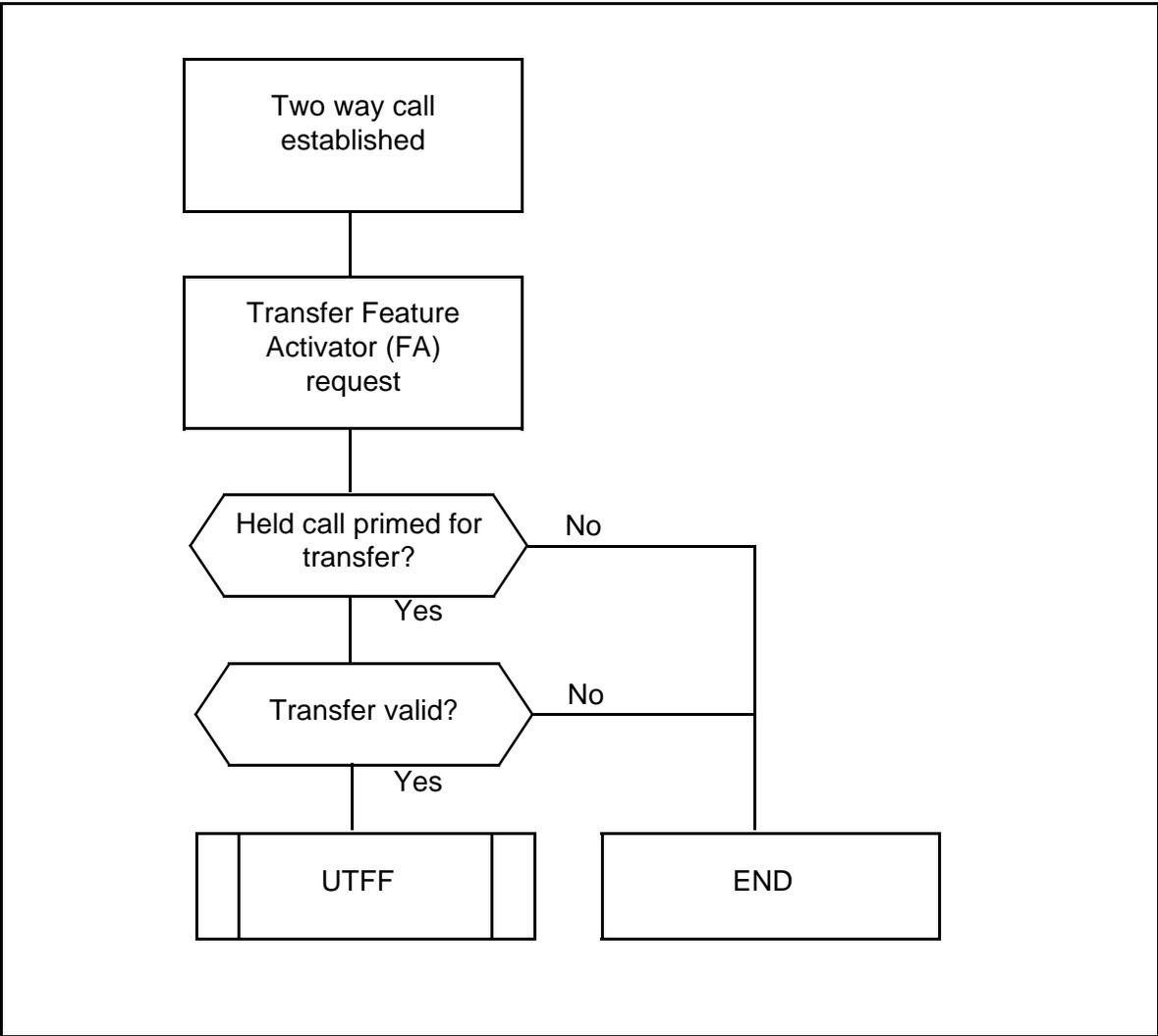


Figure 4-49: CCF measurement block (OPM011) flow chart - ISDN ACCO and ACCA registers

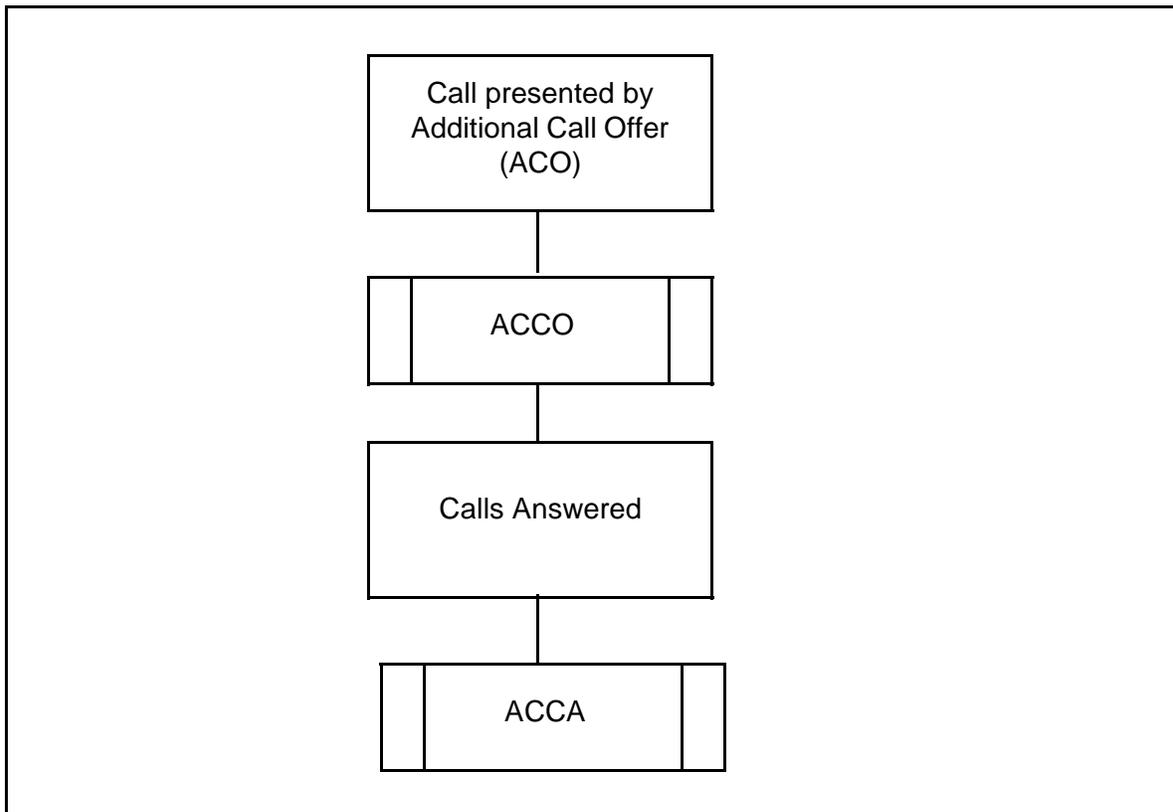


Figure 4-50: CCF measurement block (OPM011) flow chart - ISDN ACCO and ACCA registers

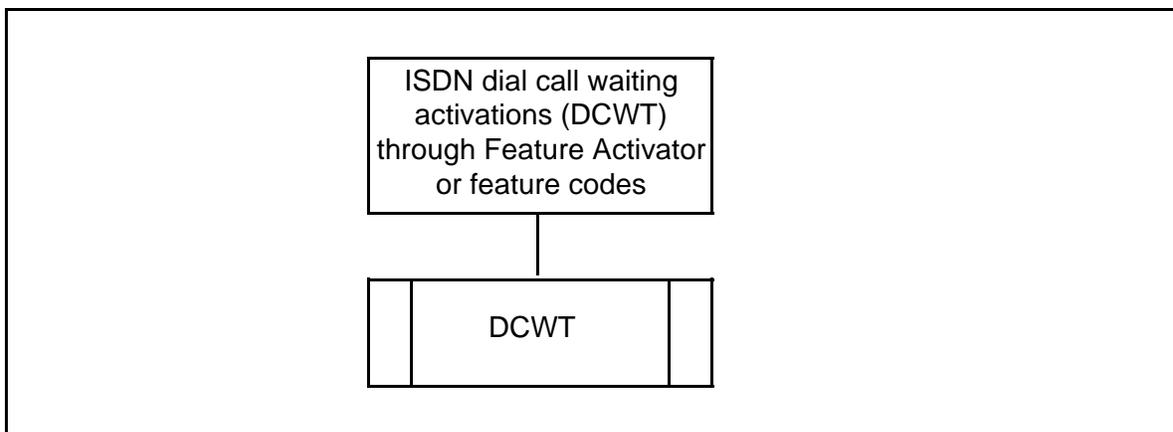


Figure 4-51: CCF measurement block (OPM011) flow chart - LRG/LRGA registers

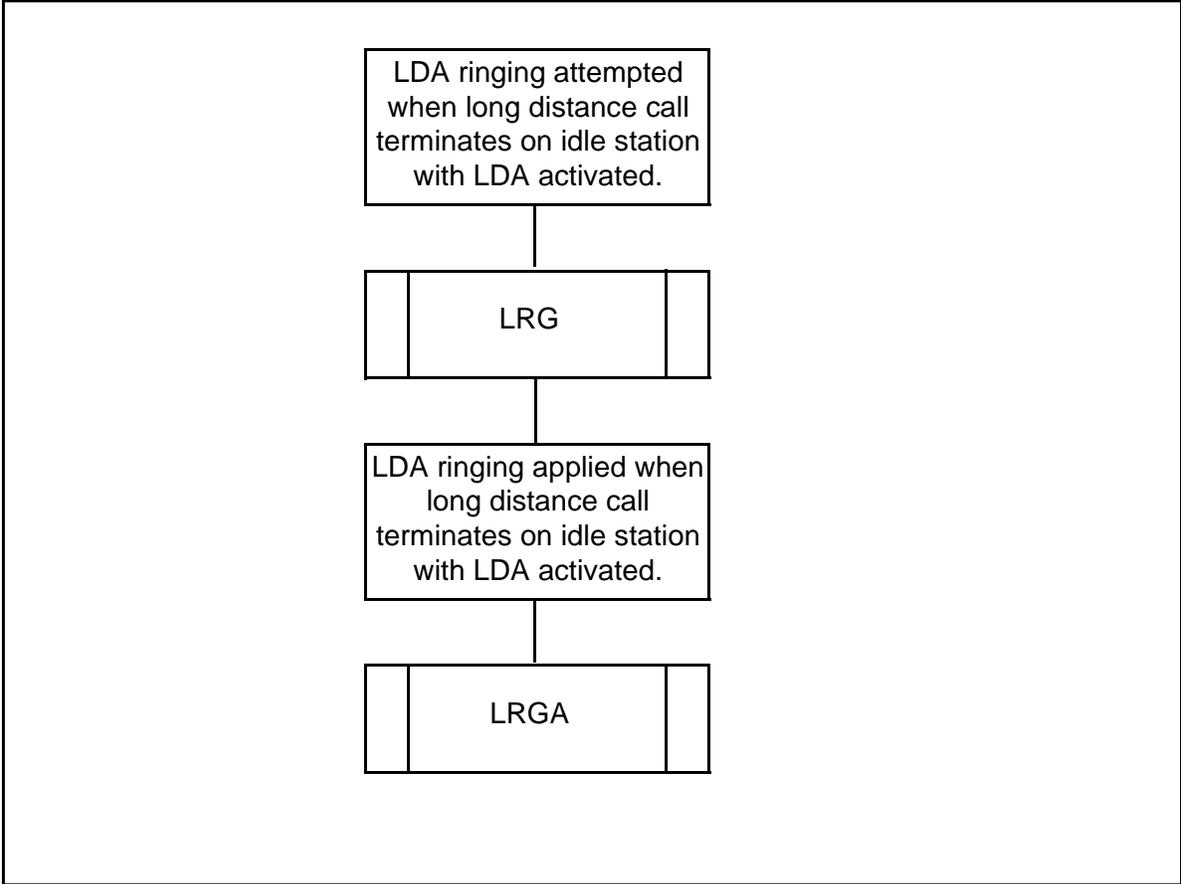


Figure 4-52: CCF measurement block (OPM011) flow chart - LCW/LCWA registers

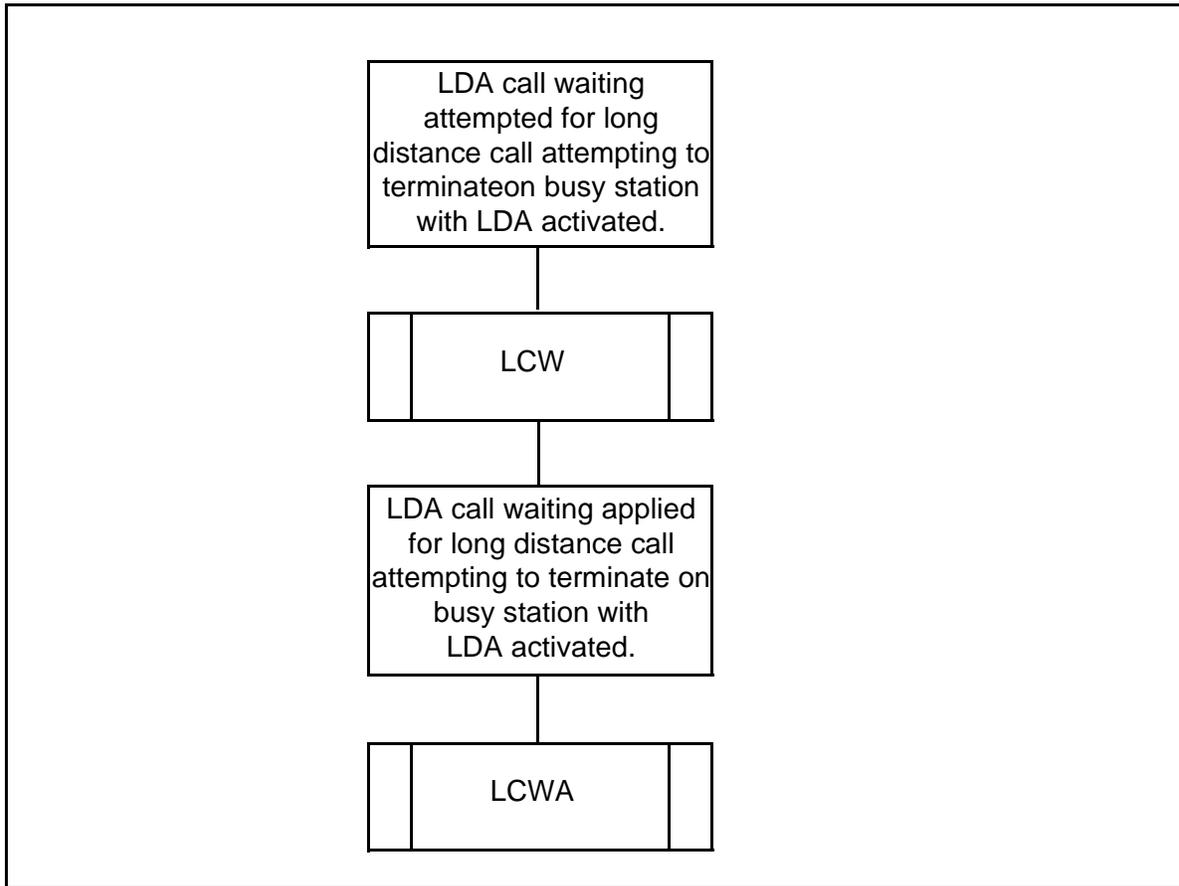
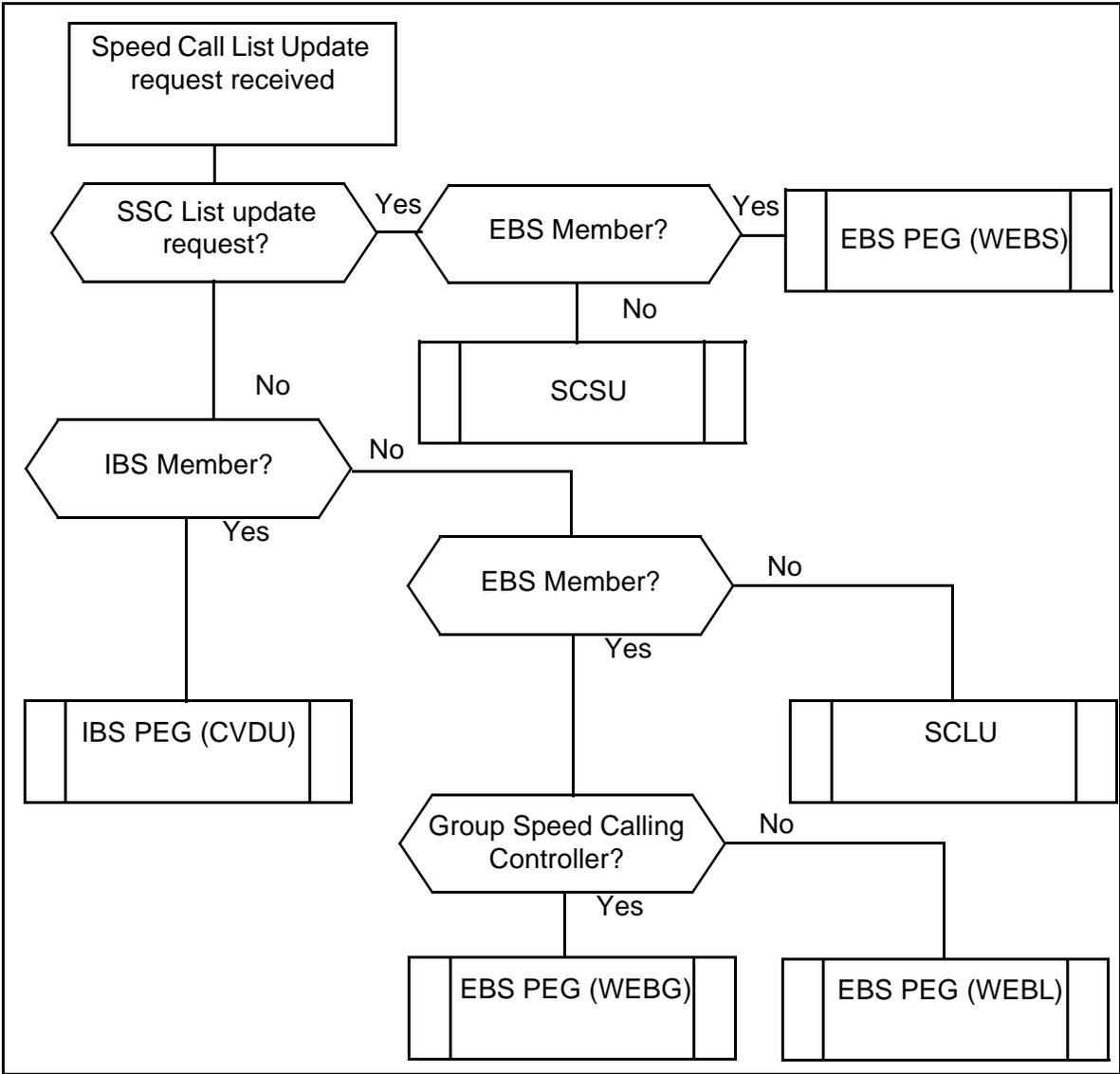


Figure 4-53: CCF measurement block (OPM011) flow chart - Web Based Short Speed Calling (WEBS) and Long Speed Calling (WEBL) update requests.



### Processor measurements (PRO measurement block - OPM012)

The Processor (PRO) measurement block (Figure 4-54 and Table 4-L) provides processor usage data.

**Figure 4-54: PRO measurement block (OPM012)**

OPM012	PRO	CAPE	TUES	14/01/93	08:00:00	HRHR
	USE	MUSE				
BKGD	0001.7					
L3PU	0031	0031				
L2PU						
1/00	0038	0039				
2/00	0041	0057				
3/00	0041	0063				

Table 4-L: PRO measurement block (OPM012) registers		
Mnemonic	Explanation	Description
BKGD	Background	USE - the amount time (in ccs) that the CPU has spent executing background tasks. The CPU real-time is calculated by subtracting this time from the total time period during which the measurements were taken.
L3PU	CCS7 Level 3 usage (appears only if CCS7 is configured in the switch)	USE - the Level 3 average percentage of processor usage per 2-minute period during the reporting period. MUSE - the Level 3 maximum percentage of processor usage per 2-minute period during the reporting period.
L2PU x/yy	CCS7 Level 2 usage (appears only if CCS7 is configured in the switch)	USE - the Level 2 average percentage of processor usage per 2-minute period during the reporting period. MUSE - the Level 2 maximum percentage of processor usage per 2-minute period during the reporting period. The Level 2 usage is identified by the link set number x (where x is 1 through 8) and link number yy (where yy is 00 through 15). Level 2 Processor Usage can be provided for up to eight links.

## Stuck - Coin Test, First - Trial Failure (CFTF measurement block - OPM013)

The Stuck-Coin Test, First-Trial Failure (CFTF) measurement block (Figure 4-55) provides a peg count of the number of times (to a maximum of 15) that a coin station fails the first stuck-coin test but passes the second stuck-coin test. The stations listed in the CFTF measurement block are entered by the system as stuck-coin test, first-trial failures occur; entries cannot be made in the measurement block by operating company personnel. Up to 16 coin stations are monitored by the switch during an update period. Any stuck-coin-test, first-trial failures at stations other than the 16 stations being monitored are pegged in the overflow counter.

*Note: OPM data for CFTF are always printed out in a fixed format and are of a fixed length. (If there are fewer than 16 stations in the list, blank lines will be printed out to fill in the 16 entries.)*

**Figure 4-55: CFTF measurement block (OPM013)**

OPM013	CFTF	CAPA	MON	12/12/98	13:15:00	QRTR
DN				BSPU		PEG
919	223	1541	CAPA	PE 02 3 05 02		00003
919	212	1556	CAPA	PE 03 2 07 01		00010
OVFL	00001					

*Note: DNs are displayed as 10-digit numbers if prompt DNXX = YES in Overlay CNFG (SYS) and as 7-digit numbers if prompt DNXX = NO in Overlay CNFG (SYS).*

Failure of both stuck-coin tests will print out a maintenance-TTY message indicating the physical location and the directory number of the failing coin station. These will not appear on the OPM CFTF peg.

## Traffic Separation Measurement System (TSMS measurement block - OPM014)

TSMS provides the means for determining the work performed by the DMS-10 switch in handling each of a number of different categories of calls. This information, available as an operational measurement report, can be used to determine revenue allocation between operating companies based on traffic-related switch occupancy.

Each call category for which TSMS information is accumulated is distinguished by a unique combination of three parameters: call prefix, call source and call destination. The *call prefix* may be one of the following:

- 1+
- 0± (which groups together 0+ and 0- as one call type)
- 950
- EAS (or any other nonprefix call, such as an intraoffice call)

A *call source* is a specific instance of one of the following source types:

- a directory number, a group of directory numbers, a thousands group, or multiple thousands groups
- an incoming trunk group or multiple incoming trunk groups
- a default, or any source that is not explicitly assigned

Each call source is assigned a unique number, called a *Source Traffic Separation Index (STSI)*, through an administrative overlay.

A *call destination* is a specific instance of one of the following destination types:

- a directory number, a group of directory numbers, a thousands group, or multiple thousands groups
- an outgoing trunk group or multiple outgoing trunk groups
- destinations such as tones, recorded announcements, revertive calls, test lines, lockout, and administration of Custom Calling features such as Speed Calling and Call Forwarding
- a default, or any destination not explicitly assigned

Each call destination is assigned a unique number, called a *Destination Traffic Separation Index (DTSI)*, through an administrative overlay.

Each combination of these three parameters is assigned by the operating company to a Traffic Separation Measurement Register (TSMR), which comprises a set of data registers used for accumulating setup time (consisting of subscriber dialing and call set up time) and connect time (measured from call setup to call disconnect) in ccs, and peg counts for each call category. The amount of TSMS information that can be stored is based on the kind of feature package installed in the switch. Three TSMS feature packages are available:

- feature package 1 makes available 32 STSIs, 32 DTSIs (21 are assignable because the first 10 are pre-assigned), and 128 TSMRs
- feature package 2 makes available 32 STSIs, 64 DTSIs (53 are assignable because the first 10 are pre-assigned), and 256 TSMRs
- feature package 3 makes available 64 STSIs, 64 DTSIs (53 are assignable because the first 10 are pre-assigned), and 256 TSMRs

### TSMS Expansion

TSMS Expansion introduces a fourth TSMS feature package. With this new feature package, 256 STSIs (255 are assignable), 256 DTSIs (245 are assignable because the first 10 are pre-assigned), and 1024 TSMRs (1023 are assignable) are available to store TSMS data.

DTSIs may also be assigned to CLASS and/or AIN announcement trunk groups.

### TSMS measurement block

The Traffic Separation Measurement System (TSMS) measurement block is shown in Figures 4-56 and 4-57, and Table 4-M.

**Figure 4-56: TSMS measurement block (OPM014) for TSMS Packages 1 - 3**

REG#	PEG	SUSE	CUSE	TOTL	
OPM014	TSMS	CAPB	SUN	05/06/9517:00:00	HRHR
000	00000	000.00	00000	00000	
001	00000	000.00	00072	00072	
002	00000	000.00	00000	00000	
007	00000	000.00	00000	00000	
023	00000	000.00	00000	00000	
.	.	.	.	.	
.	.	.	.	.	
TOTS					
ORIG	00000	000.00	00000	00000	
TERM	00000	000.00	00000	00000	

Figure 4-57: TSMS measurement block (OPM014) for TSMS Package 4

```

OPM014 TSMS  CAPB  SUN   12/06/95  17:00:00HRHR
REG#  PEG      SUSE      CUSE      TOTL
0000  000000  0000.00  000000  000000
0003  000000  0000.00  000072  000072
0006  000000  0000.00  000000  000000
 0007  000000  0000.00  000000  000000
0010  000000  0000.00  000000  000000
.      .        .          .          .
.      .        .          .          .
TOTS
ORIG  000000  0000.00  000000  000000
TERM  000000  0000.00  000000  000000
    
```

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-M: TSMS measurement block (OPM014) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
REG #	TSMS Software-Register Number; 0 through 127 (Package 1) 0 through 255 (Packages 2 - 3) 0 through 1023 (Package 4)	<p><i>Note: 0 is the default register and is used to collect data for unassigned sources or destinations.</i></p> <p>PEG - a count of the number of calls offered a particular source or destination by call type.</p> <p>SUSE - setup usage measurement starts upon receipt of the first digit (originating calls) or upon seizure of the incoming trunk (incoming/terminating or tandem calls) and stops upon determination of the actual call disposition (that is, trunk seizure).</p> <p>CUSE - connection usage measurement starts at the end of the set-up time. This is the time that the usage scan begins. Connection usage stops at the call disconnect.</p> <p>TOTL - the sum of SUSE and CUSE usage. SUSE is rounded off to the hundreds in summation.</p>
TOTS	Total Traffic	The ORIG and TERM measurements, described below, apply to total traffic.
ORIG	Originating Traffic	PEG, SUSE, CUSE, TOTL - Same as for REG#, but data are collected on total sources (originators) by call type.
TERM	Terminating Traffic	PEG, SUSE, CUSE, TOTL - Same as for REG#, but data are collected on total destinations (terminators) by call type.

---

## Equal Access (EQA measurement block - OPM015)

The Equal Access (EQA) measurement block (Figure 4-58 and Table 4-N) consists of two units. The first unit, always printed, consists of five peg counts, with each peg count representing data for one of the following call types:

- originating Inter-LATA Carrier/International Carrier (IC/INC) calls using 101XXXX access
- originating IC/INC calls using 950-XXXX access
- originating IC/INC calls with presubscribed carrier
- originating IC/INC calls routed to Access Tandem (AT)
- tandem IC/INC calls using 101XXXX access.

The second unit, printed only by an Equal Access End Office (EAEO) with a trunk group connected to an Access Tandem (AT), consists of trunk group usage measurements split on a per-IC/INC basis. A maximum of eight trunk groups may be split on a per-IC/INC basis.

If Facility Name printing in OPMs (FNOM prompt in DMO CNFG (SYS)) is enabled, a new line for the TG name will be added before each TG peg line prints, indented slightly. The reason for inserting the new line before the TG number line, rather than after, is to avoid breaking up the carrier peg data in an awkward manner.

Figure 4-58: EQA measurement block (OPM015)

OPM015	EQA	CAPA	MON	06/02/9017:15:00	QRTR
		PEG			
10XX			00000		
950			00000		
PIC			00000		
AT			00000		
TNDM			00000		
TG#	CARR	PEG	OVFL	USE	
XXXX	XXXX	00000	00000	00000	
	XXXX	00000	00000	00000	
XXXX	XXXX	00000	00000	00000	
	XXXX	00000	00000	00000	
XXXX	XXXX	00000	00000	00000	
	XXXX	00000	00000	00000	
.	.	.	.	.	
.	.	.	.	.	
.	.	.	.	.	
XXXX	XXXX	00000	00000	00000	
	XXXX	00000	00000	00000	

**Note 1:** Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

**Note 2:** For all OPM block changes due to Facility Identification by Name, in all modified sections facility names will only appear in OPM printouts if CNFG (SYS) PRFN = YES and CNFG (SYS) FNOM = YES.

An example of the modified OPM block printout is shown below, with the new output lines:

**Figure 4-59: EQA measurement block when CNFG (SYS) FNOM=YES (OPM015)**

```

OPM015 EQA 400G MON 12/08/0213:00:00 QTR
      PEG
10XX      000000
950       000000
PIC       000000
AT        000000
TNDM     000000
TG#  CARR  PEG  OVFL  USE
      TG NAME PIVL_TG_OUT_70
070  0388  000000 000000 000000
      0222  000000 000000 000000
      0221  000000 000000 000000
      0450  000000 000000 000000
      0852  000000 000000 000000
      0444  000000 000000 000000
      ...
    
```

<b>Table 4-N: EQA measurement block (OPM015) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
10XX	Originating 101XXXX Access	PEG - the number of originating Inter-LATA Carrier/ International Carrier (IC/INC) calls using 101XXXX access.
950	Originating 950-XXXX Access	PEG - the number of originating IC/INC calls using 950-XXXX access.
PIC	Originating Predesignated Access	PEG - the number of originating IC/INC calls with predesignated access to a primary interconnect carrier (PIC).
AT	Originating, Routed to Access Tandem	PEG - the number of originating IC/INC calls routed to AT.
TNDM	Tandem, 101XXXX or 950-XXXX Access	PEG - the number of tandem calls using 101XXXX or 950-XXXX access.
TG#	Trunk Group Number	The number of the trunk group connected to the AT. Eight trunk groups may be connected to the AT.

<b>Table 4-N: EQA measurement block (OPM015) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CARR	Carrier Number	The identification number(s) of IC/INCs. PEG - a count of calls routed to a given IC/INC. OVFL - a count of attempts to select a given carrier that fail because all trunks are busy. USE - a usage measurement for a trunk serving a given carrier. Usage starts when a trunk is software-busy and ends when the trunk returns to idle.

**Integrated Business Services (IBS measurement block - OPM016)**

The Integrated Business Services (IBS) measurement block (Figure 4-60 and Table 4-O) consists of peg counts of the utilization of the various IBS features (with additional blockage and use data for Conference Calls). The IBS measurement block may be printed out on demand at any time.

A flow chart showing the sequence of events that cause the measurement block registers to be incremented and the relationship between the measurement blocks associated with the Fixed Destination Call Forwarding feature appears in in Figure 4-60.

**Figure 4-60: IBS measurement block (OPM016)**

OPM016	IBS	CAPB	FRI	24/02/9013:45:00	QRTR
	PEG	BLK	USE		
CHD	00000				
CWAT	00000				
CWAA	00000				
CFWA	00000				
CFWD	00000				
CNVD	00000				
CCVD	00000				
CONF	00000	00000	00000		
UTFC	00000				
UTFH	00000				
BTF	00000				
INT	00000				
CPU	00000				
DSR	00000				
DAT	00000				
CCWT	00000				
RAG	00000				
DCPU	00000				
DCBI	00000	00000	00000		
DPUA	00000				
CFBA	00000				
CFDA	00000				
UCBA	00000				
UCBD	00000				
UCDA	00000				
UCDD	00000				
CFFA	00000				
UFFA	00000				
UFFD	00000				
CVDU	00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-O: IBS measurement block (OPM016) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CHD	Call Hold	PEG - a count of the number of times that the Call Hold feature code is dialed.
CWAT	Call Waiting Terminating	PEG - a count of the number of terminating calls to busy IBS lines with the Call Waiting feature.
CWAA	Call Waiting Answered	PEG - a count of the number of times that a call waiting is retrieved by the called IBS party.

<b>Table 4-O: (Continued) IBS measurement block (OPM016) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CFWA	Call Forward Activations	PEG - a count of the number of times that call forwarding is activated.
CFWD	Calls Forwarded	PEG - a count of the number of times that call forwarding is used to route a call.
CNVD	Convenience Dialing	PEG - a count of the number of calls that are routed by Convenience Dialing list entries.
CCVD	Convenience Dialing Update	PEG - a count of the number of all Convenience Dialing updates.
CONF	Conference Call	PEG - a count of the number of attempts to form a Three-Way Conference call. The count is incremented when the IBS station user performs a hookswitch flash to establish a conference circuit.  BLK - a count of the number of Three-Way Conference calls that are blocked due to a lack of resources.  USE - a usage measurement (in ccs) of the amount of time that conference circuits (on the Conference pack (NT4T03) in the DMS-10 Classic Network) or GTSB channels (on the Network Interface pack (NT8T04) in the DMS-10EN network) are used for Three-Way Conference calls
UTFC	User Transfer, Conference	PEG - a count of the number of attempts to transfer from a Three-Way Conference Call.
UTFH	User Transfer, Hold	PEG - a count of the number of attempts to transfer a party who has been placed on consultation hold.
BTF	Busy Transfer, Busy Transfer All, Busy Transfer Intragroup	PEG - a count of the number of all busy transfer, busy transfer all and busy transfer intragroup calls.
INT	Intercom	PEG - a count of the number of Intercom calls.
CPU	Call Pickup	PEG - a count of the number of times that the Call Pickup feature code is used to retrieve a call.
DSR	Distinctive Ringing	PEG - a count of the number of times that Distinctive Ringing is used.
DAT	Don't Answer Transfer	PEG - a count of the number of times a call is transferred because the IBS line that has DAT has not been answered within a preselected time interval.
CCWT	Cancel Call Waiting	PEG - a count of the number of times that cancel call waiting is activated by a subscriber.
RAG	Ring Again	PEG - a count of the number of times that ring again is activated by a member of an IBS group.
DCPU	Directed Call Pickup without Barge-In	PEG - a count of the number of times that the Directed Call Pickup without Barge-In access code is used to successfully retrieve a call.

<b>Table 4-O: (Continued) IBS measurement block (OPM016) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
DCBI	Directed Call Pickup with Barge-In	PEG - a count of the number of times that the Directed Call Pickup with Barge-In access code is used to successfully barge in on a call.  BLK - a count of the number of Directed Call Pickup with Barge-In calls that may not be retrieved because of lack of resources.  USE - a usage measurement (in ccs) of the amount of time that three-way conference circuits are used for Directed Call Pickup with Barge-In calls.
DPUA	Directed Call Pickup from Any Station	PEG - a count of the number of times that a call is retrieved by another member of the IBS group who has used the Directed Call Pickup from Any Station access code to successfully retrieve the call.
CFBA	Call Forward Busy Activation count	PEG - a count of the number of times user programmable call forward busy is activated
CFDA	Call Forward Busy Don't Answer	PEG - a count of the number of times user programmable call forward busy don't answer is used by a subscriber
UCBA	Usage Sensitive Call Forward Busy Activation count	PEG - a count of the number of times usage sensitive user programmable call forward busy is activated
UCBD	Usage Sensitive Call Forward Busy Deactivation count	PEG - a count of the number of times usage sensitive user programmable call forward busy is deactivated
UCDA	Usage Sensitive Call Forward Don't Answer activation	PEG - a count of the number of times usage sensitive user programmable call forward don't answer is activated
UCDD	Usage Sensitive Call Forward Don't Answer deactivation	PEG - a count of the number of times usage sensitive user programmable call forward don't answer is deactivated
CFFA	Fixed Destination Call Forwarding activation	PEG - a count of the number of times fixed destination call forwarding is activated
UFFA	Usage Sensitive Fixed Destination Call Forwarding activation	PEG - a count of the number of times usage sensitive fixed destination call forwarding is activated
UFFD	Usage Sensitive Fixed Destination Call Forwarding deactivation	PEG - a count of the number of times usage sensitive fixed destination call forwarding is deactivated
CVDU	Convenience Dialing Web Based Updates	PEG - a count of the number of web based convenience dialing list update requests.

Figure 4-61: IBS measurement block (OPM016) flow chart - Fixed Destination Call Forwarding feature CFFA/UFFA/UFFD registers

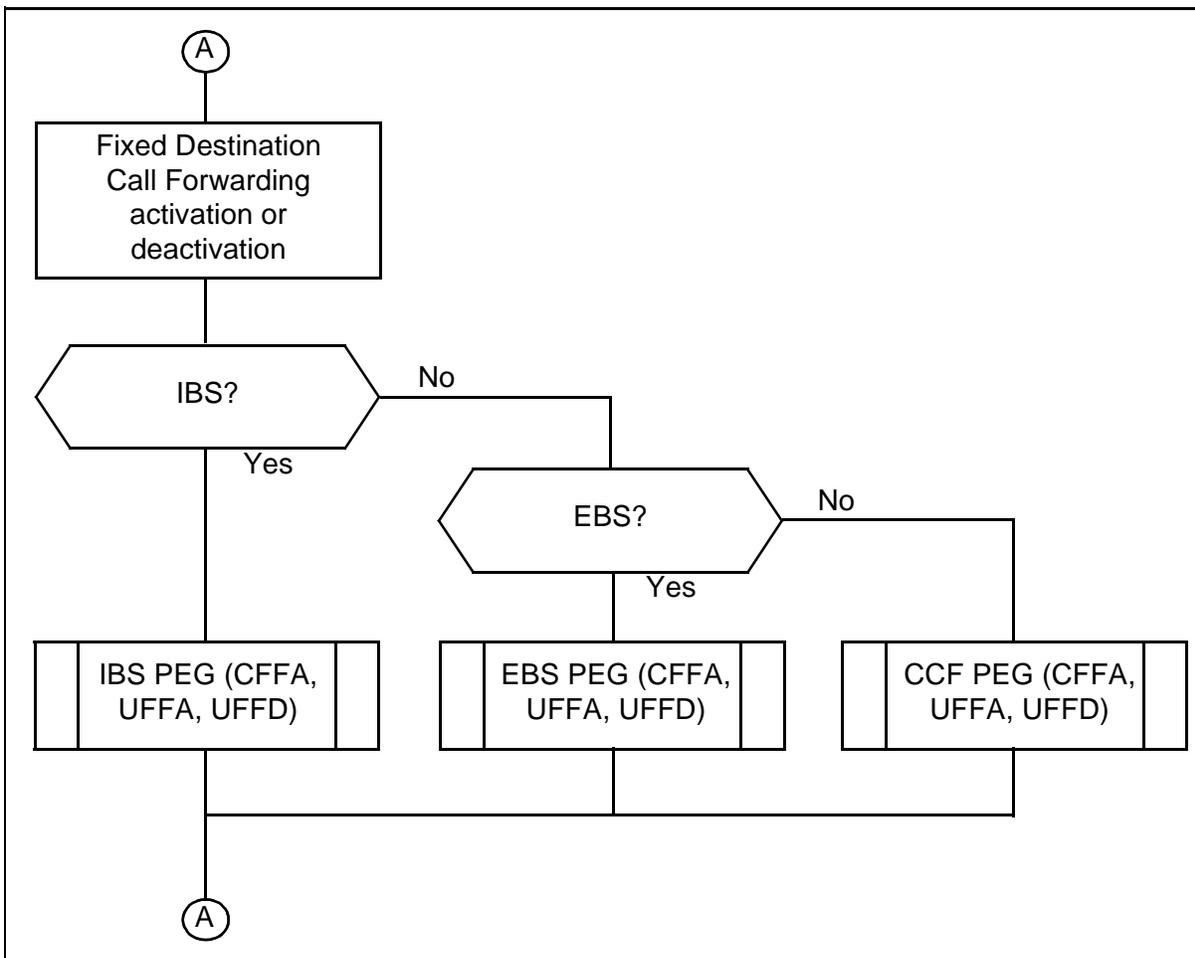
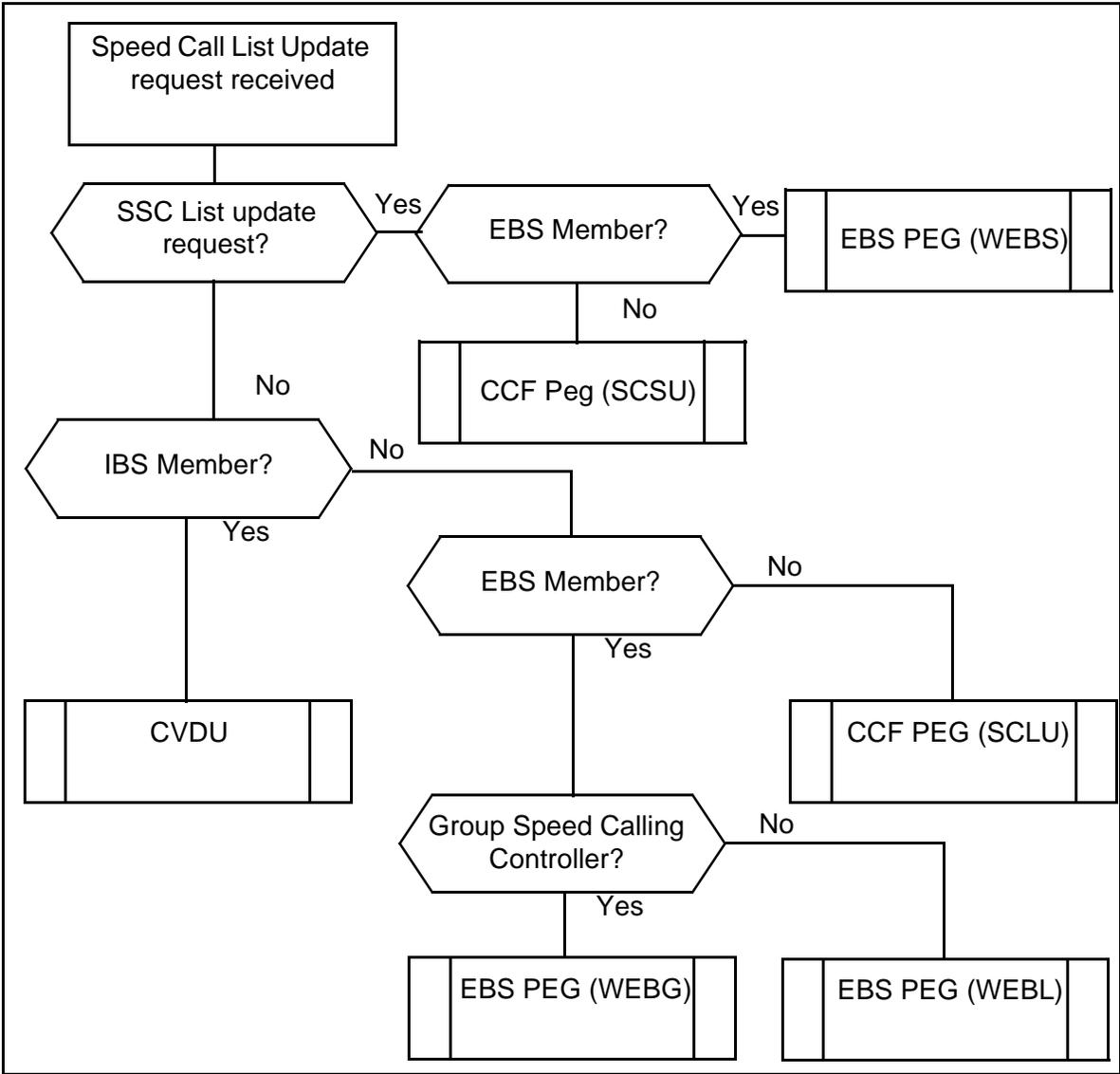


Figure 4-62: IBS measurement block (OPM016) flow chart - Convenience Dialing (CVDU), update requests.



## **Enhanced Business Services (EBS measurement block - OPM017)**

The Enhanced Business Services (EBS) measurement block (Figure 4-63 and Table 4-P) consists of peg counts of the utilization of various EBS features. Data are collected for each EBS group (see note), with each group identified by its number, 0 through 255.

*Note: Data for any given EBS group are collected and printed out only if the OPM system has been activated through Overlay OMC, EBS prompting sequence, to collect data on that group. See “EBS group registers” in Section 5.*

For selected changes made to the EBS block, flow charts showing the sequence of events that cause selected measurement block registers to be incremented and the relationship between the registers within the blocks are provided in Figures 4-66 through 4-81.

Figure 4-63: EBS measurement block (OPM017)

OPM017	EBS	CAPA	MON	13/08/9516:00:00	QRTR
	PEG	BLK	USE		
EBSxxx					
ORIG	00000				
STS	00000				
INC	00000				
DOD	00000				
CHD	00000				
CWAT	00000				
CWAA	00000				
CFWA	00000				
CFWD	00000				
GSCU	00000				
GACL	00000				
SSCU	00000				
SSCL	00000				
LSCU	00000				
LSCL	00000				
CONF	00000	00000	00000		
UTFC	00000				
UTFH	00000				
BTF	00000				
CPU	00000				
DSR	00000				
DAT	00000				
CCWT	00000				
PDID	00000	00000	00000		
ODID	00000	00000	00000		
VIWT	00000	00000	00000		
VV1	00000	00000	00000		
VV2	00000	00000	00000		
VV3	00000	00000	00000		
VV4	00000	00000	00000		
VV5	00000	00000	00000		
PDOD	00000	00000	00000		
ODOD	00000	00000	00000		
VOWT	00000	00000	00000		
VOW0	00000	00000	00000		
VOW1	00000	00000	00000		
VOW2	00000	00000	00000		
VOW3	00000	00000	00000		
VOW4	00000	00000	00000		
VOW5	00000	00000	00000		
VOW6	00000	00000	00000		
VOW7	00000	00000	00000		

(Continued on next page)

Figure 4-64: EBS measurement block (OPM017)

OPM017	EBS	CAPA	MON	13/08/9016:00:00	QRTR
	PEG		BLK		USE
VOW8	00000		00000		00000
VOW9	00000		00000		00000
VO10	00000		00000		00000
V011	00000		00000		00000
V012	00000		00000		00000
V013	00000		00000		00000
V014	00000		00000		00000
V015	00000		00000		00000
DCPU	00000				
DCBI	00000		00000		00000
DPUA	00000				
RAG	00000				
CWIA	00000				
CWIT	00000				
CWGA	00000				
CWGT	00000				
DCWA	00000				
DCAT	00000				
ICWA	00000				
CWOA	00000				
CWOT	00000				
GI01	00000		00000		00000
GI02	00000		00000		00000
GI03	00000		00000		00000
GI04	00000		00000		00000
GI05	00000		00000		00000
GI06	00000		00000		00000
GI07	00000		00000		00000
GI08	00000		00000		00000
GI09	00000		00000		00000
GI10	00000		00000		00000
GI11	00000		00000		00000
GI12	00000		00000		00000
GI13	00000		00000		00000
GI14	00000		00000		00000
GI15	00000		00000		00000
GI16	00000		00000		00000
GO01	00000		00000		00000
GO02	00000		00000		00000
GO03	00000		00000		00000
GO04	00000		00000		00000
GO05	00000		00000		00000
GO06	00000		00000		00000
GO07	00000		00000		00000

(Continued on next page)

Figure 4-65: EBS measurement block (OPM017)

OPM017	EBS	CAPA	TUES	13/04/9916:00:00	QRTR
	PEG		BLK		USE
GO08	00000		00000		00000
GO09	00000		00000		00000
GO10	00000		00000		00000
GO11	00000		00000		00000
GO12	00000		00000		00000
GO13	00000		00000		00000
GO14	00000		00000		00000
GO15	00000		00000		00000
GO16	00000		00000		00000
CFBA	00000				
CFDA	00000				
UCBA	00000				
UCBD	00000				
UCDA	00000				
UCDD	00000				
GIC	00000				
CPAT	00000				
CPRT	00000				
CPEX	00000				
CPCR	00000				
CPAB	00000				
CPPS	00000				
CPPU	00000				
CPRS	00000				
CPRU	00000				
CPCF	00000				
COAT	00000				
COAS	00000				
COEX	00000				
CODN	00000				
COAB	00000				
CFFA	00000				
UFFA	00000				
UFFD	00000				
UTFF	00000				
IHCA	00000				
IHCR	00000				
MOH	00000		00000		
SBAA	00000				
SBAT	00000				
SBIA	00000				
SBIT	00000				

(Continued on next page)

Figure 4-66: EBS measurement block (OPM017)

OPM017	EBS	CAPA	TUES	13/04/9916:00:00	QRTR
	PEG	BLK	USE		
AABT	00000				
AABA	00000				
AABD	00000				
WEBS	00000				
WEBL	00000				
WEBG	00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

Table 4-P: EBS measurement block (OPM017) registers		
Mnemonic	Explanation	Description
ORIG	Group Originating Calls	PEG - a count of the number of times that an EBS group member originates a call. The count is made upon recognition of the request for service.
STS	Station-to- Station Calls	PEG - a count of the number of calls made by an EBS group member to valid DNs within the same group. The count is incremented for each call where ringing begins and for each call to a busy number. <i>Note:</i> Included in this count are Group Intercom (GIC) terminations.
INC	Incoming Calls	PEG - a count of the number of calls made to EBS group members from sources outside the EBS group. The count is incremented for each call where ringing begins and for each call to a busy number.
DOD	Direct Outward Dialing	PEG - a count of the number of calls made by an EBS group member to DNs outside of the group. For intraoffice calls, the count is incremented for each call where ringing begins and for each call to a busy number. For interoffice calls, the count is incremented when signaling is completed on the outgoing trunk.
CHD	Call Hold	PEG - a count of the number of times that the Call Hold feature code is dialed.
CWAT	Call Waiting Attempts Terminating	PEG - a count of the number of terminating calls to busy EBS lines that have the Call Waiting feature.

<b>Table 4-P: (Continued) EBS measurement block (OPM017) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CWAA	Call Waiting Attempts Answered	PEG - a count of the number of times that a call waiting is retrieved by the called EBS party.
CFWA	Call Forward Activations	PEG - a count of the number of times that Call Forwarding is activated.
CFWD	Calls Forwarded	PEG - a count of the number of times that Call Forwarding is used to route a call.
GSCU	Group Speed Calling List Use	PEG - a count of the number of times that a Group Speed Calling list is used to route a call made by an EBS group member.
GSCL	Group Speed Calling List Changes	PEG - a count of the number of times a Group Speed Calling list is updated by an EBS group member.
SSCU	Short Speed Calling List Use	PEG - a count of the number of times that a Short Speed Calling list is used to route a call made by an EBS group member.
SSCL	Short Speed Calling List Changes	PEG - a count of the number of times a Short Speed Calling list is updated by an EBS group member.
LSCU	Long Speed Calling List Use	PEG - a count of the number of times that a Long Speed Calling list is used to route a call made by an EBS group member.
LSCL	Long Speed Calling, List Changes	PEG - a count of the number of times a Long Speed Calling list is updated by an EBS group member.
CONF	Three-Way (Conference) Calling	<p>PEG - a count of the number of attempts to form a Three-Way Conference call. The count is incremented when the EBS station user performs a hookswitch flash to establish a conference circuit.</p> <p>BLK - a count of the number of Three-Way Conference calls that are blocked because of a lack of resources. This count is incremented when the three-way call request is recognized but cannot be provided.</p> <p>USE - a usage measurement (in ccs) of the amount of time that conference circuits (on the Conference pack (NT4T03) in the DMS-10 Classic Network) or GTSB channels (on the Network Interface pack (NT8T04) in the DMS-10EN network) are used for Three-Way Conference calls</p>
UTFC	User Transfer, Conference	PEG - a count of the number of attempts to transfer from a three-way (conference) call

<b>Table 4-P: (Continued) EBS measurement block (OPM017) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
UTFH	User Transfer, Hold	PEG - a count of the number of attempts to transfer a party who has been placed on consultation hold
BTF	Busy Transfer, Busy Transfer All, Busy Transfer Intragroup	PEG - a count of the number of busy transfer, busy transfer all, and busy transfer intragroup calls.
CPU	Call Pickup	PEG - a count of the number of times that the Call Pickup feature code is used to retrieve a call.
DSR	Distinctive Ringing	PEG - a count of the number of times that Distinctive Ringing is used.
DAT	Don't Answer Transfer	PEG - a count of the number of times that a call is transferred because the EBS line that has Don't Answer Transfer has not been answered within a preselected time interval.
CCWT	Cancel Call Waiting	PEG - a count of the number of times that cancel call waiting is activated.
PDID	Primary DID VFG	PEG - a count of the number of calls that are routed to this Virtual Facilities Group (VFG). BLK - a count of the number of calls that are unable to pass through this VFG, such as VFG full or no VFG feature buffers available. USE - a usage measurement (in ccs) for facilities in this VFG. Usage begins when a facility is attached to a call and ends when the facility is released from the call.
ODID	Overflow DID VFG	
VIWT	INWATS VFG	
VV1-VV5	Customer assignable VFG	
PDOD	Primary DOD VFG	
ODOD	Overflow DOD VFG	
VOWT	OUTWATS VFG for all bands	
VOW0-VO15	Single-band OUTWATS VFG	
DCPU	Directed Call Pickup without Barge-In	PEG - a count of the number of times that a call is successfully picked up using either the Directed Call Pickup without Barge-In access code or the Direct Station Select key.
DCBI	Directed Call Pickup with Barge-In	PEG - a count of the number of times that the Directed Call Pickup with Barge-In access code is used to successfully barge in on a call. BLK - a count of the number of Directed Call Pickup with Barge-In calls that may not be retrieved because of lack of resources.

<b>Table 4-P: (Continued) EBS measurement block (OPM017) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
		USE - a usage measurement (in ccs) of the amount of time that three-way conference circuits are used for Directed Call Pickup with Barge-In calls.
DPUA	Directed Call Pickup from Any Station	PEG - a count of the number of times that a call is retrieved by another member of the EBS group who has used the Directed Call Pickup from Any Station access code to successfully retrieve the call.
RAG	Ring Again	PEG - a count of the number of times that ring again is activated by a member of an EBS group.
CWIA	Call Waiting Incoming Attempts	PEG - a count of the number of calls interrupted by call-wait tone from a call from outside the EBS group.
CWIT	Call Waiting Incoming Attempts Terminating	PEG - a count of the number of calls that are interrupted by call-wait tone from a call from outside the EBS group and are retrieved by the called EBS party.
CWGA	Call Waiting Intragroup Attempts	PEG - a count of the number of calls interrupted by call-wait tone from a call within the EBS group.
CWGT	Call Waiting Intragroup Attempts Terminating	PEG - a count of the number of calls that are interrupted by call-wait tone from a call within the EBS group and are retrieved by the called EBS party.
DCWA	Dial Call Waiting Attempts	PEG - a count of the number of calls interrupted by call-wait tone imposed by the originating party within the EBS group, using an access code to impose call waiting.
DCAT	Dial Call Waiting Attempts Terminating	PEG - a count of the number of calls that are interrupted by call-wait tone imposed by the originating party within the EBS group, using an access code to impose call waiting, and are retrieved by the called EBS party.
ICWA	Inhibit Call Waiting Attempts	PEG - a count of the number of times a call-wait tone imposed by the originating party within the EBS group (by using CWTO or DCWT) is inhibited.
CWOA	Call Waiting Origination Attempts	PEG - a count of the number of calls interrupted by call-wait tone imposed by the originating party within the EBS group.

<b>Table 4-P: (Continued) EBS measurement block (OPM017) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CWOT	Call Waiting Origination Attempts Terminating	PEG - a count of the number of calls that are interrupted by call-wait tone imposed by the originating party within the EBS group and are retrieved by the called EBS party.
GI01-GI09	Group INWATS VFGs	PEG - a count of the number of calls that are routed to this VFG.
GI10-GI16	Group INWATS VFGs	BLK - a count of the number of calls that are unable to pass through this VFG, such as VFG full or no VFG feature buffers available.
GO01 -GO09	Group OUTWATS VFGs	USE - a usage measurement (in ccs) for facilities in this VFG. Usage begins when a facility is attached to a call and ends when the facility is released from the call.
GO10 -GO16	Group OUTWATS VFGs	<i>Note 1:</i> VFGs that are not defined will not appear in the OPM printout. <i>Note 2:</i> If the office is configured as an EADAS office, all VFGs (defined and undefined) will appear in the OPM printout.
CFBA	Call Forward Busy Activation count	PEG - a count of the number of times user programmable call forward busy is activated
CFDA	Call Forward Busy Don't Answer	PEG - a count of the number of times user programmable call forward busy don't answer is used by a subscriber
UCBA	Usage Sensitive Call Forward Busy Activation count	PEG - a count of the number of times usage sensitive user programmable call forward busy is activated
UCBD	Usage Sensitive Call Forward Busy Deactivation count	PEG - a count of the number of times usage sensitive user programmable call forward busy is deactivated
UCDA	Usage Sensitive Call Forward Don't Answer activation	PEG - a count of the number of times usage sensitive user programmable call forward don't answer is activated
UCDD	Usage Sensitive Call Forward Don't Answer deactivation	PEG - a count of the number of times usage sensitive user programmable call forward don't answer is deactivated
GIC	Group Intercom	PEG - a count of the number of GIC originations in an EBS group
CPAT	Call Park, Directed Call Park, and Call Park retrieval access	PEG - a count of the number of times the Call Park, Directed Call Park, and Call Park retrieval access codes were dialed or keys were activated

<b>Table 4-P: (Continued) EBS measurement block (OPM017) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CPRT	Call Park retrieval	PEG - a count of the number of times parked calls were retrieved before the first recall
CPEX	Call Park recall timer expiration	PEG - a count of the number of times the parked call recall timer expired
CPCR	Call Park recalls	PEG - a count of the number of completed recalls that were answered
CPAB	Call Park calls abandoned	PEG - a count of the number of parked calls abandoned before being answered
CPPS	Call Park successful park attempts	PEG - a count of the number of successful call park attempts
CPPU	Call Park unsuccessful park attempts	PEG - a count of the number of unsuccessful call park attempts
CPRS	Call Park successful retrievals	PEG - a count of the number of successful call park retrievals
CPRU	Call Park unsuccessful retrieval attempts	PEG - a count of the number of unsuccessful call park retrieval attempts
CPCF	Call Park calls forwarded	PEG - a count of the number of Call Park calls forwarded
COAT	Camped-on call activations	PEG - a count of the number of times calls were camped on
COAS	Camped-on calls answered	PEG - a count of the number of camped-on calls were answered by the target station
COEX	Camped-on call expirations	PEG - a count of the number of times the camped-on call recall timer expired
CODN	Camped-on call answers	PEG - a count of the number of times the camped-on call recall timer expired and the call was answered by the administrative DN
COAB	Camped-on calls abandoned	PEG - a count of the number of times camped on calls were abandoned before being answered
CFFA	Fixed Destination Call Forwarding activation	PEG - a count of the number of times fixed destination call forwarding is activated
UFFA	Usage Sensitive Fixed Destination Call Forwarding activation	PEG - a count of the number of times usage sensitive fixed destination call forwarding is activated
UFFD	Usage Sensitive Fixed Destination Call Forwarding deactivation	PEG - a count of the number of times usage sensitive fixed destination call forwarding is deactivated
UTFF	User Transfer From Flexible Calling	PEG - a count of the number of ISDN flexible calling transfer requests.

<b>Table 4-P: (Continued) EBS measurement block (OPM017) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
IHCA	ISDN Hold Capability Activation	PEG - a count of the number of subscriber ISDN hold capability activations.
IHCR	ISDN Hold Capability Rejection	PEG - a count of the number of subscriber ISDN hold capability rejected attempts.
MOH	Music on Hold	PEG - a count of the number of successful attempts to provide MOH to a holding subscriber BLK - a count of the number of unsuccessful attempts to provide MOH to a holding subscriber
SBAA	Make Set Busy All Calls (MSBA)	PEG - a count of the number of times that MSBA is activated.
SBAT	Make Set Busy All Calls (MSBA)	PEG - a count of the number of failed termination attempts to an MBS that has MSBA active.
SBIA	Make Set Busy Intragroup Calls (MSBI)	PEG - a count of the number of times that MSBI is activated.
SBIT	Make Set Busy Intragroup (MSBI)	PEG - a count of the number of failed termination attempts to an MBS that has MSBI active.
AABT	Handsfree Auto Answerback (AAB) treatment	PEG - a count of the number of times that AAB treatment was attempted for a terminating call. <i>Note: The AABT count may be pegged even when the AABA count is not pegged, because AAB may be activated when it is assigned as a station option instead of being activated by the subscriber.</i>
AABA	Handsfree Auto Answerback (AAB) activation	PEG - a count of the number of times that the user activated AAB using the MBS AAB key.
AABD	Handsfree Auto Answerback (AAB) deactivation	PEG - a count of the number of times that the user deactivated AAB using the MBS AAB key.
WEBS	Web based Short Speed Calling list updates	PEG - a count of the number of web based Short Speed Calling list update requests.
WEBL	Web based Long Speed Calling list updates	PEG - a count of the number of web based Long Speed Calling list update requests.
WEBG	Web based Group Speed Calling updates	PEG - a count of the number of web based Group Speed Calling list update requests.

Figure 4-67: EBS measurement block (OPM017) flow chart - MBS registers for Call Park feature

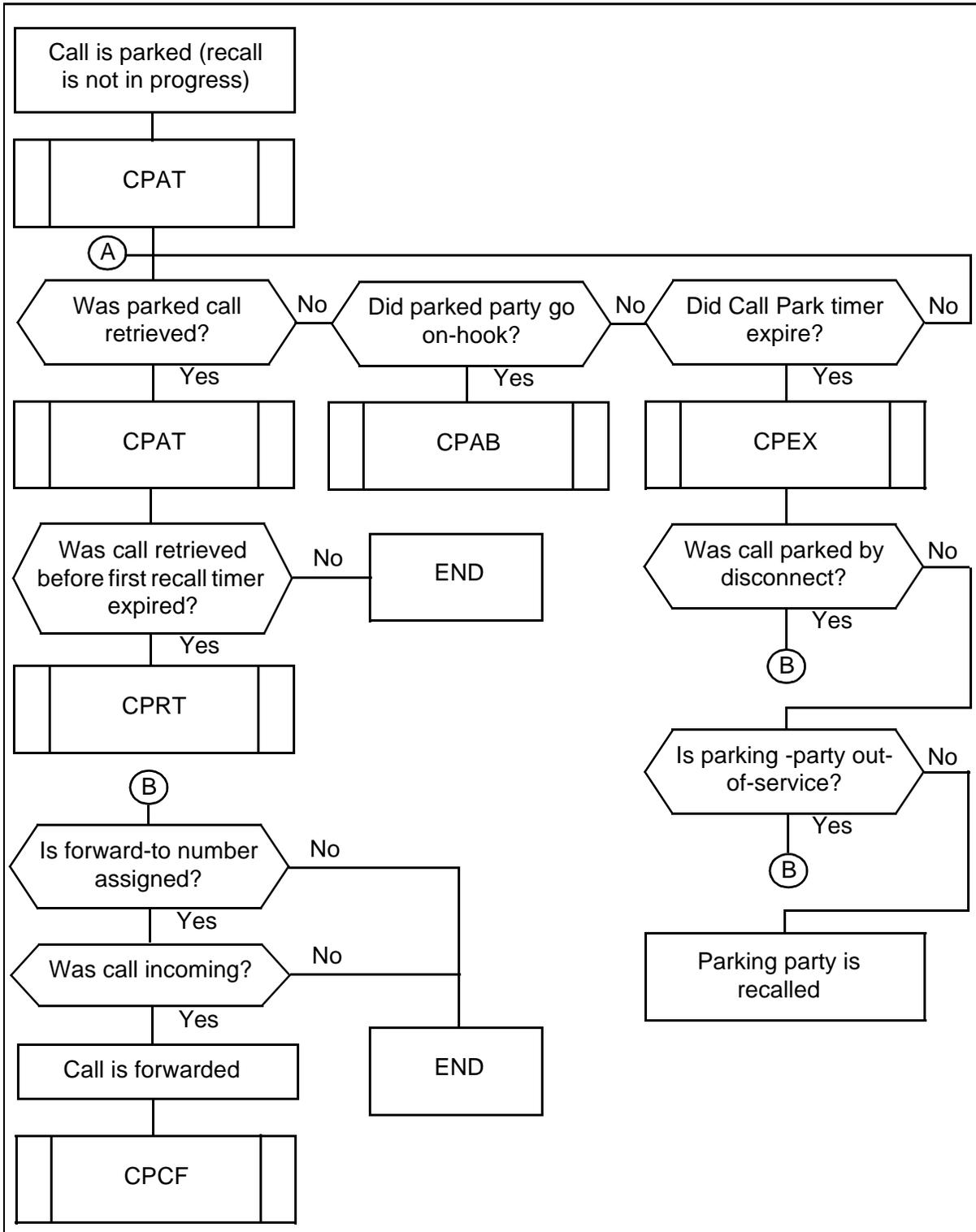


Figure 4-68: EBS measurement block (OPM017) flow chart - MBS registers for Call Park Recall feature

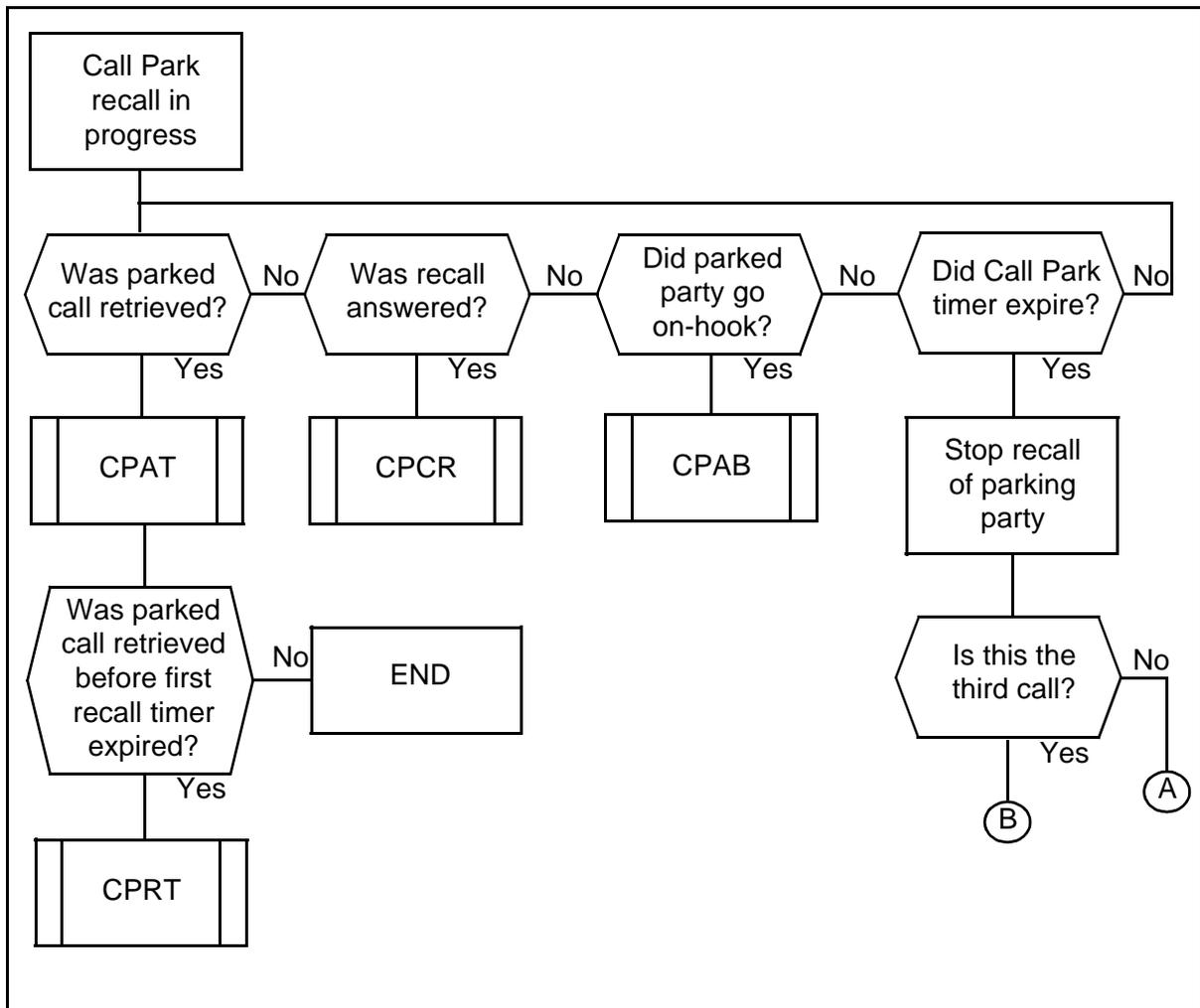


Figure 4-69: EBS measurement block (OPM017) flow chart - MBS registers for Call Park attempts

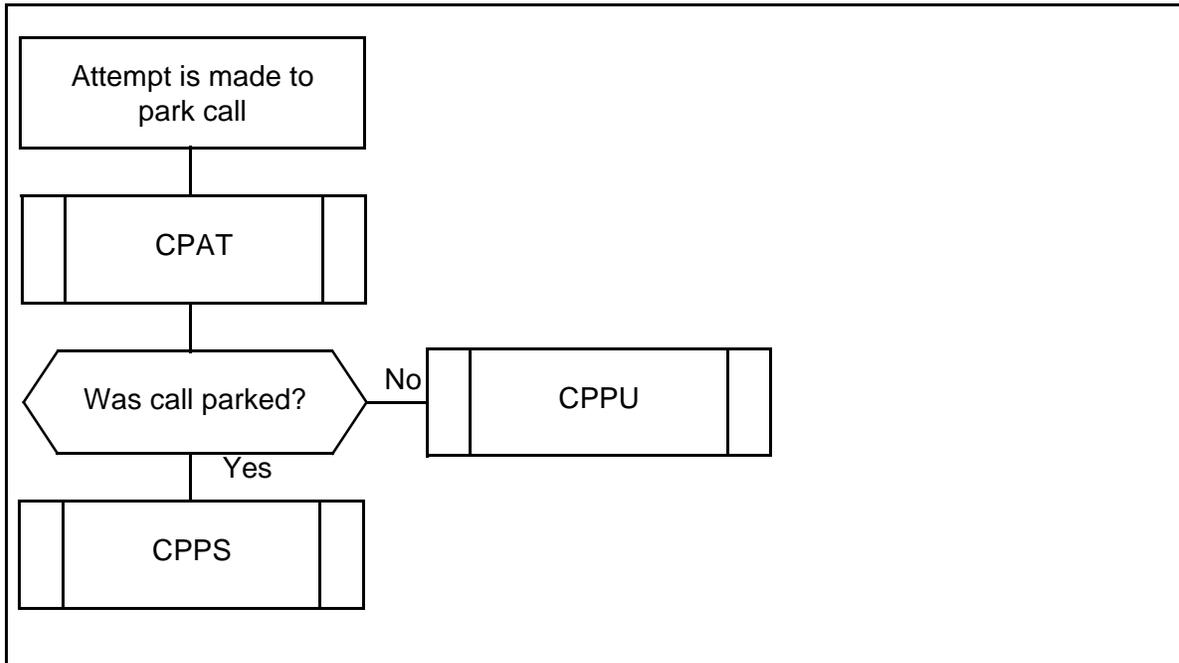


Figure 4-70: EBS measurement block (OPM017) flow chart - MBS registers for Call Park retrieval attempts

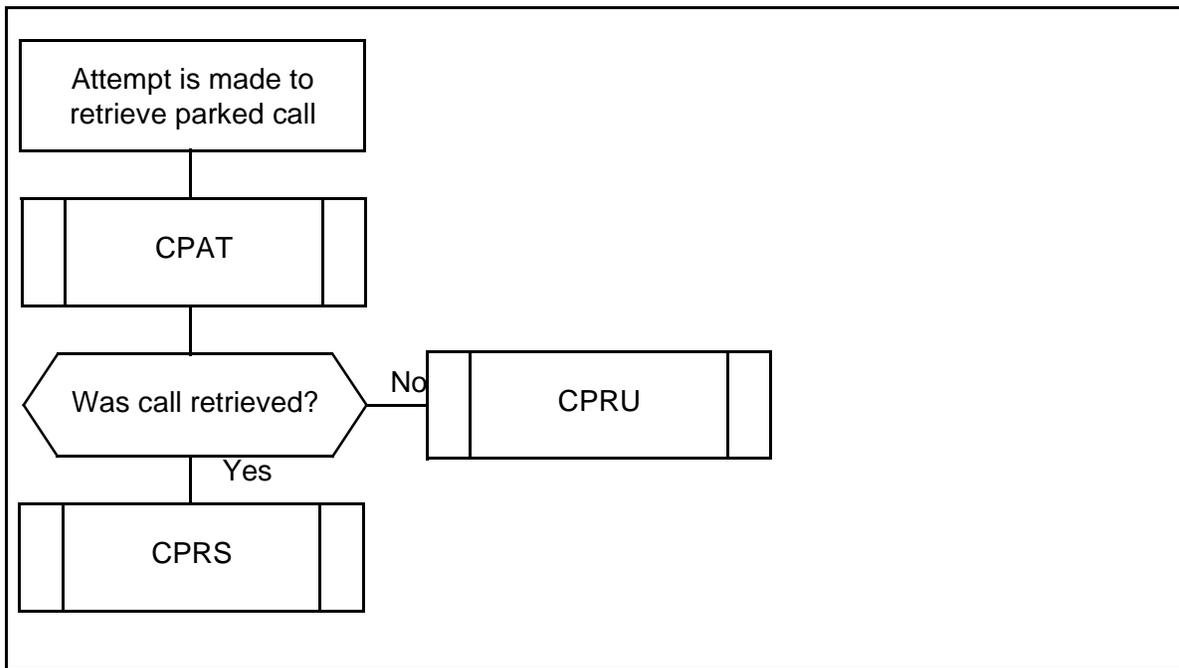


Figure 4-71: EBS measurement block (OPM017) flow chart - MBS registers for Camp-On feature

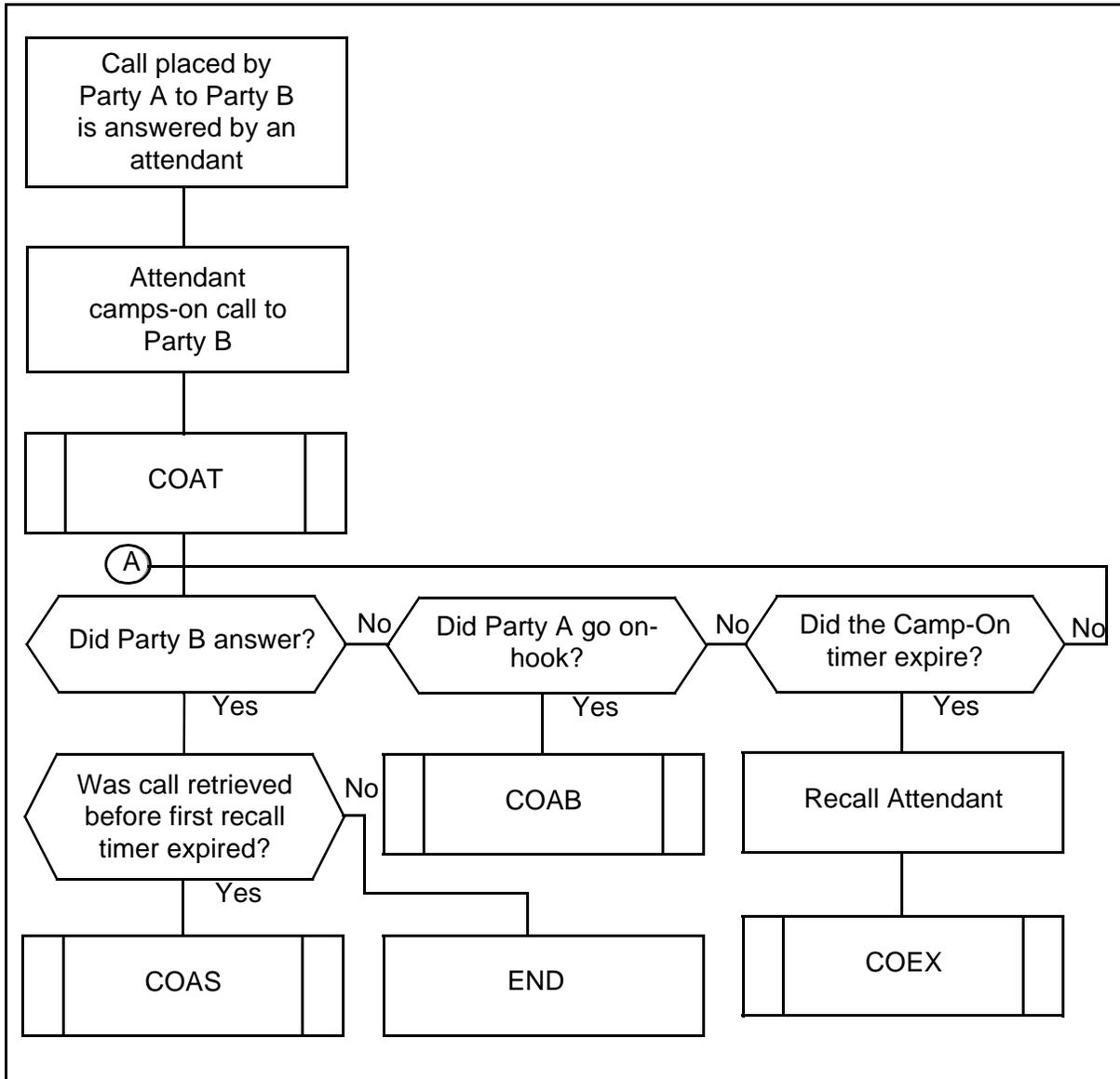


Figure 4-72: EBS measurement block (OPM017) flow chart - MBS registers for Camp-On Recall feature

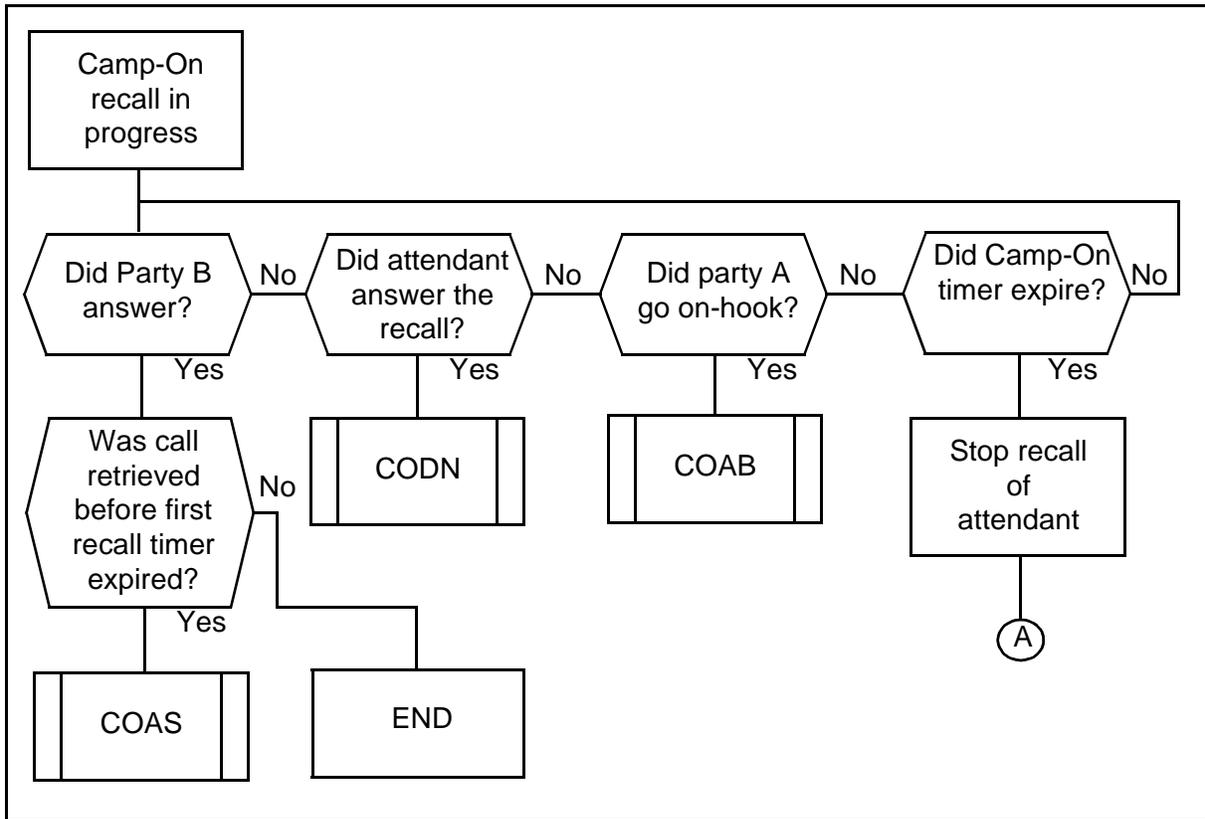


Figure 4-73: EBS measurement block (OPM017) flow chart - MBS registers for Group Intercom feature

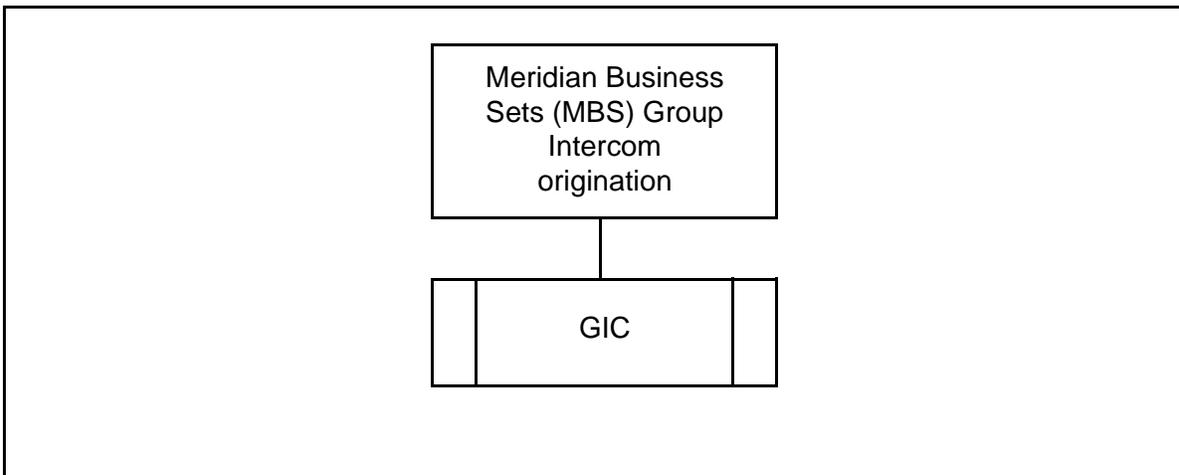


Figure 4-74: EBS measurement block (OPM017) flow chart - Fixed Destination Call Forwarding feature CFFA/UFFA/UFFD registers

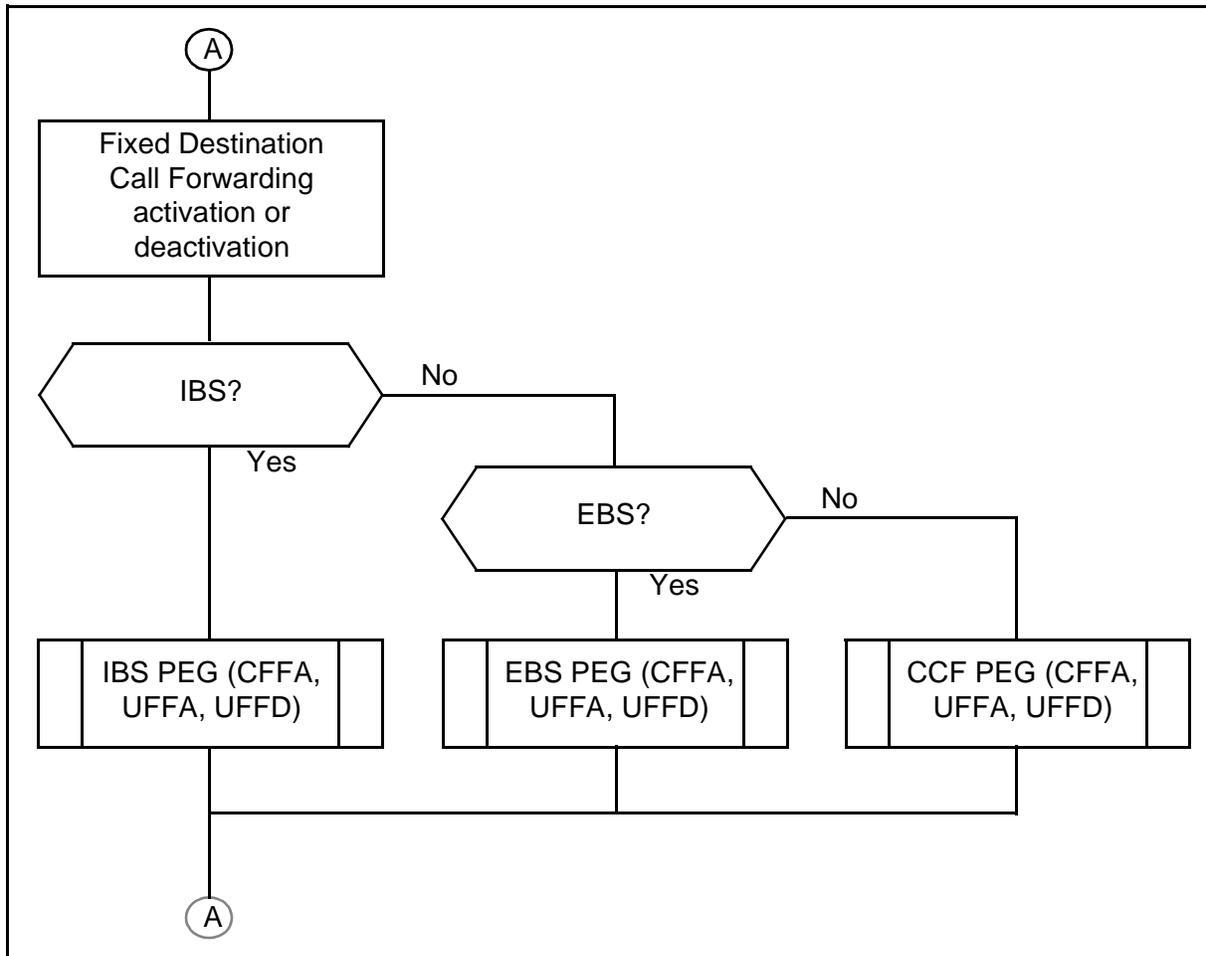


Figure 4-75: EBS measurement block (OPM017) flow chart - ISDN User Transfer from Flexible Calling feature (UTFF) register

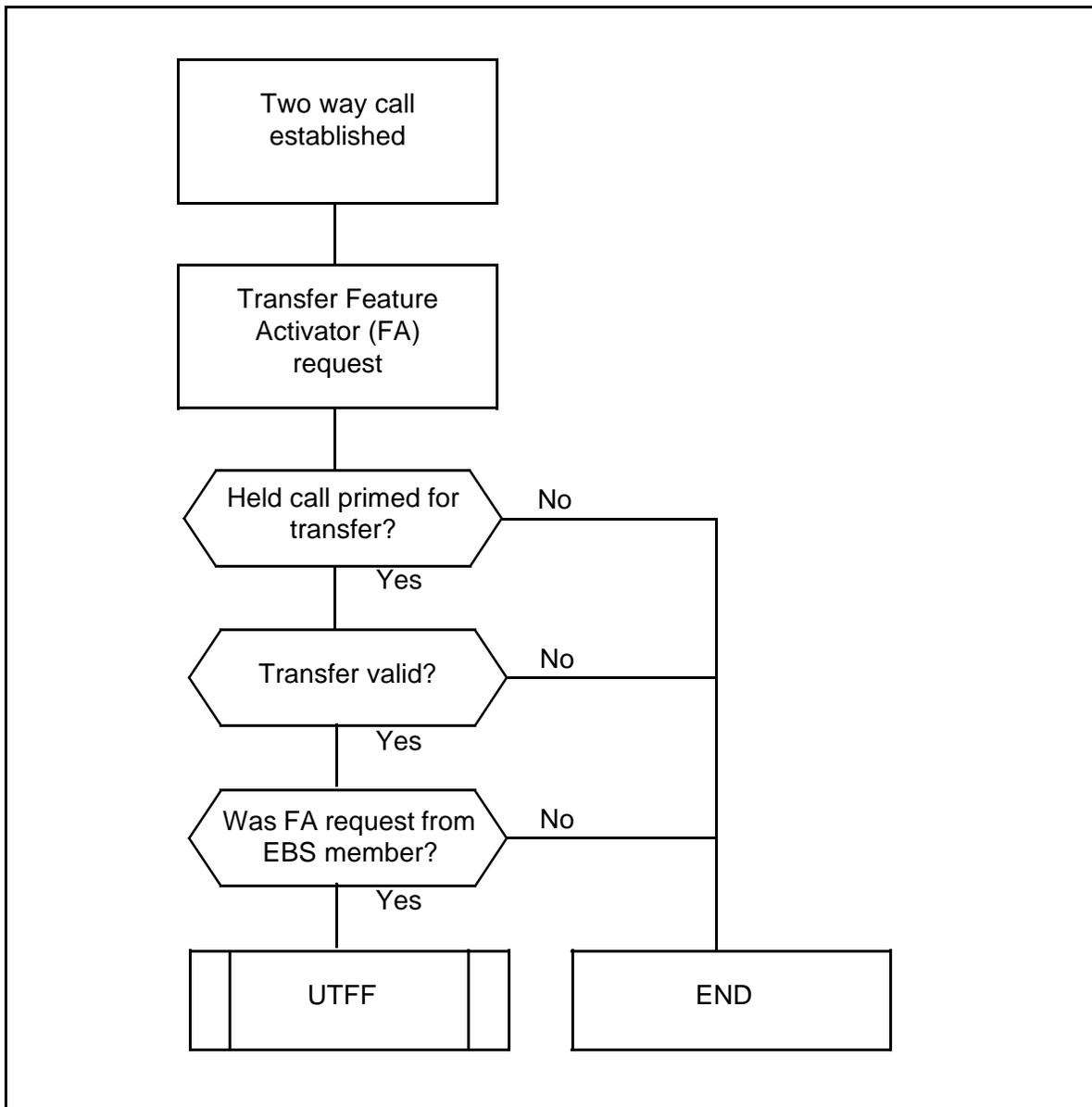


Figure 4-76: EBS measurement block (OPM017) flow chart - ISDN Hold Capability Activation (IHCA) and Rejection (IHCR) registers

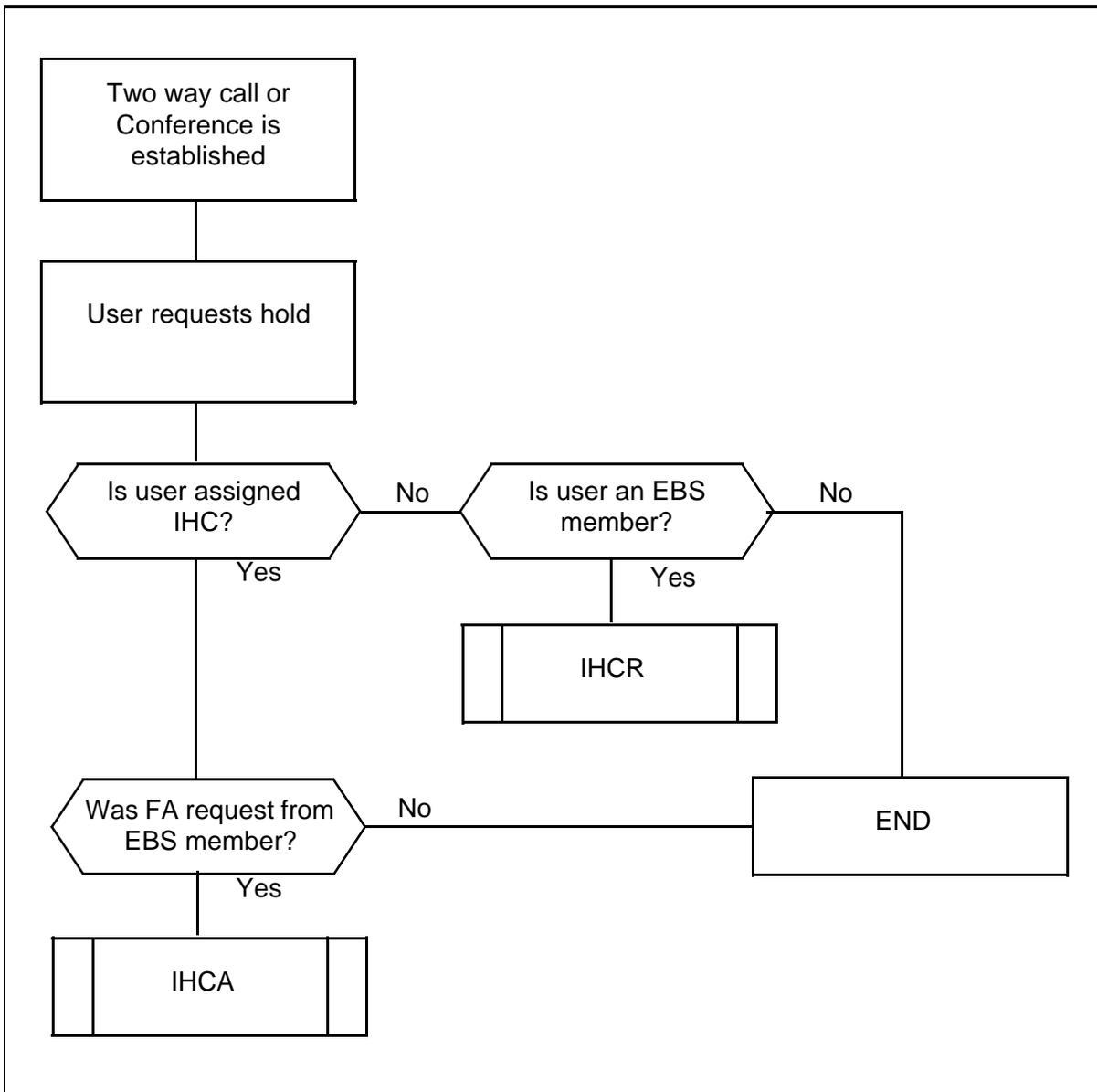


Figure 4-77: EBS measurement block (OPM017) flow chart - Make Set Busy All Calls activation (SBAA) registers

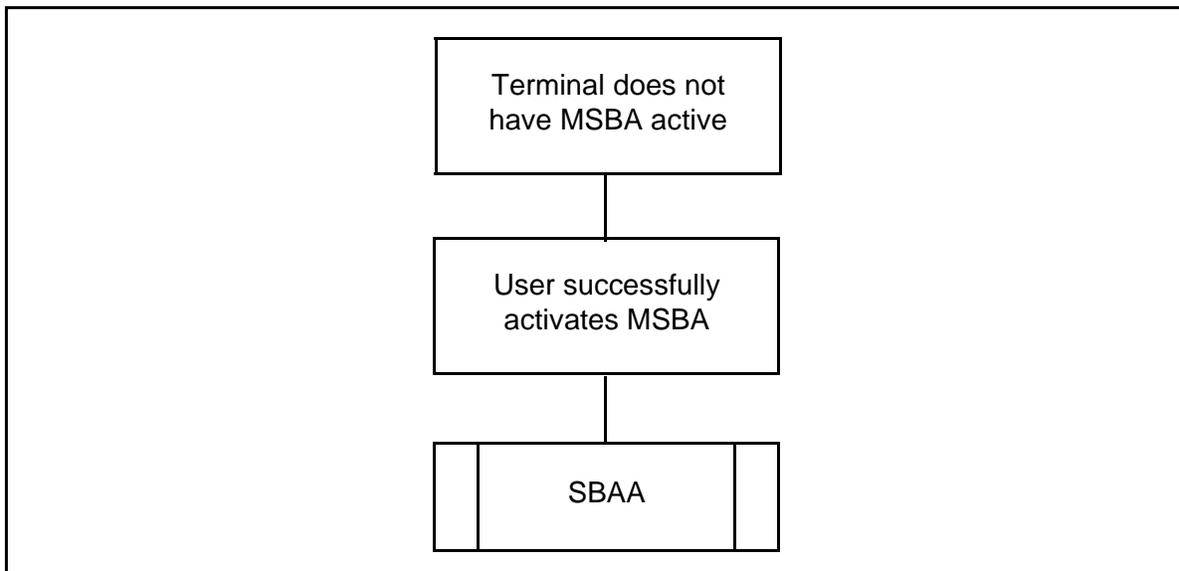


Figure 4-78: EBS measurement block (OPM017) flow chart - Make Set Busy All Calls termination (SBAT) registers

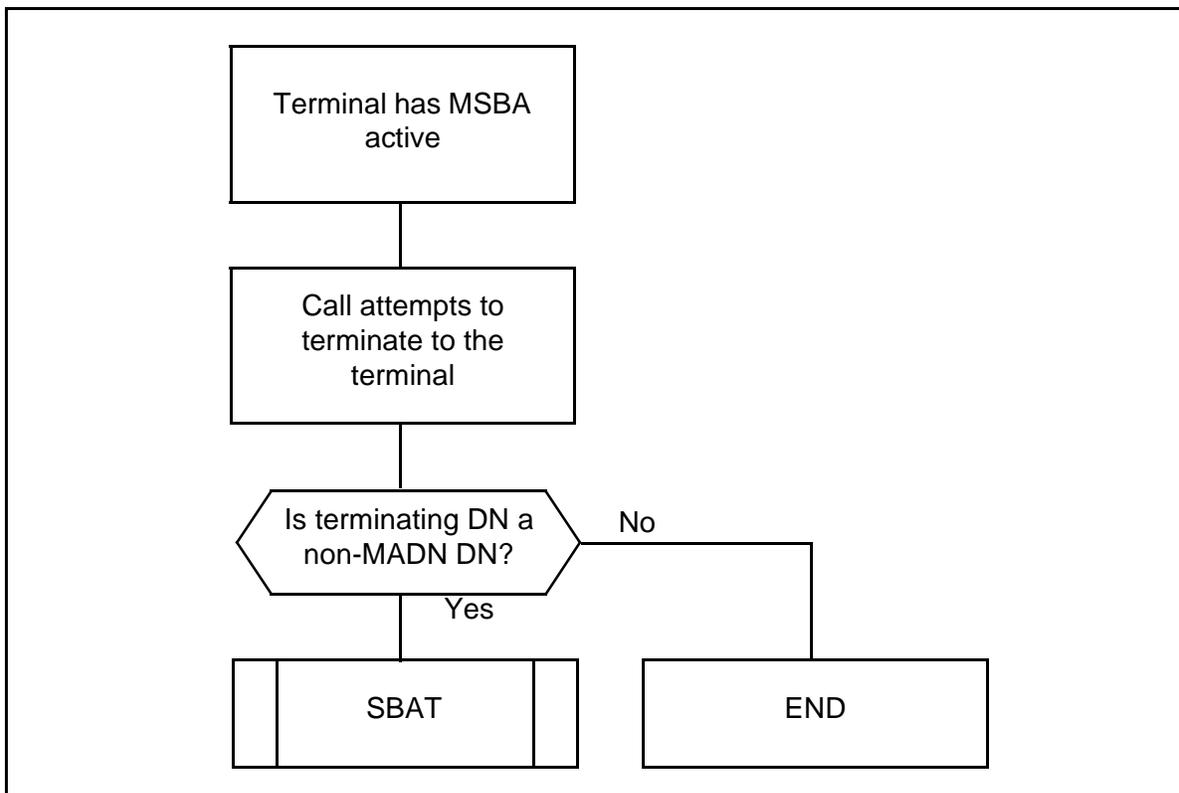


Figure 4-79: EBS measurement block (OPM017) flow chart - Make Set Busy Intragroup Calls activation (SBIA) registers

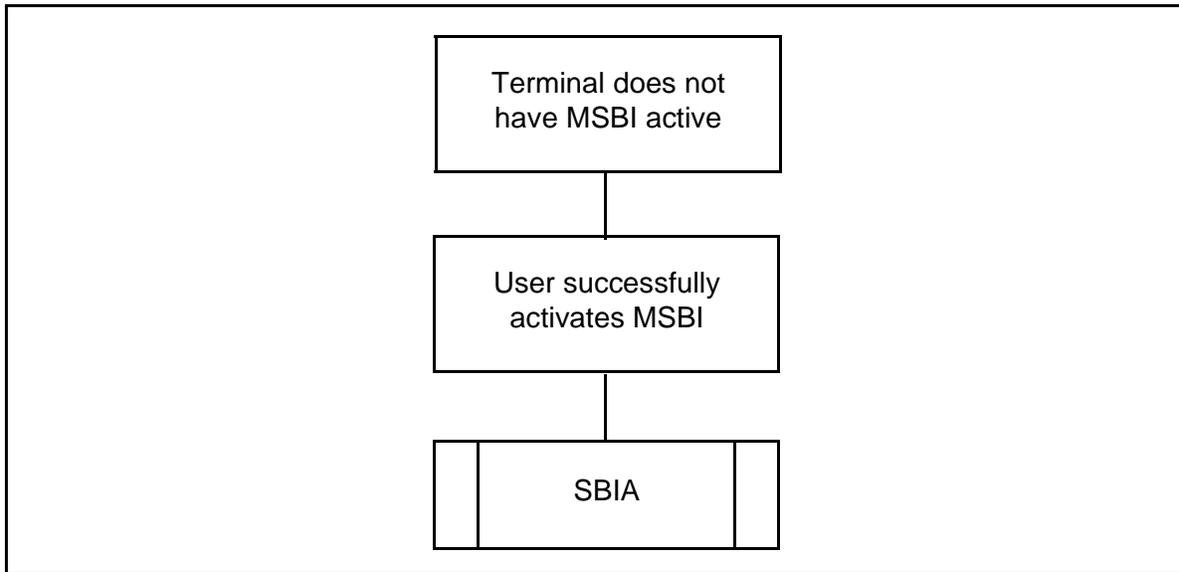


Figure 4-80: EBS measurement block (OPM017) flow chart - Make Set Busy Intragroup Calls termination (SBIT) registers

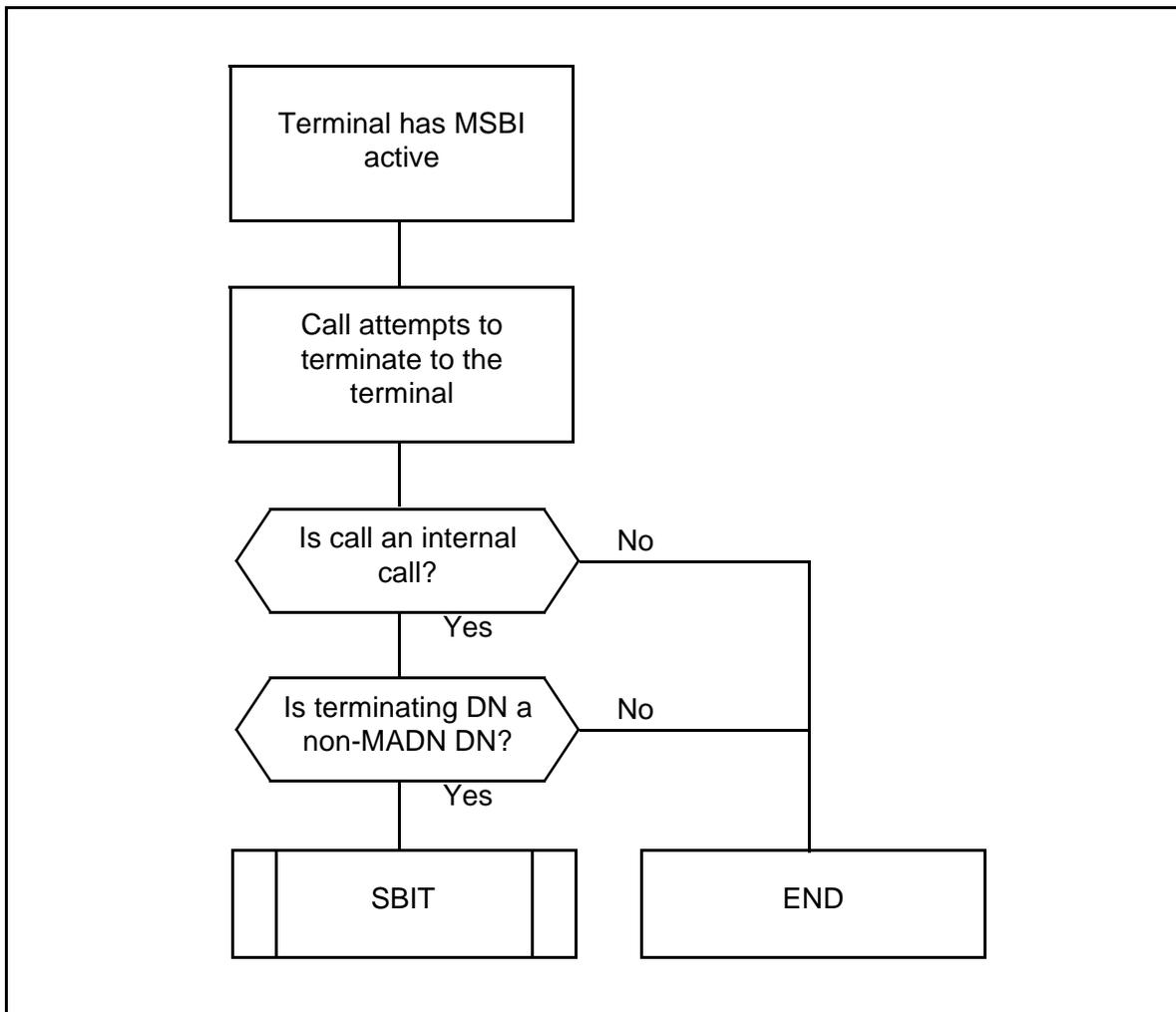


Figure 4-81: EBS measurement block (OPM017) flow chart - Handsfree Auto Answerback termination (AABT) register

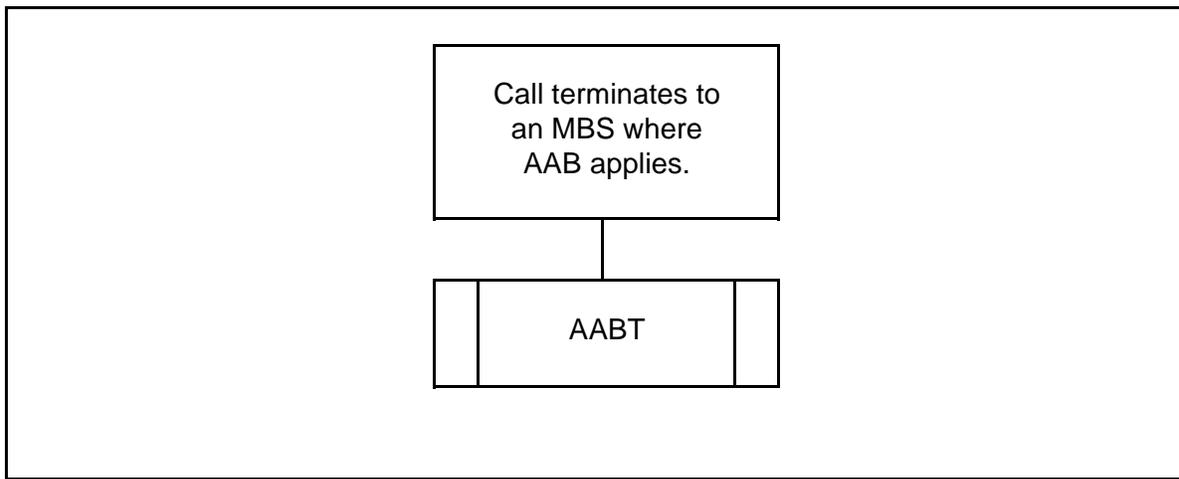
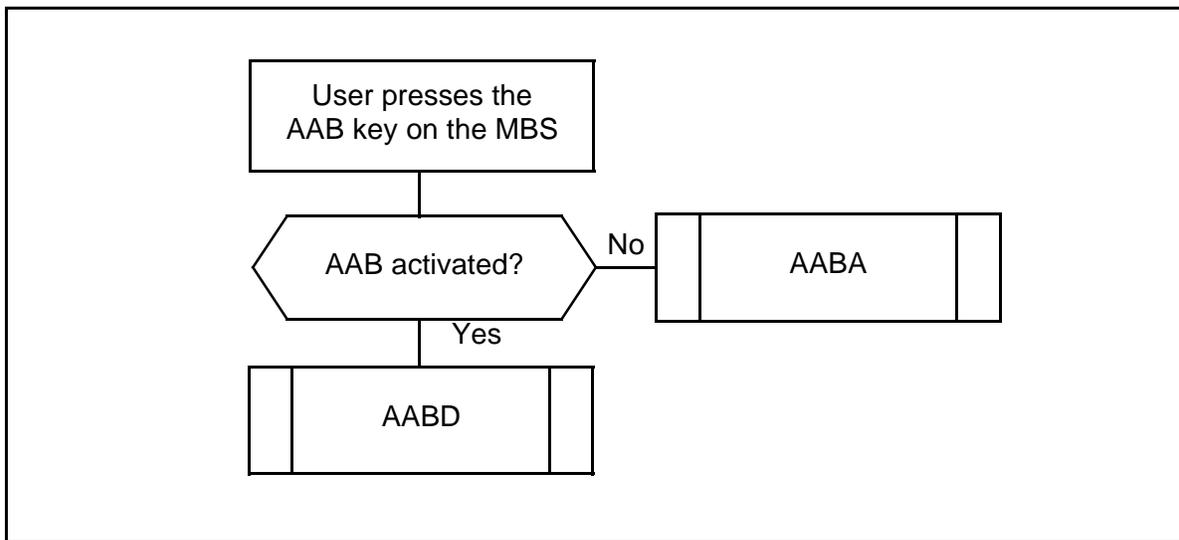
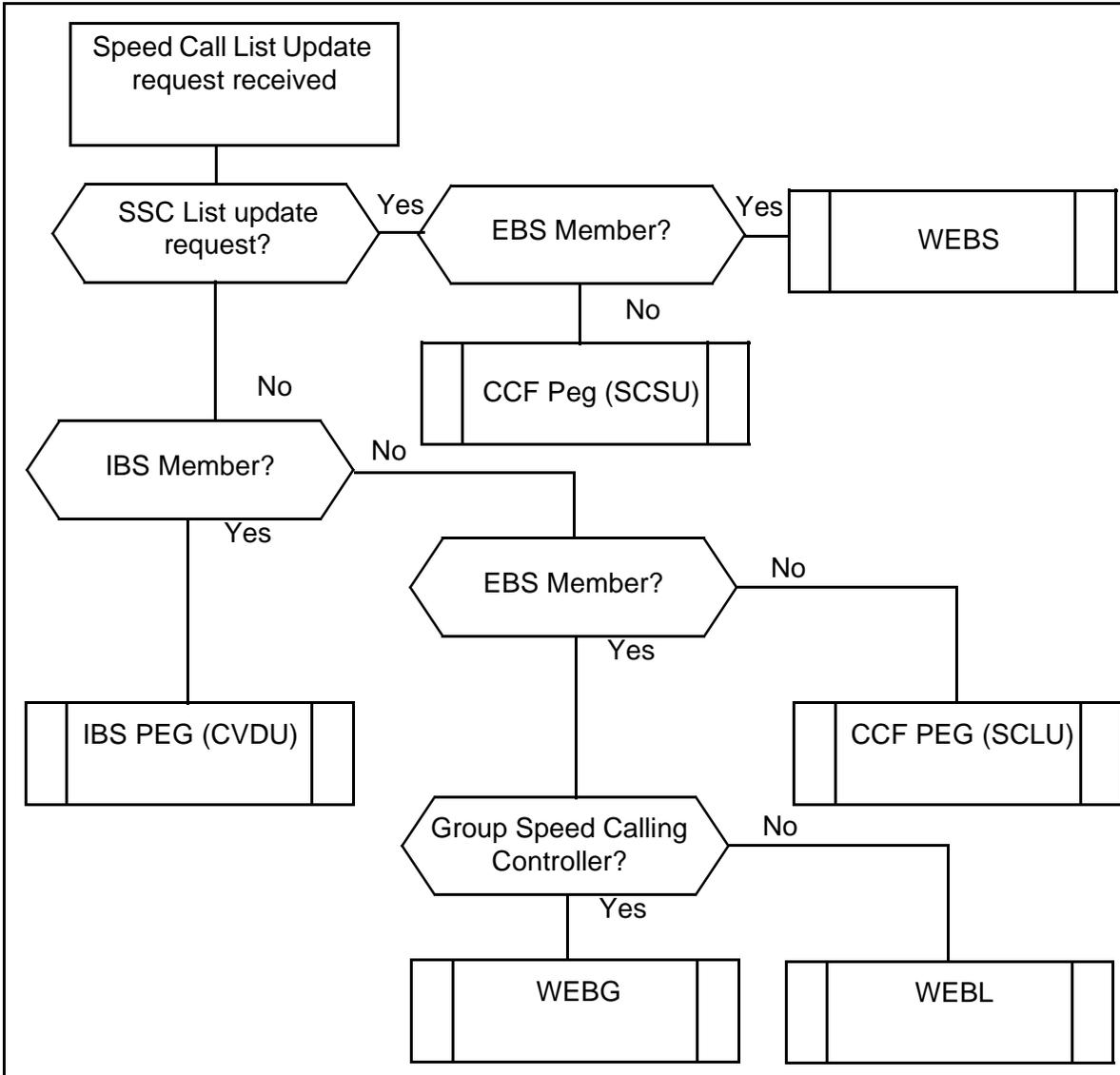


Figure 4-82: EBS measurement block (OPM017) flow chart - Handsfree Auto Answerback activation (AABA) and deactivation (AABD) registers



*Note: Assume that the AAB option is assigned to the PDN on the MBS.*

Figure 4-83: EBS measurement block (OPM017) flow chart - Web Based Short Speed Calling (WEBS), Long Speed Calling (WEBL), and Group Speed Calling (WEBG) update requests.



## DS-1 Span Line (D1LP measurement block - OPM018)

The DS-1 Span Line (D1LP) measurement block (Figure 4-84 and Table 4-Q) provides information on the performance of either the DS-1 span line connecting the SCM-10S to the SLC-96 or the SCM-10U to the Remote Carrier Urban (RCU), or the Subscriber Remote Interface (SRI) to the Remote Line Concentrating Module (RLCM), Remote Subscriber Line Equipment (RSLE), Remote Subscriber Line Module (RSLM), Outside Plant Module (OPM), Outside Plant Access Cabinet (OPAC), or Remote Switching Center (RSC-S).

Span line measurements are provided for each DS-1 Interface pack (NT6X85) and for each Subscriber Remote Interface pack (NT4T09). Individual packs are identified by physical address (SCE *b s p u* or PE *b s p u*).

**Note 1:** In the D1LP Measurement Block, either OVFL (overflow) or BLK (block) is the column heading for the second column. OVFL is used for Generic 402.10 up to Generic 402.50, and BLK is used for Generic 402.50 and later 400-Series generics. The type of information in the column is the same.

**Note 2:** When BLK = D1LP in Overlay OMC (OMC), the SRLK portion of the D1LP measurement block will be updated and modified according to the parameters configured for the NTKW measurement block (OPM006).

**Figure 4-84: D1LP measurement block (OPM018)**

OPM018	D1LP	CAPB	TUES	11/01/9013:30:00	HRHF
		PEG	BLK/OVFL	USE	MTCE
D1LK	SCE <i>b s p u</i>	00000	00000	00000	00000
	.	.	.	.	.
	.	.	.	.	.
	.	.	.	.	.
SRLK	PE <i>b s p u</i>	00000	00000	00000	00000
	.	.	.	.	.
	.	.	.	.	.
	.	.	.	.	.

**Note:** Beginning with Generic 408.10, registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-Q: D1LP measurement block (OPM018) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
D1LK	DS-1 Link	<p>PEG<sup>1</sup> - a count of the number of origination attempts from shelf/shelf groups served by this span line.</p> <p>BLK/OVFL<sup>1</sup> - a count of the number of unavailable channels.</p> <p>USE<sup>1</sup> - a usage measurement in hundred call seconds (ccs) for all channels on this span line.</p>
		<p>MTCE - the amount of time in hundred call seconds (ccs) this span line is placed in a maintenance status (for example, faulty, man-made-busy, system-made-busy, indirectly out-of-service).</p>
SRLK	Subscriber Remote Interface Link	<p>PEG - a count of the number of attempts to obtain a time slot on this span line. The count includes both successful and unsuccessful attempts. Where multiple attempts are made to obtain a time slot, only the first attempt is pegged.</p> <p>OVFL - a count of the number of attempts to obtain a timeslot on this span line that fail because an idle time slot was not found.</p> <p>USE - a usage measurement in hundred call seconds (ccs) for all channels on this span line. Use starts when DMS-10 switch software reserves a time slot on this span line and ends when it returned to the idle state.</p> <p>MTCE - the amount of time in hundred call seconds (ccs) this span line is placed in a maintenance status (for example, faulty, man-made-busy, system-made-busy, indirectly out-of-service). Maintenance calls are not included.</p>

Only counts for an active signaling link to an RCU are included in the PEG, BLK/OVFL, and USE categories.

## Pool Identification (POOL measurement block - OPM019)

The Pool Identification (POOL) measurement block (Figure 4-85 and Table 4-R) provides information on pool identification.

The Billing Register (BR) output occurs only for offices configured for Automatic Message Accounting (AMA). The Data Link Controller Output Register Pool (MDLC), Satellite Bulk Pool in the Host Switching Office (SSOB), and Billing Pool for Satellite Formatted Billing in the Host Switching Office (AMAB) outputs occur only for offices in a DMS-10 Cluster configuration.

For selected changes made to the POOL block, flow charts showing the sequence of events that cause selected POOL registers to be incremented and the relationship between the registers within the block are shown in Figures 4-86 through 4-97.

**Figure 4-85: POOL measurement block (OPM019)**

OPM019	POOL	CAPZ	THU	11/12/90/13:30/00	HRHF	
POOL	ALOC	USBL	IDLE	BLK	PEG	
CR	00000	00000	00000	00000	00000	
LR		00000	00000	00000	00000	00000
MTTY	00000	00000	00000	00000	00000	
DIGB	00000	00000	00000	00000	00000	
BR	00000	00000	00000	00000	00000	
MR	00000	00000	00000	00000	00000	
MDLC	00000	00000	00000	00000	00000	
SSOB	00000	00000	00000	00000	00000	
AMAB	00000	00000	00000	00000	00000	
SFTR	00000	00000	00000	00000	00000	
LFTR	00000	00000	00000	00000	00000	
XFTR	00000	00000	00000	00000	00000	
RSVC	00000	00000	00000	00000	00000	
Q931	00000	00000	00000	00000	00000	
CPEB	00000	00000	00000	00000	00000	
TRNS	00030	00030	00030	00000	00000	
TAFF	00024	00024	00024	00000	00000	

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-R: Pool measurement block (OPM019) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
PLID	Pool Identification	The following measurements are for the indicated pool types.
CR	Call Register Pool	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
LR	Line Register Pool	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
MTTY	Message Pool I/O System	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
DIGB	Digit Buffer Pool	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p>

<b>Table 4-R: (Continued) Pool measurement block (OPM019) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
		<p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
BR	Billing Register Pool	<p>ALOC - the value entered in Overlay CNFG (AMA prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
MR	Maintenance Register Pool	<p>ALOC - Not modifiable; currently fixed at three buffers.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
MDLC	Data Link Controller Output Register Pool	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>

<b>Table 4-R: (Continued) Pool measurement block (OPM019) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
SSOB	Satellite Bulk Pool in the Host Switching Office (HSO)	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
AMAB	Billing Pool for Satellite Formatted Billing in the HSO	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
SFTR	Small Feature Buffers	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
LFTR	Large Feature Buffers	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p>

<b>Table 4-R: (Continued)</b> <b>Pool measurement block (OPM019) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
		<p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
XFTR	Extra Large Feature Buffers	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
RSVC	Pool of the Service Registers for RSC-S resources	<p>ALOC - not modifiable; currently fixed at 4800</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
Q931	ISDN Call Buffer for Q.931 signalling protocol	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>

<b>Table 4-R: (Continued)</b>		
<b>Pool measurement block (OPM019) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CPEB	ISDN Customer Premise Equipment Buffer	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
TRNS	Transaction Register Pool	<p>ALOC - the value entered in Overlay CNFG (BUFF prompting sequence) for each pool.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>
TAFF	Transaction and Fixed Format Interface Register Pool	<p>ALOC - TAFF registers will automatically be set to 80% of the number of TRNS registers.</p> <p>USBL - the actual number of buffers available for system use.</p> <p>IDLE - the number of buffers not used by the system during the measurement period.</p> <p>BLK - the number of times an attempt to obtain a buffer was made and none was available during this measurement period. (This does not indicate that data was lost or discarded because each application decides whether to retry or discard.)</p> <p>PEG - the number of times an attempt was made to remove a buffer from the pool.</p>

Figure 4-86: POOL measurement block (OPM019) flow chart - RSVC IDLE register

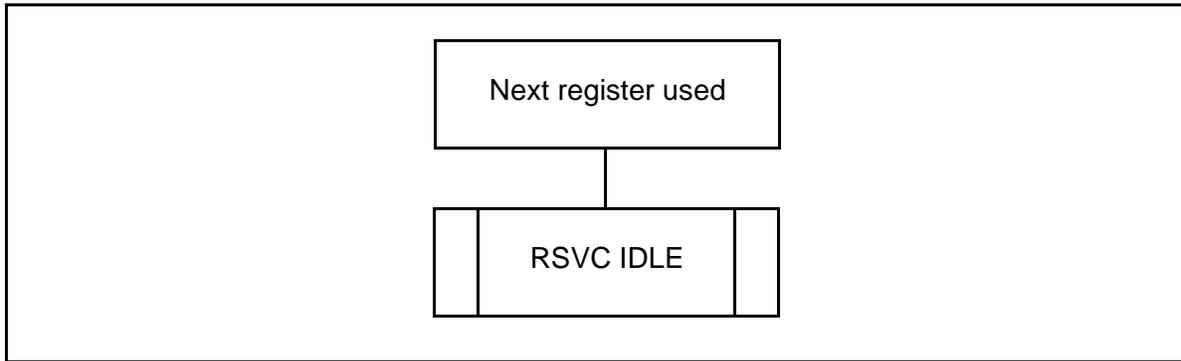


Figure 4-87: POOL measurement block (OPM019) flow chart - RSVC IDLE, BLK, or PEG register

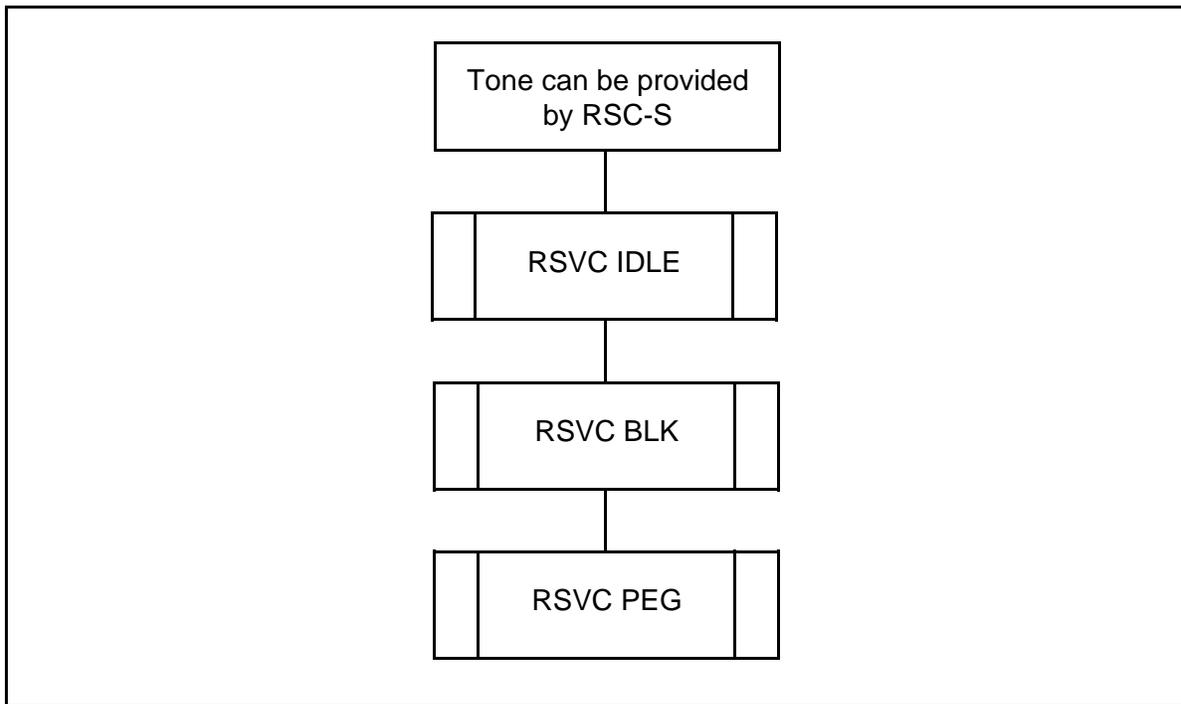


Figure 4-88: POOL measurement block (OPM019) flow chart - RSVCL IDLE, BLK, or PEG register

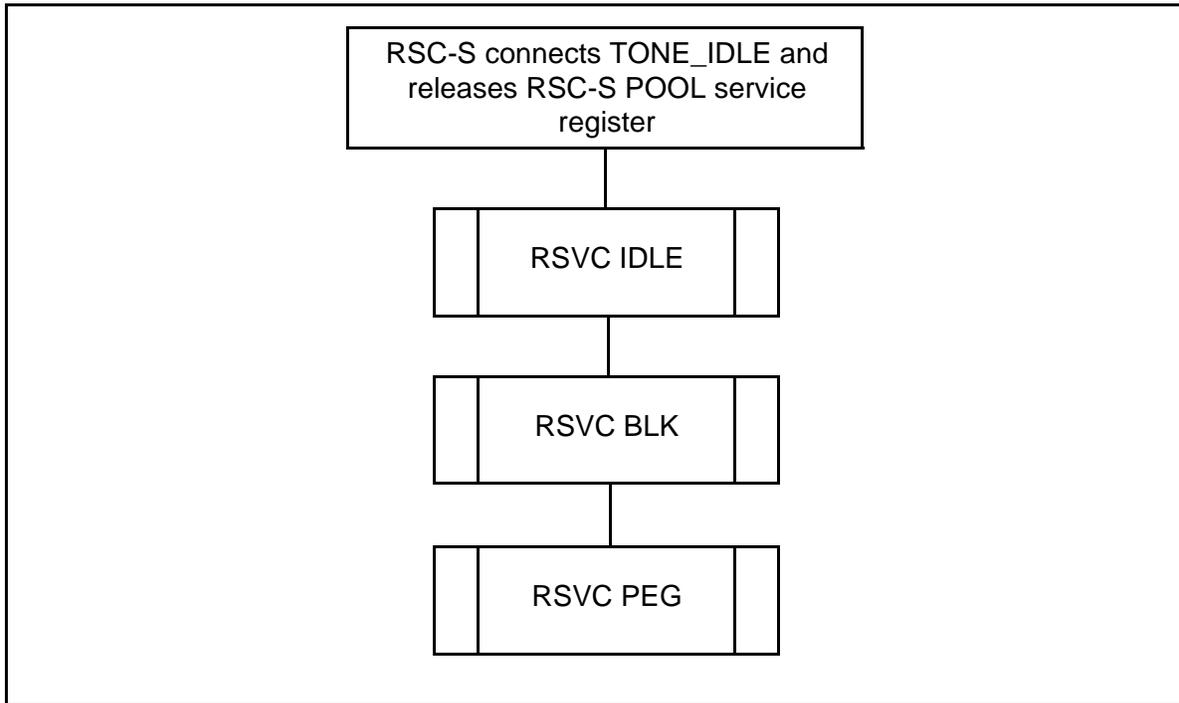


Figure 4-89: POOL measurement block (OPM019) flow chart - RSVCL IDLE, BLK, or PEG register

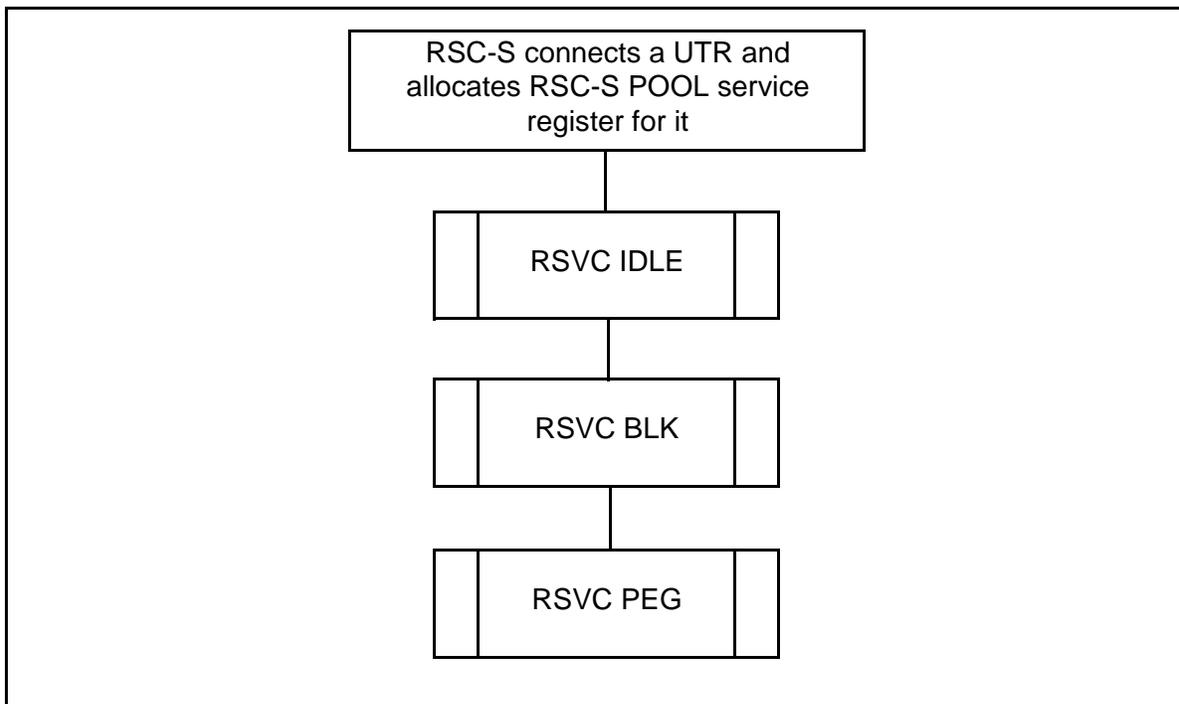


Figure 4-90: POOL measurement block (OPM019) flow chart - RSVC IDLE, BLK, or PEG register

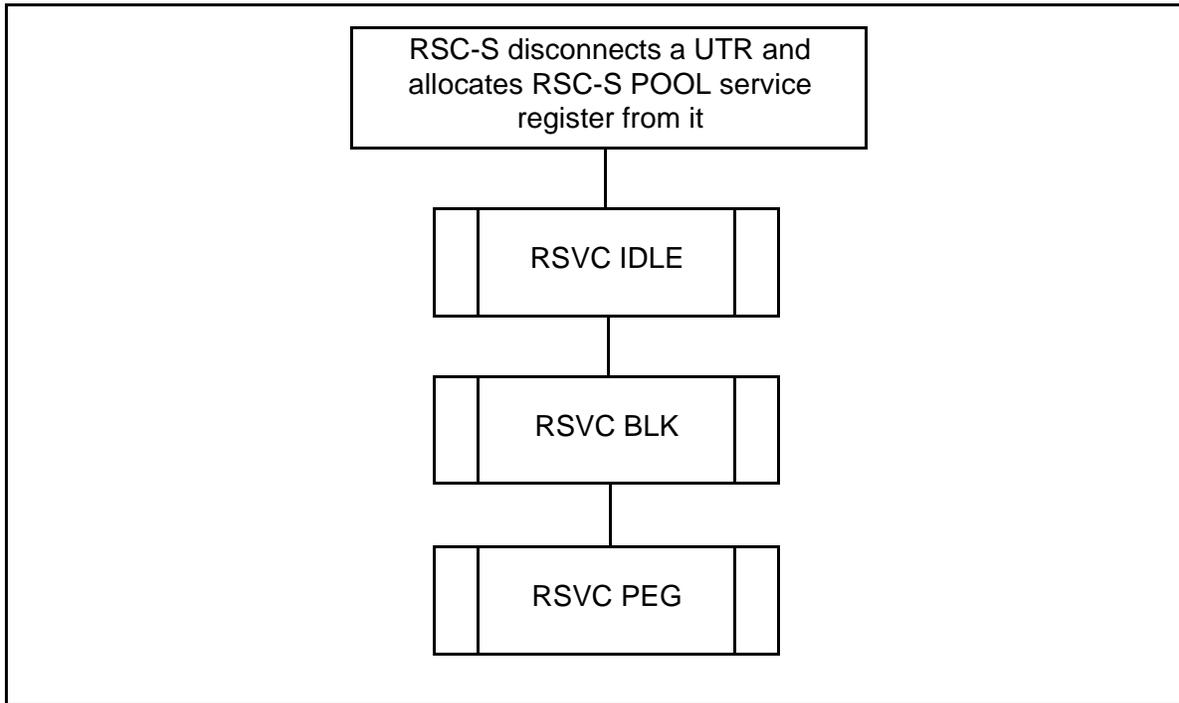


Figure 4-91: POOL measurement block (OPM019) flow chart - RSCS PEG register

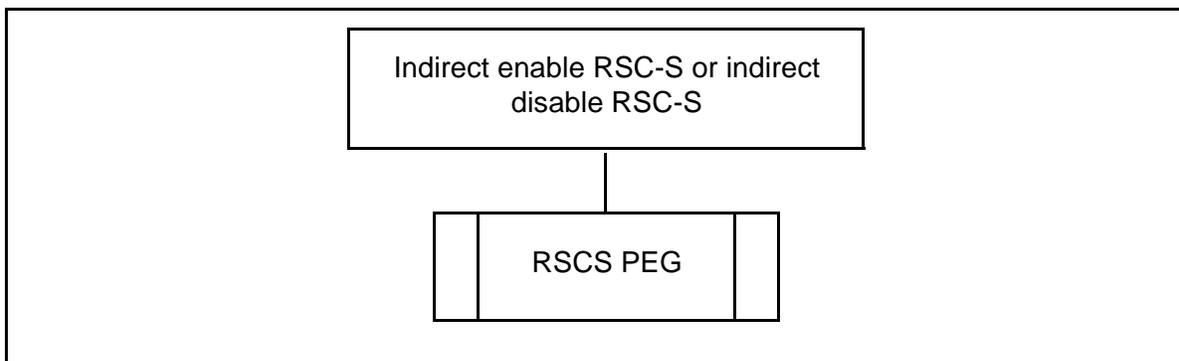


Figure 4-92: POOL measurement block (OPM019) flow chart - RSVC IDLE, BLK, or PEG register

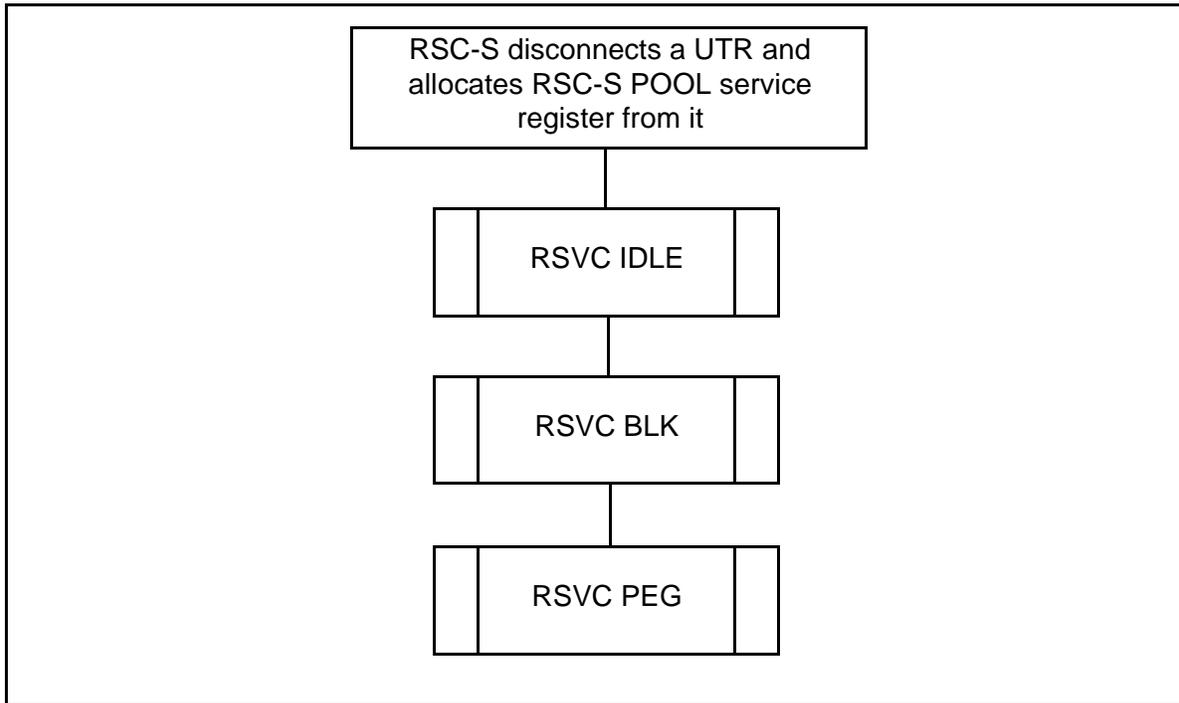


Figure 4-93: POOL measurement block (OPM019) flow chart - TRNS IDLE, BLK, or PEG register (equipment download)

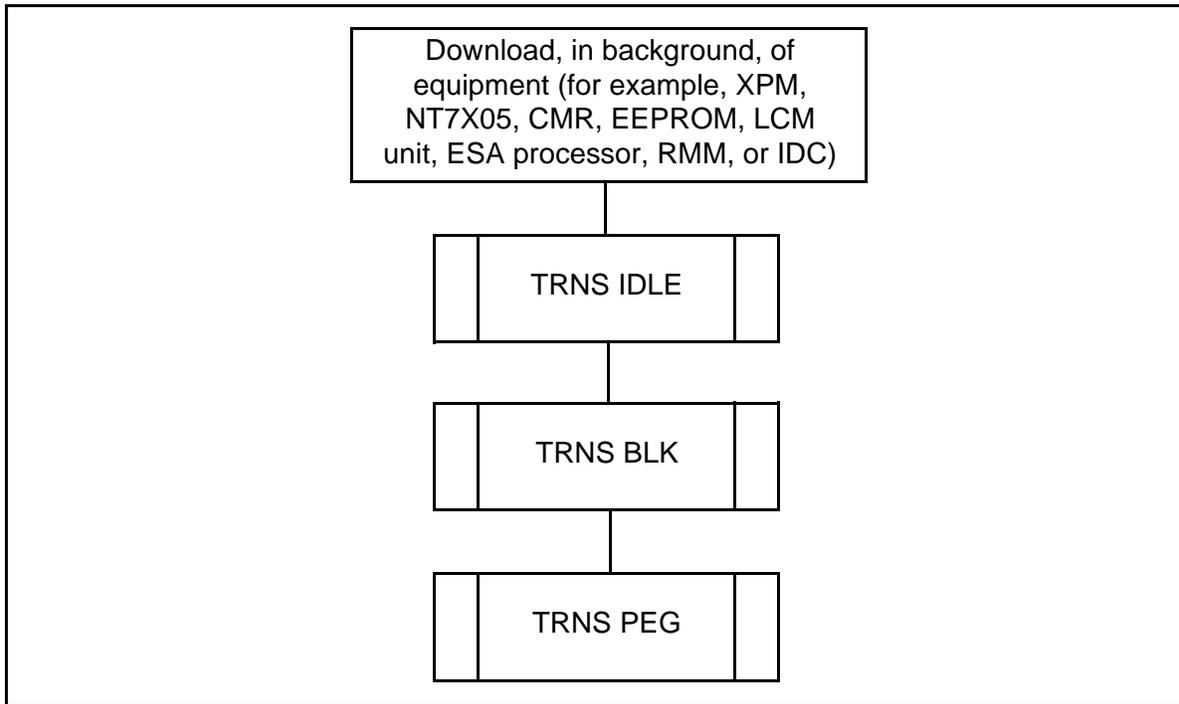


Figure 4-94: POOL measurement block (OPM019) flow chart - TRNS IDLE, BLK, or PEG register (update XPM)

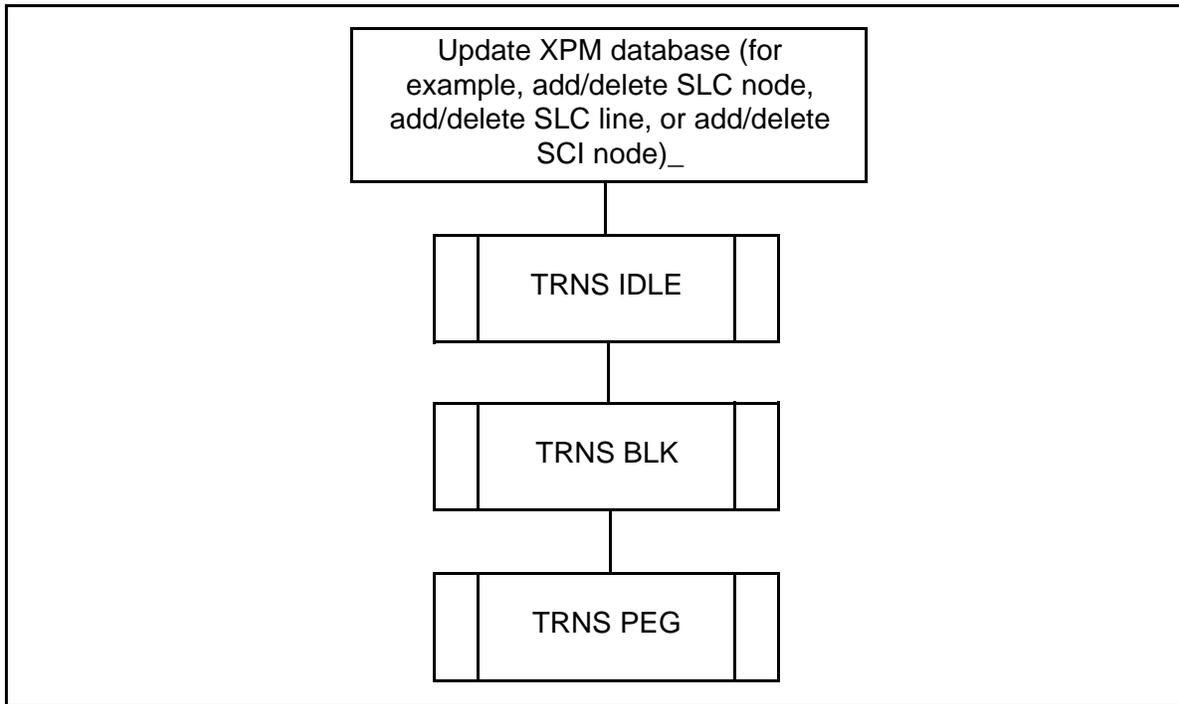


Figure 4-95: POOL measurement block (OPM019) flow chart - TRNS IDLE, BLK, or PEG register (update CPM)

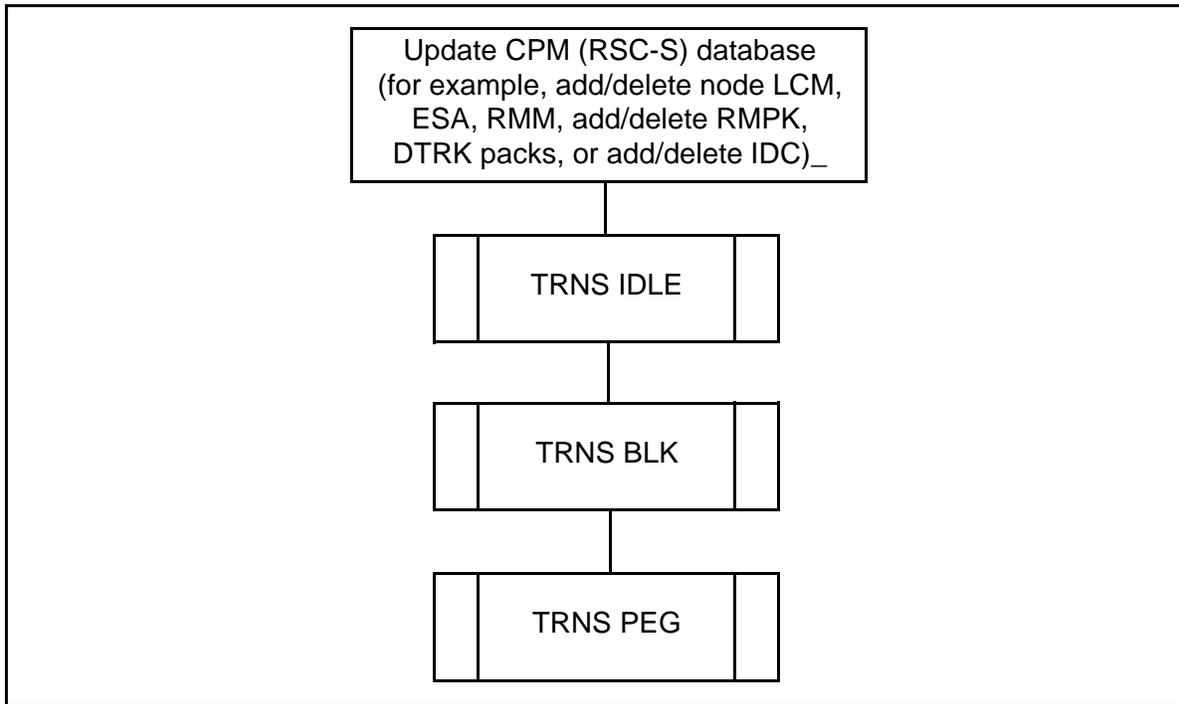


Figure 4-96: POOL measurement block (OPM019) flow chart - TRNS IDLE, BLK, or PEG register (ESMA database update)

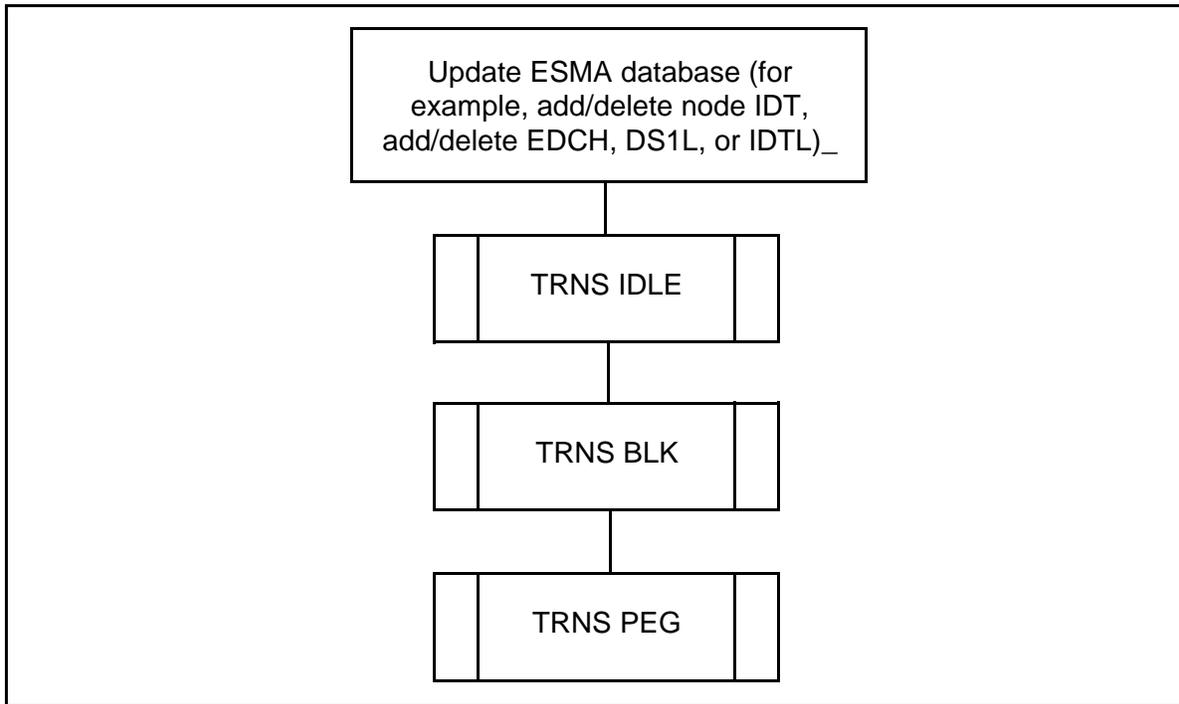
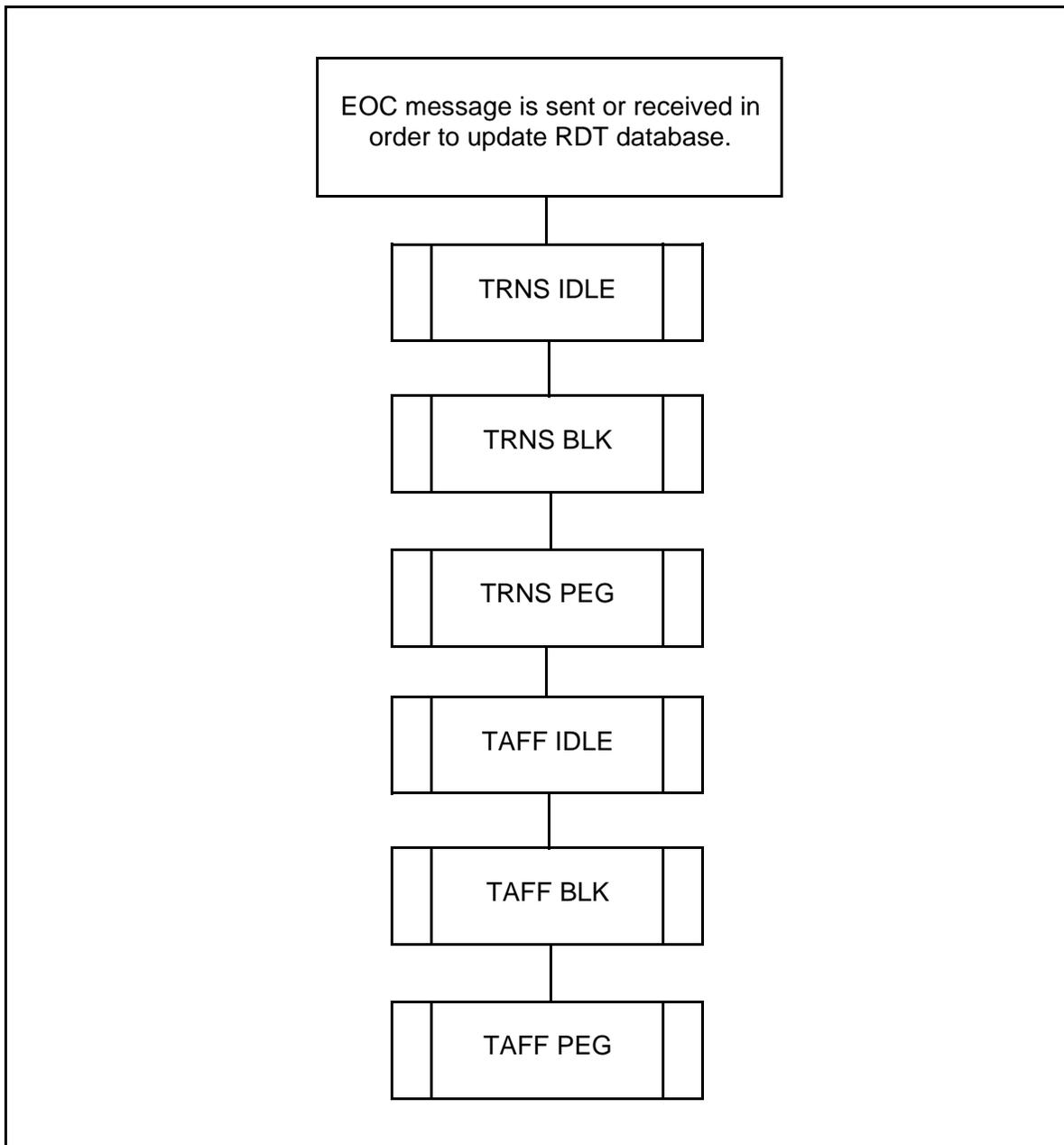


Figure 4-97: POOL measurement block (OPM019) flow chart - TRNS and TAFF IDLE, BLK, or PEG register



**CCS7 Level 2 (S7L2 measurement block - OPM020)**

The CCS7 Level 2 (S7L2) measurement block (Figure 4-98 and Table 4-S) provides information on the signaling links of a CCS7 network. Individual signaling link performance, availability, and use are measured. Each measurement block provides information on up to 38 links. The columns in the measurement block are identified by the link set number (LS#, where # is 1 through 38) and link number in the link set (L#, where # is 0 through 15). One S7L2 block is provided in each office.

**Figure 4-98: S7L2 measurement block (OPM020)**

OPM020	S7L2	CAPA	FRI	09/09/90	11:00:00	HRHR
	LS#/L#	LS#/L#				LS#/L#
	PEG	PEG				PEG
INSV	00000	00000	.	.	.	00000
ALIN	00000	00000	.	.	.	00000
SGER	00000	00000	.	.	.	00000
NACK	00000	00000	.	.	.	00000
LNAV	00000	00000	.	.	.	00000
LINH	00000	00000	.	.	.	00000
RINH	00000	00000	.	.	.	00000
LNKF	00000	00000	.	.	.	00000
POUT	00000	00000	.	.	.	00000
INH B	00000	00000	.	.	.	00000
UNIH	00000	00000	.	.	.	00000
OCTX	00000	00000	.	.	.	00000
REXM	00000	00000	.	.	.	00000
MSUX	00000	00000	.	.	.	00000
OCTR	00000	00000	.	.	.	00000
MSUR	00000	00000	.	.	.	00000
CNG1	00000	00000	.	.	.	00000
CNG2	00000	00000	.	.	.	00000
CNG3	00000	00000	.	.	.	00000
CGT1	00000	00000	.	.	.	00000
CGT2	00000	00000	.	.	.	00000
CGT3	00000	00000	.	.	.	00000
MSU1	00000	00000	.	.	.	00000
MSU2	00000	00000	.	.	.	00000
MSU3	00000	00000	.	.	.	00000
CGL1	00000	00000	.	.	.	00000
CGL2	00000	00000	.	.	.	00000
CGL3	00000	00000	.	.	.	00000

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-S: S7L2 measurement block (OPM020) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
INSV	In Service	PEG - a count, in 5-second increments per link, of the cumulative duration of the link being in the in-service state
ALIN	Alignment	PEG - a count, per link, of the number of times signaling link alignment or proving failure occurred.
SGER	Signaling Error	PEG - a count, per link, of the number of Signaling Units (SUs) received in error.
NACK	Negative Acknowledgement	PEG - a count, per link, of the number of negative acknowledgments received.
LNAV	Link Unavailability	PEG - a count, in seconds per link, of the cumulative duration of signaling link unavailability for any reason.
LINH	Local Inhibition	PEG - a count, in seconds per link, of the cumulative duration of signaling link inhibition because of local management actions.
RINH	Remote Inhibition	PEG - a count, in seconds per link, of the cumulative duration of signaling link inhibition because of remote management actions.
LNKF	Link Failure	PEG - a count, in seconds per link, of the cumulative duration of signaling link unavailability because of link failure.
POUT	Processor Outage	PEG - a count, in seconds per link, of the cumulative duration of signaling link unavailability because of remote processor outage.
INHB	Management Inhibit	PEG - a count, per link, of the number of management inhibits.
UNIH	Management Uninhibit	PEG - a count, per link, of the number of local management uninhibits.
OCTX	Octets Transmitted	PEG - a count, in 100 octets per link, of the number of SIF and SIO octets transmitted.
REXM	Octets Retransmitted	PEG - a count, in octets per link, of the number of octets retransmitted.
MSUX	Message Signaling Units (MSUs) Transmitted	PEG - a count, in MSUs per link, of the number of MSUs transmitted or retransmitted.
OCTR	Octets Received	PEG - a count, in 100 octets per link, of the number of SIF and SIO octets received.
MSUR	Message Signaling Units (MSUs) Received	PEG - a count, in MSUs per link, of the number of MSUs received.
CNG1	Congestion Indication, Threshold 1	PEG - a count, per link, of the number of signaling link congestion indications for threshold 1.

<b>Table 4-S: (Continued)</b>		
<b>S7L2 measurement block (OPM020) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CNG2	Congestion Indication, Threshold 2	PEG - a count, per link, of the number of signaling link congestion indications for threshold 2.
CNG3	Congestion Indication, Threshold 3	PEG - a count, per link, of the number of signaling link congestion indications for threshold 3.
CGT1	Congestion Time, Threshold 1	PEG - a count, in seconds per link, of the cumulative duration of signaling link congestions for threshold 1.
CGT2	Congestion Time, Threshold 2	PEG - a count, in seconds per link, of the cumulative duration of signaling link congestions for threshold 2.
CGT3	Congestion Time, Threshold 3	PEG - a count, in seconds per link, of the cumulative duration of signaling link congestions for threshold 3.
MSU1	Message Signaling Units (MSUs) Discarded, Threshold 1	PEG - a count, in MSUs per link, of the number of MSUs discarded because of signaling link congestion for threshold 1.
MSU2	Message Signaling Units (MSUs) Discarded, Threshold 2	PEG - a count, in MSUs per link, of the number of MSUs discarded because of signaling link congestion for threshold 2.
MSU3	Message Signaling Units (MSUs) Discarded, Threshold 3	PEG - a count, in MSUs per link, of the number of MSUs discarded because of signaling link congestion for threshold 3.
CGL1	Congestion Loss, Threshold 1	PEG - a count, per link, of the number of congestion indications that caused a loss of MSUs for threshold 1.
CGL2	Congestion Loss, Threshold 2	PEG - a count, per link, of the number of congestion indications that caused a loss of MSUs for threshold 2.
CGL3	Congestion Loss, Threshold 3	PEG - a count, per link, of the number of congestion indications that caused a loss of MSUs for threshold 3.

### CCS7 Level 3 (S7L3 measurement block - OPM021)

The CCS7 Level 3 (S7L3) measurement block provides availability information for signaling link sets and adjacent signaling points. Figure 4-99 and Table 4-100 show a sample report and descriptions of the block registers, respectively, for switches that do not have the STP feature. Figure 4-101 and Table 4-T show a sample report and descriptions of the block registers, respectively, for switches that also have the STP feature. Figure 4-102 is a flow chart showing the sequence of events that cause selected S7L3 registers for offices with the STP feature installed to be incremented and also showing the relationship between the registers within the block.

Registers in the five-digit format, information on up to six links is provided. The columns in the measurement block are identified by the link set number (LS#, where # is 1 through 38). One S7L3 block is provided in each office.

**Figure 4-99: S7L3 measurement block (OPM021)**

OPM021	S7L3	CAPA	FRI	10/13/95	11:00:00	HRHR
	LS#	LS#				LS#
	PEG	PEG				PEG
UNAV	00000	00000	.	.	.	00000
INAC	00000	00000	.	.	.	00000
TRPR	00000	00000	.	.	.	00000
TRAL	00000	00000	.	.	.	00000
MTX	00000	00000	.	.	.	00000
MRX	00000	00000	.	.	.	00000
OTX	00000	00000	.	.	.	00000
ORX	00000	00000	.	.	.	00000

*Note:* The report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

**Figure 4-100:**  
**S7L3 measurement block (OPM021) registers for switches without STP**

Mnemonic	Explanation
UNAV	duration, in seconds, of signaling linkset unavailability
INAC	duration, in seconds, of adjacent signaling point inaccessibility
TRPR	number of times a transfer prohibited or transfer cluster prohibited message was transmitted due to a link set failure (events/link set). The TRPR field is always zero-filled when this measurement block is printed at an SSP.
TRAL	number of times a transfer allowed and transfer cluster allowed message was transmitted due to a link set recovery (events/link set). The TRAL field is always zero-filled when this measurement block is printed at an SSP.
MTX	number of MSUs transmitted
MRX	number of MSUs received
OTX	number of octets transmitted (in 100 octets)
ORX	number of octets received (in 100 octets)

**Figure 4-101: S7L3 measurement block (OPM021) for switches with STP**

OPM021	S7L3	CAPA	FRI	10/13/95	11:00:00	HRHR
	LS#/L#	LS#/L#				LS#/L#
	PEG	PEG				PEG
UNAV	00000	00000	.	.	.	00000
INAC	00000	00000	.	.	.	00000
TRPR	00000	00000	.	.	.	00000
TRAL	00000	00000	.	.	.	00000
MTX	00000	00000	.	.	.	00000
MRX	00000	00000	.	.	.	00000
OTX	00000	00000	.	.	.	00000
ORX	00000	00000	.	.	.	00000
TPTX	00000	00000	.	.	.	00000
TPRX	00000	00000	.	.	.	00000
TRTX	00000	00000	.	.	.	00000
TRRX	00000	00000	.	.	.	00000
TATX	00000	00000	.	.	.	00000
TARX	00000	00000	.	.	.	00000
RSTX	00000	00000	.	.	.	00000
RSRX	00000	00000	.	.	.	00000
RCTX	00000	00000	.	.	.	00000
RCRX	00000	00000	.	.	.	00000
TCTX	00000	00000	.	.	.	00000
TCRX	00000	00000	.	.	.	00000
TMRX	00000	00000	.	.	.	00000

<b>Table 4-T: S7L3 measurement block (OPM021) registers for generics with STP</b>	
<b>Mnemonic</b>	<b>Explanation</b>
UNAV	duration, in seconds, of signaling linkset unavailability
INAC	duration, in seconds, of adjacent signaling point inaccessibility
TRPR	number of times a transfer prohibited or transfer cluster prohibited message was transmitted due to a link set failure (events/link set). The TRPR field is always zero-filled when this measurement block is printed at an SSP.
TRAL	number of times a transfer allowed and transfer cluster allowed message was transmitted due to a link set recovery (events/link set). The TRAL field is always zero-filled when this measurement block is printed at an SSP.
MTX	number of MSUs transmitted
MRX	number of MSUs received
OTX	number of octets transmitted (in 100 octets)
ORX	number of octets received (in 100 octets)
TPTX	number of transfer prohibited and transfer cluster prohibited messages transmitted
TPRX	number of transfer prohibited and transfer cluster prohibited messages received
TRTX	number of transfer restricted and transfer cluster restricted messages transmitted
TRRX	number of transfer restricted and transfer cluster restricted messages received
TATX	number of transfer allowed and transfer cluster allowed messages transmitted
TARX	number of transfer allowed and transfer cluster allowed messages received
RSTX	number of signaling route set test messages transmitted
RSRX	number of signaling route set test messages received
RCTX	number of signaling route set congestion test messages transmitted
RCRX	number of signaling route set congestion test messages received
TCTX	number of transfer control messages transmitted
TCRX	number of transfer control messages received
TMRX	number of signaling link test messages received

Figure 4-102: S7L3 measurement block (OPM021) flow chart for switches with STP

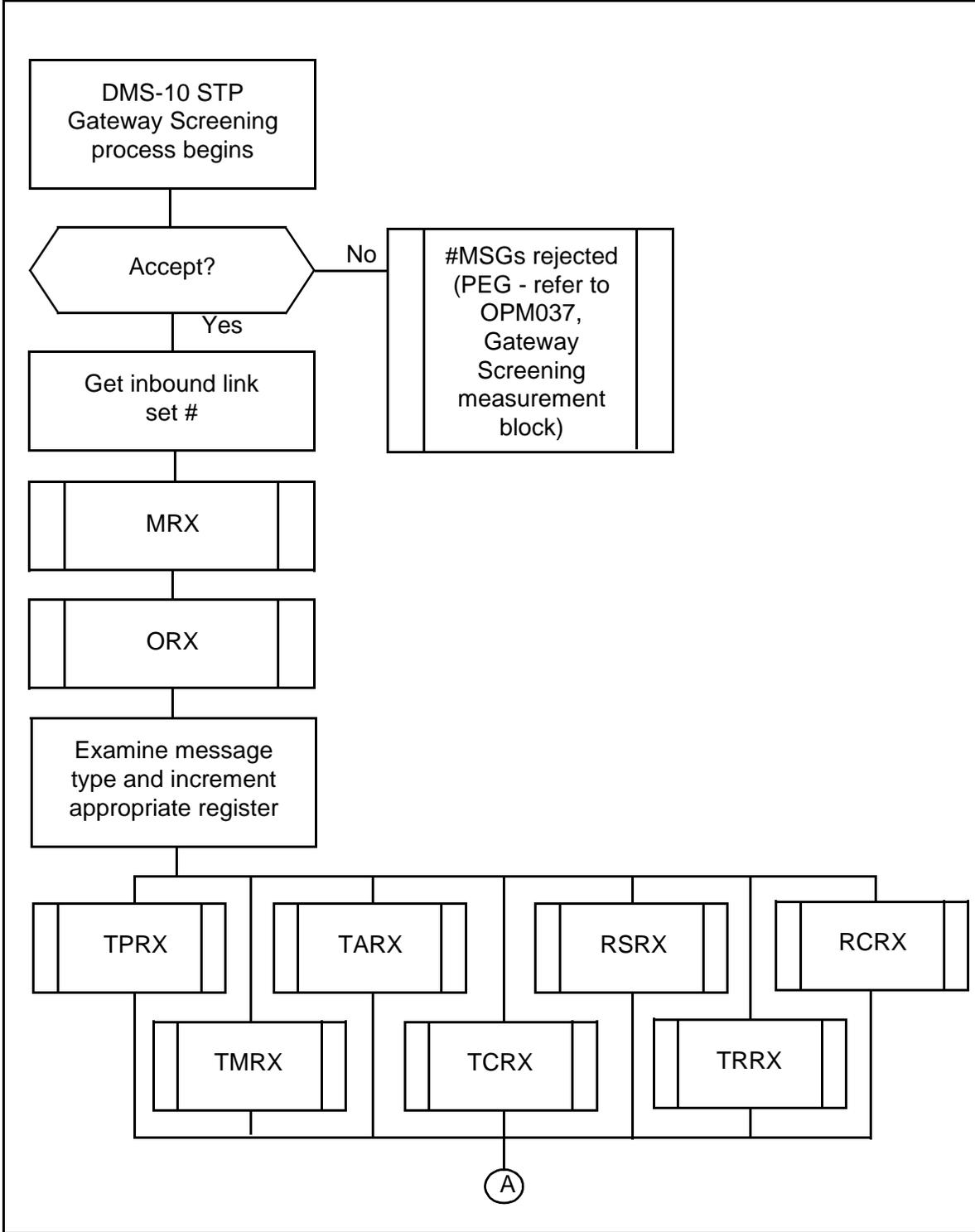


Figure 4-103: S7L3 measurement block (OPM021) flow chart for switches with STP - Continued

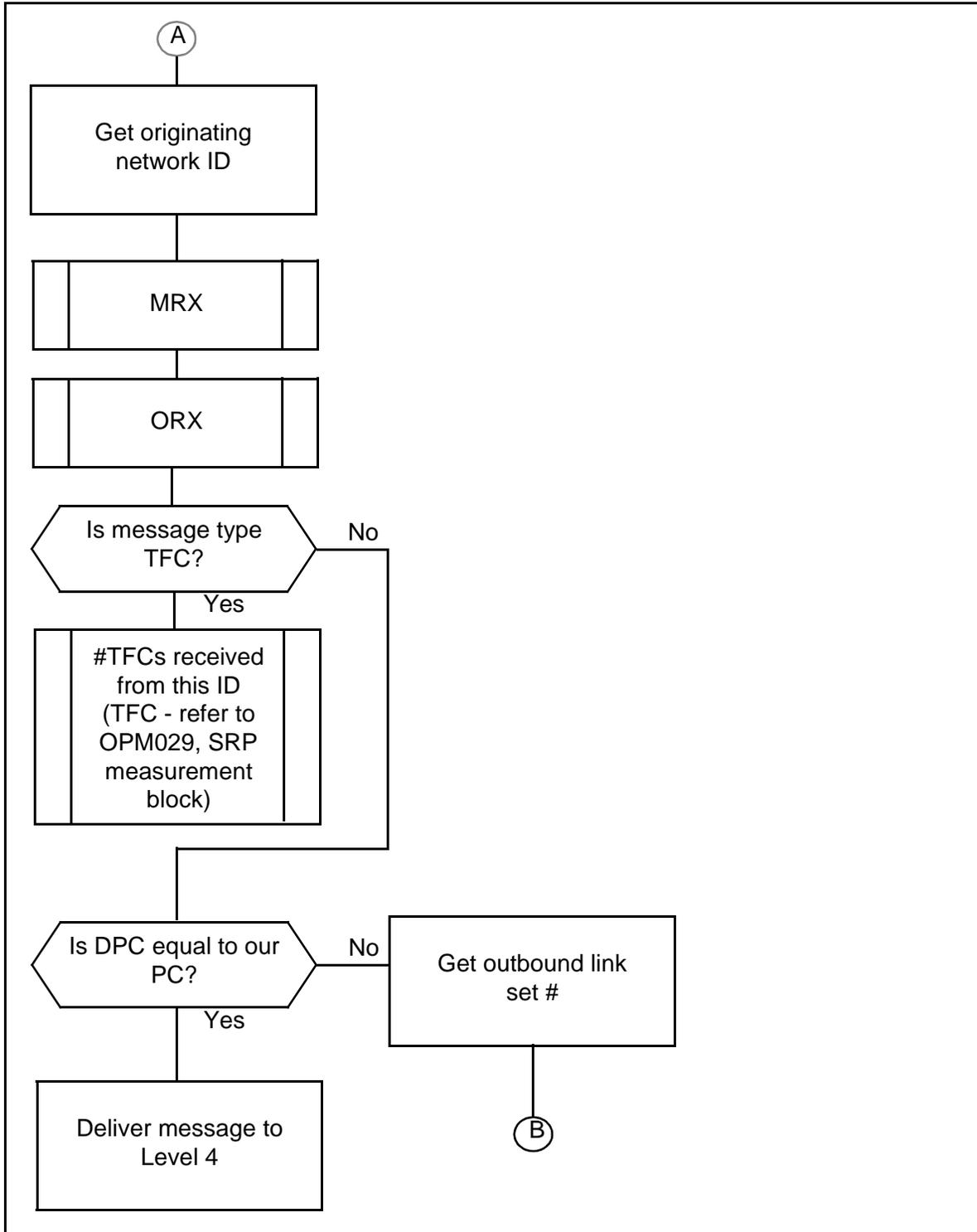
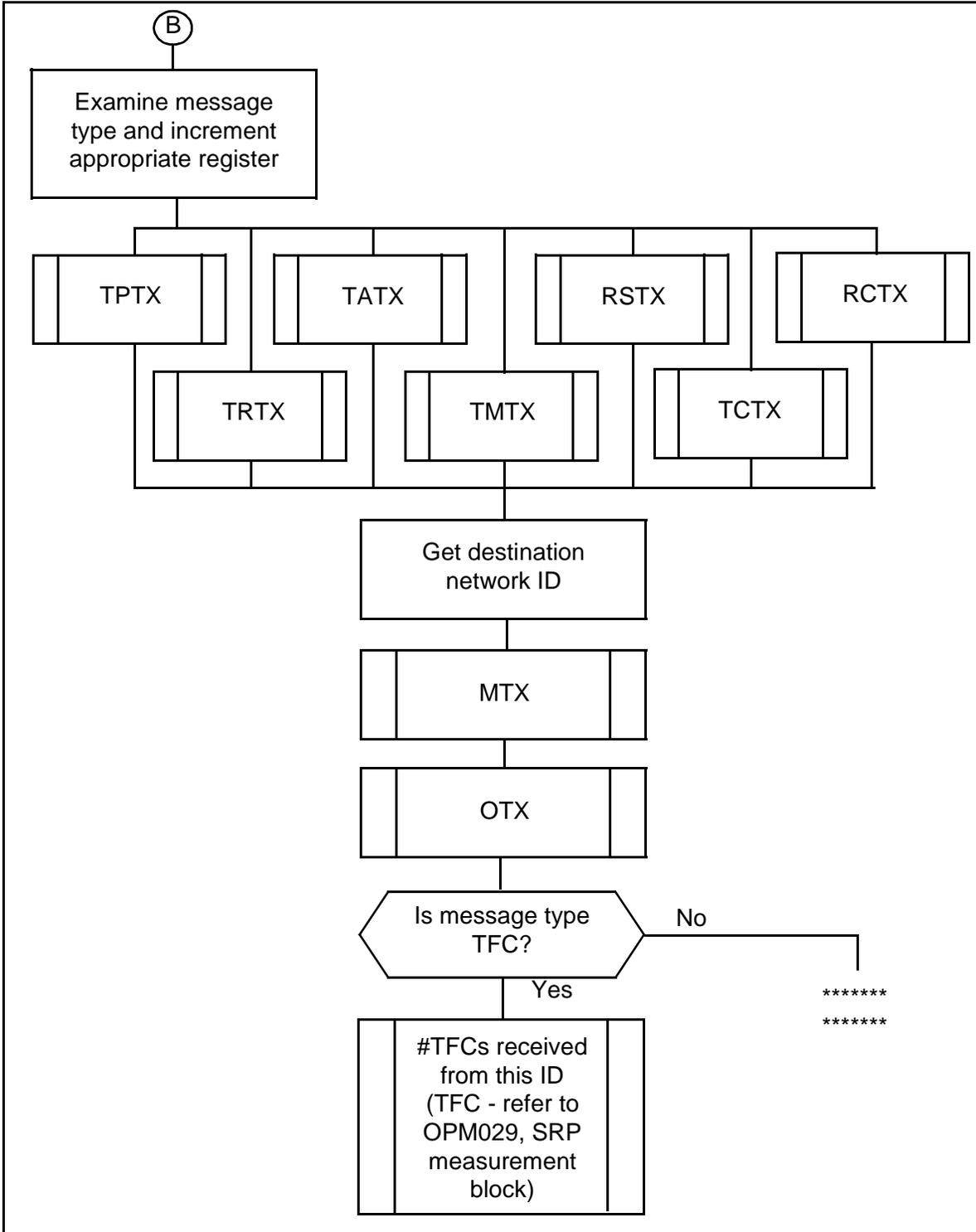


Figure 4-104: S7L3 measurement block (OPM021) flow chart for switches with STP - Continued



## CCS7 Signaling Route Set (SNRS measurement block - OPM022)

The CCS7 Signaling Route Set (SNRS) measurement block (Figure 4-105 and Table 4-U) indicates the number of Message Signaling Units discarded due to unavailability of the route set. These counts only apply to member routing.

**Figure 4-105: SNRS measurement block (OPM022)**

OPM022	SNRS	CAPZ	THU	08/12/90	13:30:00	HRHR
	DPC		PEG			
	<i>nnncccmmm</i>		00000			
	<i>nnncccmmm</i>		00000			
	.		.			
	.		.			
	.		.			
	<i>nnncccmmm</i>		00000			

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

Table 4-U: SNRS measurement block (OPM022) registers		
Mnemonic	Explanation	Description
DPC	Destination point code	Code identifying the signaling point attached to the identified route set. The code is of the form: <i>nnn ccc mmm</i> , where <i>nnn</i> is the network number, <i>ccc</i> is the cluster number, and <i>mmm</i> is the member number.  PEG - number of Message Signaling Units discarded due to route set unavailability.

## Signaling Connection Control Part (SCCP measurement block - OPM023)

The Signaling Connection Control Part (SCCP) measurement block (Figure 4-106 and Table 4-V) indicates SCCP performance and utilization. The SCCP exchanges information between the User Part and the Message Transfer Part of CCS7 architecture.

**Figure 4-106: SCCP measurement block (OPM023)**

OPM023	SCCP	CAPZ	THU	08/25/90	13:30:00	HRHF
		PEG				
	DPUN	00000				
	SSUN	00000				
	NWCG	00000				
	SSCG	00000				
	UNEQ	00000				
	SYER	00000				
	MSG5	00000				
	MSGR	00000				
	SNT0	00000				
	REC0	00000				
	UDSR	00000				
	UDSX	00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-V: SCCP measurement block (OPM023) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
DPUN	Network Failure	PEG - a count of routing failure occurrences due to unavailability of Destination Point Codes (DPC)
SSUN	Subsystem Unavailable	PEG - a count of routing failure occurrences due to subsystem unavailability
NWCG	Network Congestion	PEG - a count of routing failure occurrences due to network congestion
SSCG	Subsystem Congestion	PEG - a count of UDT (Unit Data Service) message routing failure occurrences due to subsystem congestion at the destination
UNEQ	Unequipped User	PEG - a count of routing failure occurrences due to an unequipped user
SYER	Syntax Error	PEG - a count of message receptions with syntax errors
MSGs	Messages Sent	PEG - a count of the total number of messages sent by the SCCP
MSGR	Messages Received	PEG - a count of the total number of messages received by the SCCP
SNT0	Messages Sent - Class 0	PEG - a count of Class 0 messages sent (for connectionless only)
REC0	Messages Received - Class 0	PEG - a count of class 0 messages received (for connectionless only)
UDSR	Unit Data Service Messages Received	PEG - a count of UDT (Unit Data Service) messages received
UDSX	Unit Data Service Messages Sent	PEG - a count of UDT (Unit Data Service) messages sent

## Transaction Capability Application Part (TCAP measurement block - OPM024)

The Transaction Capability Application Part (TCAP) measurement block (Figure 4-107 and Table 4-W) indicates utilization and performance characteristics of TCAP signaling between applications and network nodes.

**Figure 4-107: TCAP measurement block (OPM024)**

OPM024	TCAP	CAPZ	THU	08/25/90	13:30:00	HRHF
		PEG				
	MSNT	00000				
	MREC	00000				
	CSNT	00000				
	CREC	00000				
	PKGT	00000				
	INCT	00000				
	BADT	00000				
	TRID	00000				
	COMP	00000				
	INCC	00000				
	BADC	00000				
	NVID	00000				
	REID	00000				

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-W: TCAP measurement block (OPM024) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
MSNT	Messages Sent	PEG - a count of the total number of TCAP messages sent by the node
MREC	Messages Received	PEG - a count of the total number of TCAP messages received by the node
CSNT	Components Sent	PEG - a count of the total number of components sent by the node
CREC	Components Received	PEG - a count of the total number of components received by the node
PKGT	Package Type	PEG - a count of unrecognized package type protocol errors in the transaction portion of TCAP
INCT	Incorrect Transaction	PEG - a count of incorrect transaction protocol errors in the transaction portion of TCAP
BADT	Badly Structured Transaction	PEG - a count of badly structured transaction protocol errors in the transaction portion of TCAP
TRID	Transaction Identification	PEG - a count of unrecognized transaction ID protocol errors in the transaction portion of TCAP
COMP	Unrecognized Component	PEG - a count of unrecognized component protocol errors in the component portion of TCAP
INCC	Incorrect Component	PEG - a count of incorrect component protocol errors in the component portion of TCAP
BADC	Badly Structured Component	PEG - a count of badly structured component protocol errors in the component portion of TCAP
NVID	Invoke Problem	PEG - a count of unrecognized correlation ID protocol error invoke problems in the component portion of TCAP
REID	Return Error Problem	PEG - a count of unrecognized correlation ID return error problem protocol errors in the component portion of TCAP

### Enhanced 800 Services (E800 measurement block - OPM025)

The Enhanced E800 Services (E800) measurement block (Figure 4-108 and Table 4-X) provides information on database query failures, call abandons and other call processing counts, and network management counts.

**Figure 4-108: E800 measurement block (OPM025)**

OPM025	E800	CAPZ	THU	08/25/90	13:30:00	HRHF
						PEG
NSCO	00000					
NEON	00000					
CTBQ	00000					
CTAQ	00000					
TMOT	00000					
CABO	00000					
CAAO	00000					
BADM	00000					
NMBL	00000					
BCVC	00000					
BCOC	00000					
BCMC	00000					
BCSC	00000					
OSIX	00000					
OTEN	00000					
ONPA	00000					
OOVL	00000					
OMCL	00000					
OSMS	00000					
CMFL	00000					
SSSF	00000					
ANNC	00000					
INVL	00000					

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-X: E800 measurement block (OPM025) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
NSCO	Number Service Call Originations	PEG - a count of Number Service Call Originations from co-located stations that have reached the dialing complete stage
NEON	Number Service calls from subtending end offices	PEG - a count of Number Service calls from subtended end offices that have reached the dialing complete stage
CTBQ	Call Terminations Before Query	PEG - a count of all call terminations before the database query request

<b>Table 4-X: (Continued) E800 measurement block (OPM025) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CTAQ	Call Terminations After Query	PEG - a count of all call terminations after the database query request, but before the query response
TMOT	Timeout At the SSP	PEG - a count of all occurrences of a timeout at the Service Switching Point (SSP)
CABO	Call Abandon Before Outpulsing	PEG - a count of the times a call was abandoned after the query response but before outpulsing digits
CAAO	Call Abandon After Outpulsing	PEG - a count of the times a call was abandoned after outpulsing digits but before the call was answered
BADM	Invalid Command Message	PEG - a count of all occurrences of undecipherable, incomplete, or bad data or an out-of-sequence message
NMBL	Network Management Blocked Calls	PEG - a count of all Number Service calls (NSC) blocked by NM (Network Management)
BCVC	Blocked VCCO Calls	PEG - a count of all the NM blocked calls for excessive VCCO calls or nonpurchased HNPAs
BCOC	Blocked Overload Control	PEG - a count of the times an NSC was blocked by SCP overload controls
BCMC	Blocked Mass Calling	PEG - a count of the NSCs blocked for mass calling
BCSC	Blocked SMS Controls	PEG - a count of the NSCs blocked by SMS-initiated controls
OSIX	Block List Overflow	PEG - a count of the block list overflow of 6- digit vacant code
OTEN	Block List Overflow	PEG - a count of the block list overflow of 10 digit vacant code
ONPA	Block List Overflow	PEG - a count of the block list overflow of nonpurchased HNPA
OOVL	Block List Overflow	PEG - a count of the block list overflow of SCP overload
OMCL	Block List Overflow	PEG - a count of the block list overflow of mass calling
OSMS	Block List Overflow	PEG - a count of the block list overflow caused by SMS control
CMFL	ANI failure on a CAMA trunk	PEG - a count of the number of times the ANI function on an incoming CAMA trunk failed; if the ANI failure occurs on a multi-party line, this peg is not incremented.
SSSF	Second stage signaling failure on an Equal Access End Office trunk	PEG - a count of the number of times the second stage signaling was either missing or incomplete.
ANNC	Call announcement at the SCP	PEG - a count of the calls routed to announcement by the SCP due to out-of-band, unallocated number (VCCO), disconnected number, overflow, busy, or no circuit available condition.
INVL	Invalid/inactive carrier code from SCP	PEG - a count of the calls routed to invalid or inactive carrier codes received from the SCP.

### Emergency Stand-Alone (ESA measurement block - OPM026)

The Emergency Stand-Alone (ESA) measurement block (Figure 4-109 and Table 4-Y) provides call processing information for each Remote Switching Center (RSC-S), Outside Plant Module (OPM), Outside Plant Access Cabinet (OPAC), Remote Line Concentrating Module (RLCM), Remote Subscriber Line Equipment (RSLE), and Remote Subscriber Line Module (RSLM) shelf which is configured with the ESA option. These measurements are sent to the DMS-10 switch upon exit from ESA and will be placed in the holding register during the next UPDT period. Data will be collected individually for each site.

**Figure 4-109: ESA measurement block (OPM026)**

OPM026	ESA	CAPZ	THU	11/12/90	13:30:00	HRHR
site	LCE/RSE	b (s)	PEG	BLK		
ORIG			00000	00000		
TERM			00000	00000		
ORTM			00000			
LSMB			00000			
COIF			00000			
RGPT			00000			
RGB			00000			
RGCF			00000			
RGTR			00000			
XLAT			00000			
PRFX			00000			
TORG			00000	00000		
TTRM			00000	00000		
TORT			00000			
TSMB			00000			
TXL			00000			

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-Y: ESA measurement block (OPM026) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
ORIG	Origination	PEG - a count of all successful origination attempts (dial tone received). BLK - a count of all origination attempts that are unsuccessful because of unavailable resources.
TERM	Termination	PEG - a count of all termination attempts for intraswitched calls. BLK - a count of all termination attempts for intraswitched call that are blocked because of a lack of resources.
ORTM	Origination-Termination	PEG - a count of all successful termination attempts for intraswitched calls.
LSMB	Line System-Made-Busy	PEG - a count of intraswitched calls whose terminations went System-Made-Busy (SMB) while processing the call (usually because of ring faults).
COIF	Coin Fault	PEG - a count of all coin faults or failures.
RGPT	Ring Pretrip	PEG - a count of ringing fault messages in the talking state.
RGB	Ring Block	PEG - a count of ring blockages in the ringing state.
RGCF	Ringing Continuity Failure	PEG - a count of continuity test failures while in the ringing state.
RGTR	Ringing Test Register Failure	PEG - a count of test register failures while in the ringing state.
XLAT	Translation Error	PEG - a count of translation errors of the dialed number.
PRFX	Prefix Usage	(Valid only for OPM, OPAC, and RLCM sites) PEG - a count of the number of times ESA prefixes, including E911, were dialed.
TORG	Trunk Origination	PEG - a count of successful trunk origination attempts. BLK - a count of all trunk origination attempts that are unsuccessful because of unavailable resources.
TTRM	Trunk Termination (Applies only to RSC-S)	PEG - a count of all termination attempts to RSC-S trunks. BLK - a count of all trunk termination attempts that are unsuccessful because of unavailable resources.
TORT	Trunk Origination-Termination (Applies only to RSC-S)	PEG - a count of all successful trunk termination attempts for intraswitched calls.
TSMB	Trunk System Made-Busy (Applies only to RSC-S)	PEG - a count of trunk intraswitched calls whose terminations went system-made-busy (SMB) during call processing.
TXL	Trunk Translation Error (Applies only to RSC-S)	PEG - a count of translation errors associated with the dialed number that was received on the trunk.

### Intraswitching (INTR measurement block - OPM027)

The Intraswitching (INTR) measurement block (Figure 4-110 and Table 4-Z) provides information on both interswitched call processing and intraswitched call processing for RSC-S, OPM, OPAC, RLCM, RSLE, RSLM, and Star Hub offices, if the DMS-10 switch is equipped with the Intraswitching feature. Data will be collected individually for each site.

**Figure 4-110: INTR measurement block (OPM027)**

OPM027/21INTR CAPZ THU 11/12/90 13:30:00 HRHR					
<i>site</i>	LCE/RSE/HUBE	<i>b s</i>	PEG	BLK	USE
TOTC			00000	00000	00000
INTE			00000	00000	00000
IAU0			00000	00000	00000
IAU1			00000	00000	00000
XFER			00000	00000	

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-Z: INTR measurement block (OPM027) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
TOTC	Total Calls	PEG - a count of all intraswitching line-to-line call attempts (the sum of INTE, IAU0, and IAU1 PEGs). BLK - a count of intraswitching origination attempts that are unsuccessful because of a lack of resources (a sum of INTE, IAU0, and IAU1 BLKs). USE - a count in hundred call seconds (ccs) of all intraswitching channels that are traffic busy (a sum of INTE, IAU0, and IAU1 USEs).
INTE	Interunit Calls	PEG - a count of all interunit call attempts. BLK - a count of interunit origination attempts that are unsuccessful because of a lack of resources. USE - a count in hundred call seconds (ccs) of all interunit channels that are traffic busy.
IAU0	Intraunit-0 Calls <i>Note:</i> Does not apply to the Remote Switching Center (RSC-S).	PEG - a count of all Intraunit-0 call attempts. BLK - a count of Intraunit-0 origination attempts that are unsuccessful because of a lack of resources. USE - a count in hundred call seconds (ccs) of all Intraunit-0 channels that are traffic busy.
IAU1	Intraunit-1 Calls <i>Note:</i> Does not apply to the Remote Switching Center (RSC-S).	PEG - a count of all Intraunit-1 call attempts. BLK - a count of Intraunit-1 origination attempts that are unsuccessful because of a lack of resources. USE - a count in hundred call seconds (ccs) of all Intraunit-1 channels that are traffic busy.
XFER	Transferred Calls	PEG - a count of attempts to transfer an intraswitched call to the DMS-10 switch. BLK - a count of intraswitched call transfers that are blocked because of a lack of resources in the DMS-10 switch.

## Simplified Message Desk Interface (SMDI measurement block - OPM028)

The Simplified Message Desk Interface (SMDI) measurement block (Figure 4-111 and Table 4-AA) provides information about Voice Message System (VMS) access. Figures 4-112 through 4-116 are flow charts showing the sequence of events that cause selected SMDI registers to be incremented and also showing the relationship between the registers within the block.

**Figure 4-111: SMDI measurement block (OPM028)**

OPM028	SMDI	CAPZ	FRI	11/12/99	13:30:00	QTR
			PEG	BLK	DIS	
LOGU	nnsite		CE/IE	b s p pt	(SMDI nn)	
INPU			00000		00000	
OUT			00000	00000		
MACT			00000	00000		
MDAC			00000	00000		
MERR			00000	00000		

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

Table 4-AA: SMDI measurement block (OPM028) registers		
Mnemonic	Explanation	Description
INPU	Input Count	PEG - a count of all successful message transfers from the VMS to the DMS-10 switch. BLK - NA DIS - a count of messages discarded due to transmission errors
OUT	Output Count	PEG - a count of all successful message transfers from the DMS-10 switch to the VMS. BLK - a count of messages from the DMS-10 switch to the VMS that were blocked due to lack of space in the output buffer DIS - NA
MACT	Activation Count	PEG - a count of successful MDSS activation messages received by the DMS-10 switch from the VMS. BLK - a count of unsuccessful MDSS activation messages received by the DMS-10 switch from the VMS. DIS - NA
MDAC	Deactivation Count	PEG - a count of successful MDSS deactivation messages received by the DMS-10 switch from the VMS.

Table 4-AA: (Continued) SMDI measurement block (OPM028) registers		
Mnemonic	Explanation	Description
		BLK - a count of unsuccessful MDSS deactivation messages received by the DMS-10 switch from the VMS. DIS - NA
MERR	Output Error Count	PEG - a count of successful MDSS message transfers from the DMS-10 switch to the VMS. BLK - a count of MDSS messages from the DMS-10 switch to the VMS that were blocked due to lack of space in the output buffer. DIS - NA

Figure 4-112: SMDI measurement block (OPM028) flow chart - Effect of MWI activation attempt on Activation (MACT) and Deactivation (MDAC) registers

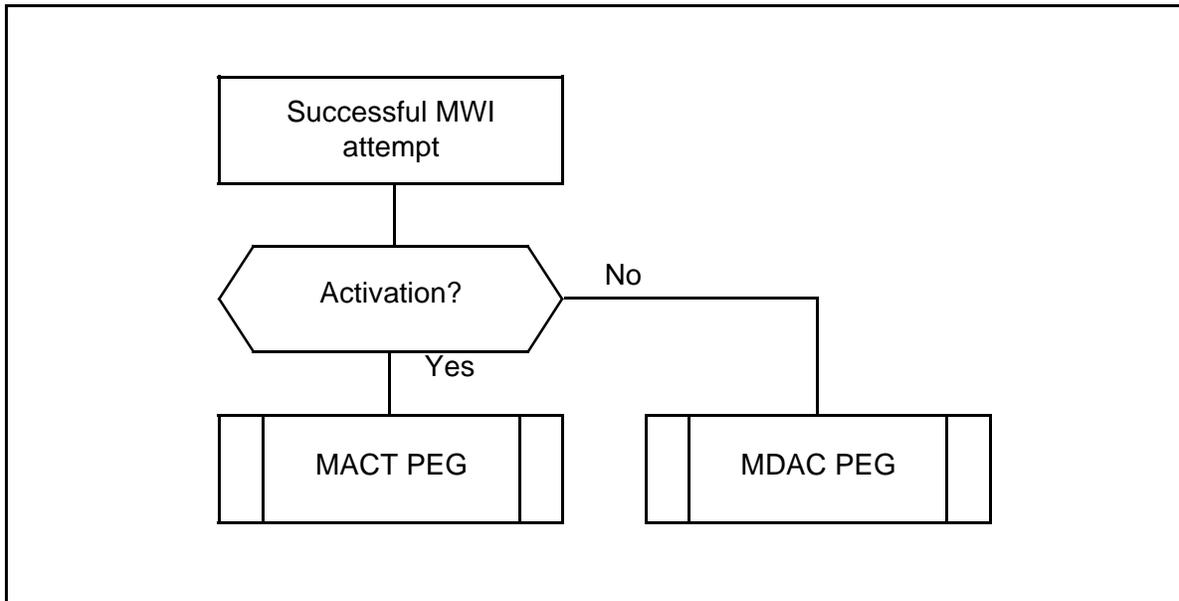


Figure 4-113: SMDI measurement block (OPM028) flow chart - Effect of notification unavailable to destination DN on Activation (MACT) and Deactivation (MDAC) registers

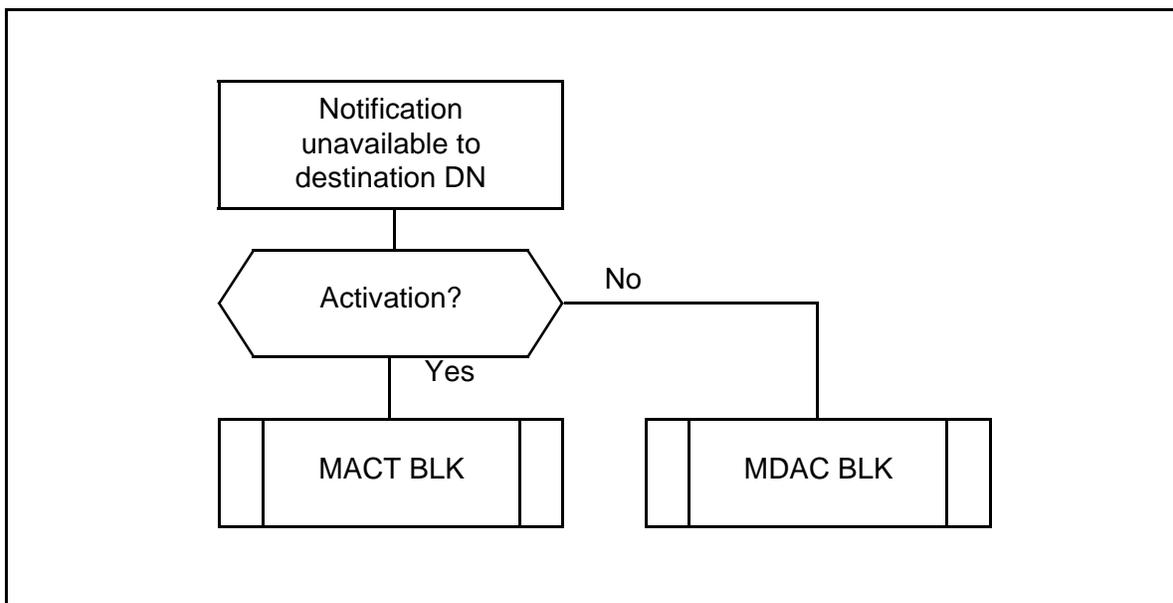
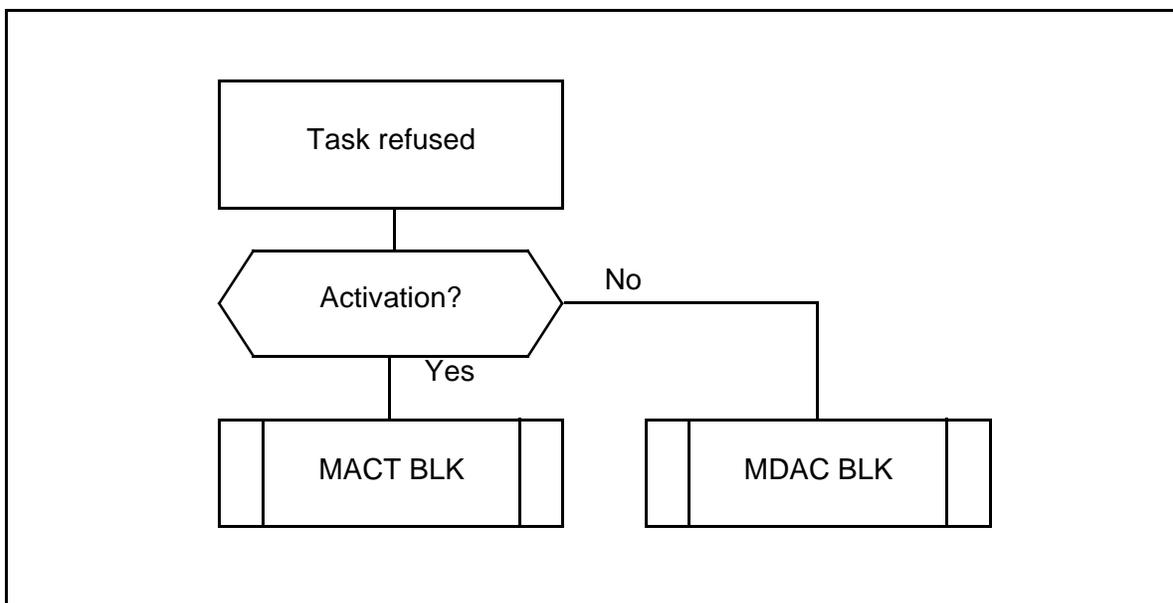
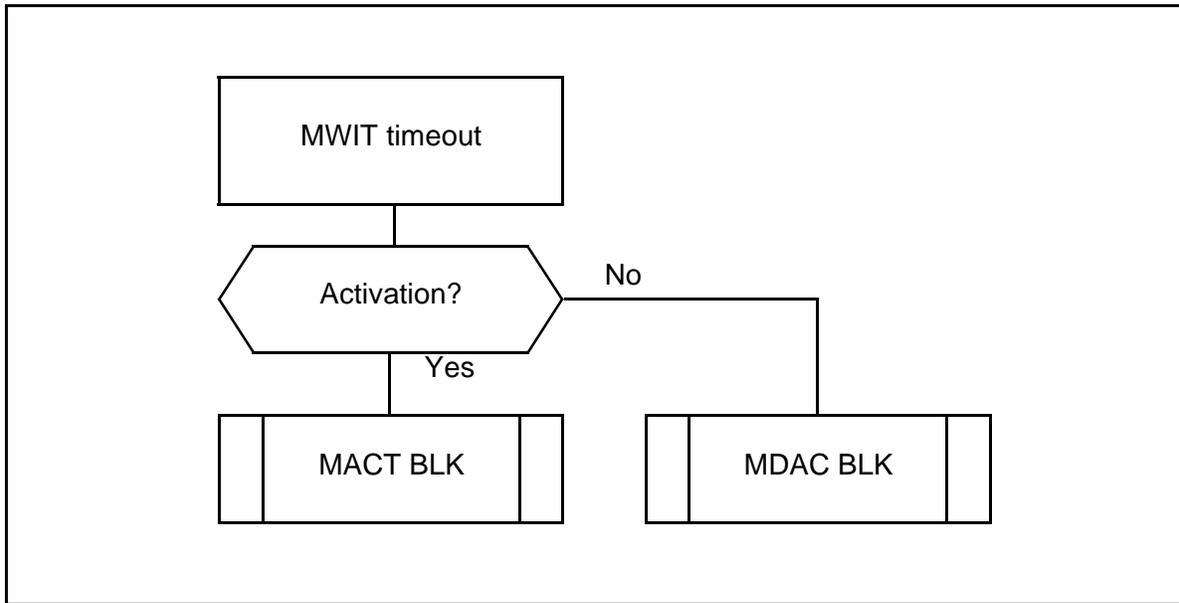


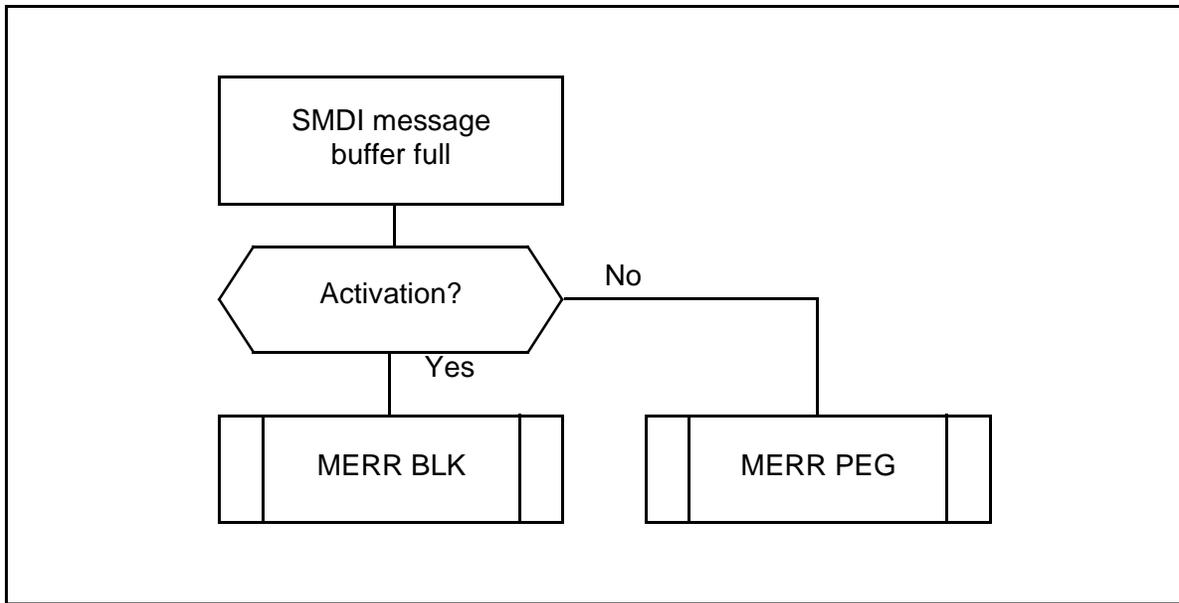
Figure 4-114: SMDI measurement block (OPM028) flow chart - Effect of task refused on Activation (MACT) and Deactivation (MDAC) registers



**Figure 4-115: SMDI measurement block (OPM028) flow chart - Effect of MWIT timeout on Activation (MACT) and Deactivation (MDAC) registers**



**Figure 4-116: SMDI measurement block (OPM028) flow chart - Effect of full SMDI message buffer on Output Error (MERR) register**



### CCS7 (CCS7 measurement block - OPM029)

The CCS7 measurement block is shown in Figure 4-117. The individual PEGs in the block are described in Table 4-AB.

*Note:* When requested through Overlay OMC (LSU) (see section 5 of this NTP), measurement block registers for a single link set are printed in the measurement block. In this display, only non-zero registers are shown. This display, shown in Figure 4-117, appears at the end of the OPM029 report.

**Figure 4-117: CCS7 measurement block (OPM029)**

OPM029	CCS7	CAPZ	THU 11/12/90	14:30:00	QRTR
			PEG		
OCTX			00000		
OCTR			00000		
OCTS			00000		
MSUX			00000		
MSUR			00000		
MSUS			00000		
MSUD			00000		
LSU = 01					
NTWK	MSUX	MSUR	OCTX	OCTR	TFC
0	000000	000000	000000	000000	000000
.	.	.	.	.	.
.	.	.	.	.	.
255	000000	000000	000000	000000	000000

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-AB: SRP or CCS7 measurement block (OPM029) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
OCTX	Octets transmitted	PEG - a count of MSU octets transmitted, divided by 100
OCTR	Octets received	PEG - a count of MSU octets received, divided by 100
OCTS	Octets through switched	PEG - a count of MSU octets through-switched, divided by 100
MSUX	MSUs transmitted	PEG - a count of MSUs transmitted
MSUR	MSUs received	PEG - a count of MSUs received
MSUS	MSUs through switched	PEG - a count of MSUs through-switched
MSUD	MSUs discarded	PEG - a count of MSUs discarded due to invalid DPC
TFC	transfer control messages	PEG - a count of TFCs received
NTWK	Network code (1-255)	Identifies the network from which messages have been received or to which messages have been sent

### **Custom Local Area Signaling Services (CLAS measurement block - OPM030)**

The Custom Local Area Services (CLAS) measurement block (Figure 4-118 and Tables 4-AC through 4-AN) provides information about all of the CLASS features. For selected changes made to the CLAS block, low charts showing the sequence of events that cause the ARPR and AR1X registers to be incremented and the relationship between the registers within the CLAS AR block are shown in Figures 4-121 and 4-122.

*Note: Even though the CLAS measurement block contains entries for all CLASS features, only measurement blocks for features that are configured on the switch will be printed. The CLAS measurement block will not be printed if none of the CLASS features are configured.*

Figure 4-118: CLAS measurement block (OPM030)

OPM030	CLAS	CAPZ	THU	11/18/93	14:30:00	QRTR
ACB		PEG		BLK		
ACT		00000		00000		
LDEN		00000				
SDEN		00000				
STON		00000				
IMED		00000				
DLAY		00000				
TIME		00000				
RSUM		00000				
REJ		00000				
DACT		00000				
TCTO		00000				
TCER		00000				
AR		PEG		BLK		
ACT		00000		00000		
2STG		00000				
LDEN		00000				
SDEN		00000				
STON		00000				
IMED		00000				
DLAY		00000				
TIME		00000				
RSUM		00000				
REJ		00000				
DACT		00000				
TCTO		00000				
TCER		00000				
ARPR		00000				
ARIX		00000				

(Continued on next page)

Figure 4-119: CLAS measurement block (OPM030)

OPM030	CLAS	CAPZ	THU	11/18/93	14:30:00	QRTR
CND		PEG				
DN		00000				
PRIV		00000				
UNAV		00000				
ACT		00000				
DACT		00000				
CNB		PEG	BLK			
ACT		00000	00000			
PRIV		00000				
PUBL		00000				
CNAM		PEG				
NAME		00000				
PRIV		00000				
UNAV		00000				
RTCQ		00000				
CTCQ		00000				
LTCQ		00000				
ACGB		00000				
ACGO		00000				
RTTO		00000				
CTTO		00000				
LTTO		00000				
TCER		00000				
CNAB		PEG	BLK			
ACT		00000	00000			
CIDS		PEG	BLK			
CNND		00000	00000			
CNNB		00000	00000			
ACR		PEG	BLK			
ACT		00000	00000			
DACT		00000	00000			
REJ		00000				
COT		PEG	BLK			
ACT		00000	00000			
UNAV		00000				
2STG		00000				
TRAC		00000				

(Continued on next page)

Figure 4-120: CLAS measurement block (OPM030)

OPM030	CLAS	CAPZ	THU	11/18/93	14:30:00	QRTR
SCA		PEG	BLK	USE		
SLE		00000	00000	00000		
ACT		00000				
DACT		00000				
SCRN		00000				
REJ		00000				
TCTO		00000				
TCER		00000				
WEBR		00000				
WEBU		00000				
SCF		PEG	BLK	USE		
SLE		00000	00000	00000		
ACT		00000				
DACT		00000				
SCRN		00000				
CFW		00000				
TCTO		00000				
TCER		00000				
WEBR		00000				
WEBU		00000				
SCR		PEG	BLK	USE		
SLE		00000	00000	00000		
ACT		00000				
DACT		00000				
SCRN		00000				
REJ		00000				
TCTO		00000				
TCER		00000				
WEBR		00000				
WEBU		00000				
SDR		PEG	BLK	USE		
SLE		00000	00000	00000		
ACT		00000				
DACT		00000				
SCRN		00000				
DRNG		00000				
CWT		00000				
TCTO		00000				
TCER		00000				
WEBR		00000				
WEBU		00000				

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-AC: CLAS measurement block (OPM030) Automatic Recall Automatic Call Back (AR/ACB) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
ACT	PEG - number of times the AR/ACB activation code was dialed by a subscriber allowed access to the feature BLK - number of times the AR/ACB activation was denied due to system failure or lack of resources
2STG	PEG - number of times the digit 1 was dialed in 2-stage AR activation
LDEN	PEG - number of times AR/ACB activation was denied due to long-term denial
SDEN	PEG - number of times AR/ACB activation was denied due to short-term denial
STON	PEG - number of times AR/ACB activation was denied due to short-term denial tone
IMED	PEG - number of AR/ACB activations that resulted in immediate processing
DLAY	PEG - number of AR/ACB activations that resulted in delayed processing
TIME	PEG - number of AR/ACB requests that timed out
RSUM	PEG - number of AR/ACB requests for which scanning was resumed after an idle indication was given for a called line that subsequently became busy before the call setup was completed
REJ	PEG - number of AR/ACB requests for which a call rejection indication (due to an SCR or ACR) was received in the response to the initial query
DACT	PEG - number of times AR/ACB deactivation code was dialed by a subscriber allowed access to the feature
TCTO	PEG - number of TCAP timeouts during AR/ACB feature processing
TCER	PEG - number of TCAP errors during AR/ACB feature processing
ARPR	PEG - number of AR calls blocked due to private DN restriction
AR1X	PEG - number of AR calls blocked due to repetitive calls restriction

<b>Table 4-AD: CLAS measurement block (OPM030) Calling Number Delivery (CND) and Usage-Sensitive Calling Name Delivery (UNAM) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
DN	PEG - number of calls for which a complete calling DN was transmitted to Customer Premises Equipment (CPE) for display
PRIV	PEG - number of calls for which a P was transmitted to CPE for display
UNAV	PEG - number of calls for which an O was transmitted to CPE for display
ACT	PEG - number of customer UCND and/or UNAM activations. The number of DND activations is also included in this count.
DACT	PEG - number of customer UCND and/or UNAM deactivations. The number of DND deactivations is also included in this count.

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*Note: The measurement block above is printed if either the CND or the CNAM feature is configured in the switch. Only the ACT and DACT measurements are used for both features.*

<b>Table 4-AE: CLAS measurement block (OPM030) Calling Number Delivery Blocking (CNB) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
ACT	PEG - number of times the CNB access code was dialed by a subscriber allowed to access the feature  BLK - number of times CNB activation was unsuccessful due to insufficient software resources
PRIV	PEG - number of times CNB was used to suppress the calling DN
PUBL	PEG - number of times CNB was used to deliver the calling DN (that is, calling number delivery suppression was removed)

*Note: CNB measurement block registers for business lines are combined with the counts for residential lines and are output only in the CLASS OM block.*

<b>Table 4-AF: CLAS measurement block (OPM030) Calling Name Delivery (CNAM) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
NAME	PEG - number of calls for which a name was transmitted to the CPE for display
PRIV	PEG - number of times that a private indicator (P) was transmitted to the CPE for display
UNAV	PEG - number of times that an out-of-area / unavailable indicator (O) was transmitted to the CPE for display
RTCQ	PEG - number of TCAP queries sent to a residential name database in support of CNAM
CTCQ	PEG - number of TCAP queries sent to a centralized name database in support of CNAM when prompt PND (personal name delivery) in Overlay HUNT (EBS) is set to YES
LTCQ	PEG - number of TCAP queries sent to a local name database in support of CNAM when prompt PND (personal name delivery) in Overlay HUNT (EBS) is set to YES
ACGB	PEG - number of TCAP name queries blocked because of Automatic Code Gapping (ACG) controls in effect for the NPA-NXX
ACGO	PEG - number of ACG control table overflows
RTTO	PEG - number of timeouts that occurred while waiting for TCAP responses from a residential database in support of CNAM
CTTO	PEG - number of timeouts that occurred while waiting for TCAP responses from a centralized database in support of CNAM when prompt PND (personal name delivery) in Overlay HUNT (EBS) is set to YES
LTTO	PEG - number of timeouts that occurred while waiting for TCAP responses from a local database in support of CNAM when prompt PND (personal name delivery) in Overlay HUNT (EBS) is set to YES

<b>Table 4-AF: (Continued)</b> <b>CLAS measurement block (OPM030) Calling Name Delivery (CNAM) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
TCER	PEG - number of miscellaneous TCAP errors during name database queries

<b>Table 4-AG:</b> <b>CLAS measurement block (OPM030) Calling Name Delivery Blocking (CNAB) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
ACT	PEG - number of CNAB activation attempts by subscribers BLK - number of times CNAB activation was unsuccessful due to insufficient resources

*Note: CNAB measurement block registers for business lines are combined with the counts for residential lines and are output only in the CLASS OM block.*

<b>Table 4-AH:</b> <b>CLAS measurement block (OPM030) Calling Identity Delivery and Suppression (CIDS) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
CNND	PEG - number of CIDS delivery activation attempts by subscribers BLK - number of times CIDS delivery activation was unsuccessful due to insufficient resources
CNNB	PEG - number of CIDS blocking activation attempts by subscribers BLK - number of times CIDS blocking activation was unsuccessful due to insufficient resources

*Note: CIDS measurement block registers for business lines are combined with the counts for residential lines and are output only in the CLASS OM block.*

<b>Table 4-AI:</b> <b>CLAS measurement block (OPM030) Anonymous Call Rejection (ACR) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
ACT	PEG - number of ACR activation attempts by subscribers BLK - number of times ACR activation was unsuccessful due to insufficient resources
DACT	PEG - number of ACR deactivation attempts by subscribers BLK - number of times ACR deactivation was unsuccessful due to insufficient resources
REJ	PEG - number of anonymous calls rejected (provided ACRJ generic treatment)

*Note: ACR measurement block registers for business lines are combined with the counts for residential lines and are output only in the CLASS OM block.*

<b>Table 4-AJ: CLAS measurement block (OPM030) Customer Originated Trace (COT) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
ACT	PEG - number of times the COT access code was dialed by a subscriber allowed to access the feature BLK - number of times COT was unavailable due to insufficient software resources
UNAV	PEG - number of times the DN was unavailable during COT activation
2STG	PEG - number of times a digit 1 was dialed to activate COT (applies to 2-stage activation only)
TRAC	PEG - number of trace confirmations given

<b>Table 4-AK: CLAS measurement block (OPM030) Selective Call Acceptance (SCA) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
SLE	PEG - number of attempts to invoke an SCA SLE session by a subscriber allowed to access the feature BLK - number of calls denied access to an SCA SLE session due to system failure or lack of resources USE - 10-second usage for calls using an SCA SLE session
ACT	PEG - number of SCA activations
DACT	PEG - number of SCA deactivations
SCRN	PEG - number of calls screened for SCA
REJ	PEG - number of calls rejected as a result of being screened
TCTO	PEG - number of TCAP timeouts during an SCA editing session
TCER	PEG - number of TCAP errors during an SCA editing session
WEBR	PEG - number of web based requests for SCA list information
WEBU	PEG - number of web based updates for SCA lists

<b>Table 4-AL: CLAS measurement block (OPM030) Selective Call Forwarding (SCF) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
SLE	PEG - number of attempts to invoke an SCF SLE session by a subscriber allowed access to the feature BLK - number of calls denied access to an SCF SLE session due to system failure or lack of resources USE - 10-second usage for calls using an SCF SLE session
ACT	PEG - number of SCF activations
DACT	PEG - number of SCF deactivations
SCRN	PEG - number of calls screened for SCF

<b>Table 4-AL: (Continued)</b> <b>CLAS measurement block (OPM030) Selective Call Forwarding (SCF) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
CFW	PEG - number of calls forwarded as a result of being screened
TCTO	PEG - number of TCAP timeouts during an SCF editing session
TCER	PEG - number of TCAP errors during an SCF editing session
WEBR	PEG - number of web based requests for SCF list information
WEBU	PEG - number of web based updates for SCF lists

<b>Table 4-AM:</b> <b>CLAS measurement block (OPM030) Selective Call Rejection (SCR) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
SLE	PEG - number of attempts to invoke an SCR SLE session by a subscriber allowed to access the feature BLK - number of calls denied access to an SCR SLE session due to system failure or lack of resources USE - 10-second usage for calls using an SCR SLE session
ACT	PEG - number of SCR activations
DACT	PEG - number of SCR deactivations
SCRN	PEG - number of calls screened for SCR
REJ	PEG - number of calls rejected as a result of being screened
TCTO	PEG - number of TCAP timeouts during an SCR editing session
TCER	PEG - number of TCAP errors during an SCR editing session
WEBR	PEG - number of web based requests for SCRlist information
WEBU	PEG - number of web based updates for SCR lists

<b>Table 4-AN:</b> <b>CLAS measurement block (OPM030) Selective Distinctive Ringing / Call Waiting (SDR) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
SLE	PEG - number of attempts to invoke an SDR SLE session by a subscriber allowed to access the feature BLK - number of calls denied access to an SDR SLE session due to system failure or lack of resources USE - 10-second usage for calls using an SDR SLE session
ACT	PEG - number of SDR activations
DACT	PEG - number of SDR deactivations
SCRN	PEG - number of calls screened for SDR
DRNG	PEG - number of attempts to provide distinctive ringing

<b>Table 4-AN: (Continued)</b>	
<b>CLAS measurement block (OPM030) Selective Distinctive Ringing / Call Waiting (SDR) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
CWT	PEG - number of attempts to provide distinctive call waiting tone
TCTO	PEG - number of TCAP timeouts during an SDR editing session
TCER	PEG - number of TCAP errors during an SDR editing session
WEBR	PEG - number of web based requests for SDR list information
WEBU	PEG - number of web based updates for SDR lists

**Figure 4-121: CLAS measurement block (OPM030) flow chart - AR Block to Private (ARPR) register**

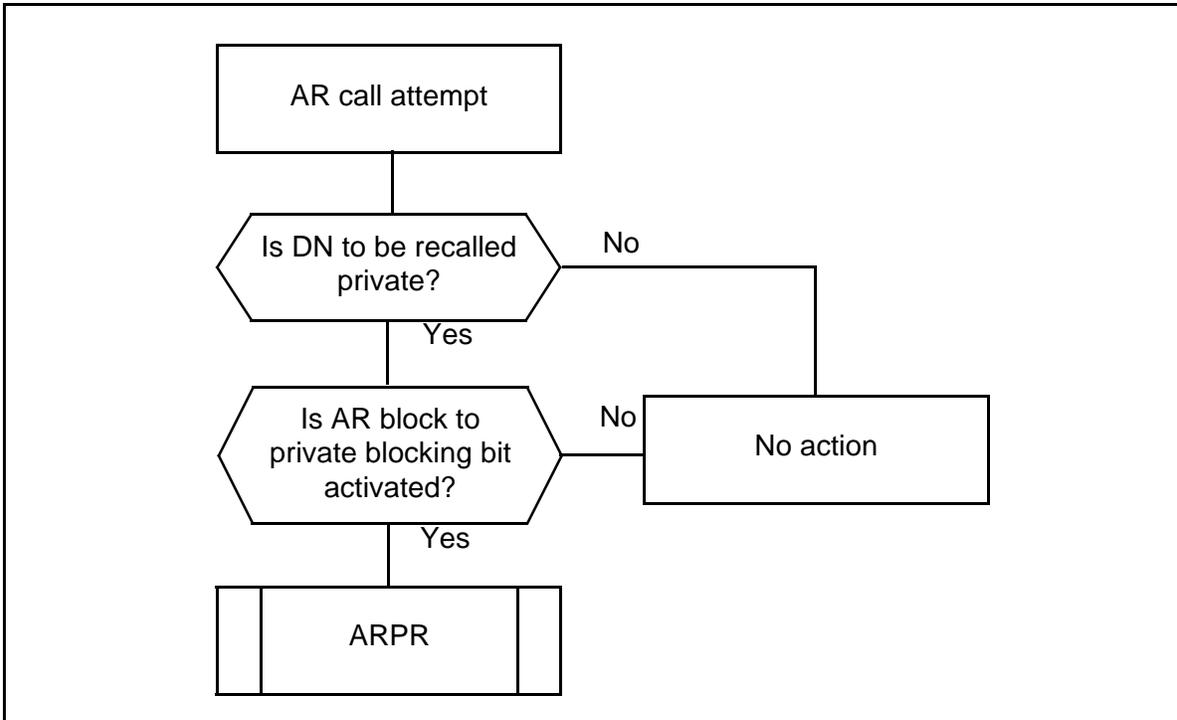
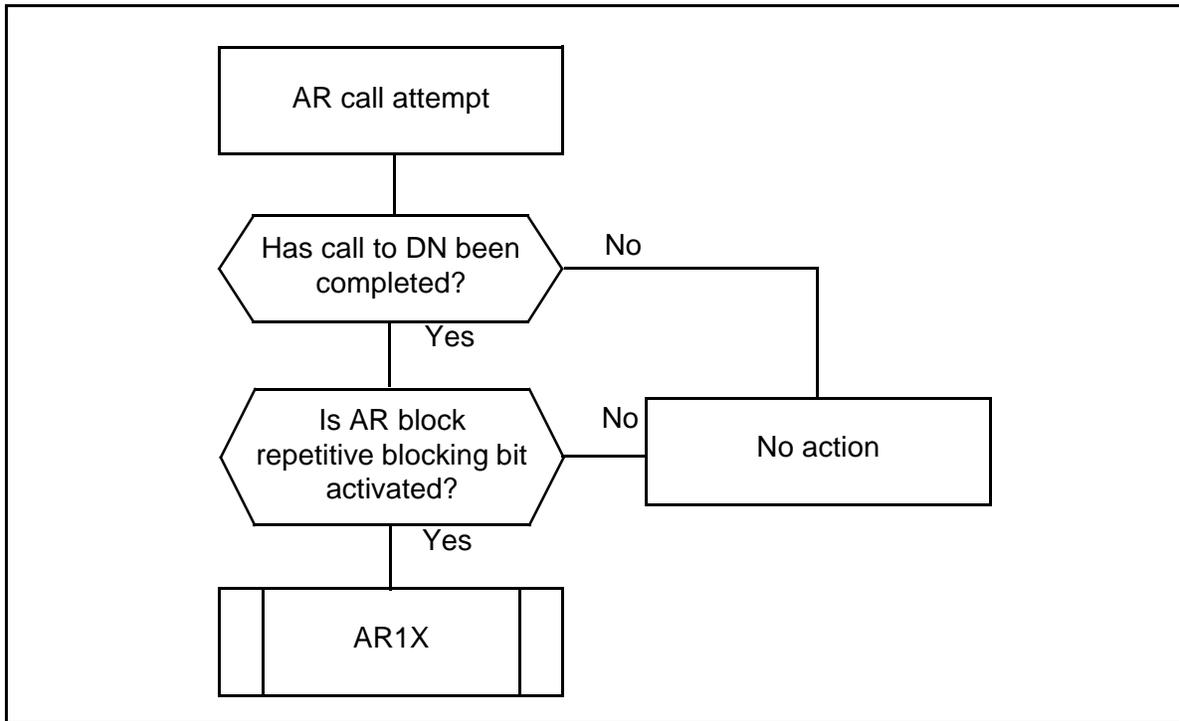


Figure 4-122: CLAS measurement block (OPM030) flow chart - AR Block Repetitive (AR1X) register



## Integrated Services Digital Network User Part (ISUP measurement block - OPM031)

The Integrated Services Digital Network User Part (ISUP) measurement block (Figure 4-123 and Table 4-AO) provides information about CLASS feature calls that utilize ISUP.

**Figure 4-123: ISUP measurement block (OPM031)**

OPM031	ISUP	CAPZ	THU	11/12/90	14:30:00	QTR
		PEG				
OTGM		00000				
INCM		00000				
ERRM		00000				
REL		00000				
SREP		00000				
CREP		00000				
OREP		00000				
FAIL		00000				
CONG		00000				
NOCT		00000				
ADDR		00000				
TEMP		00000				
UNAL		00000				
BUSY		00000				
OOS		00000				
OTHR		00000				
SCOT		00000				
OCOT		00000				
DPCU		00000				
NETC		00000				
LBLO		00000				
SDID		00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-AO: ISUP measurement block (OPM031) registers</b>	
OTGM	PEG - number of ISUP messages sent
INCM	PEG - number of ISUP messages received
ERRM	PEG - number of unreasonable messages received
REL	PEG - number of releases initiated due to abnormal conditions
SREP	PEG - number of circuits requiring repeated attempts due to dual seizure
CREP	PEG - number of circuits requiring repeated attempts due to continuity failure
OREP	PEG - number of circuits requiring repeated attempts due to other causes
FAIL	PEG - the number of call attempts that have failed at the first ISUP exchange, or the number of times a release or reset circuit was received during ISUP call setup, or the number of times a release, reset circuit, or unequipped CIC was received during ISUP call setup.
CONG	PEG - number of release messages at originating exchange due to switching equipment congestion
NOCT	PEG - number of release messages at originating exchange due to unavailable circuits
ADDR	PEG - number of release messages at originating exchange due to incomplete addresses
TEMP	PEG - number of release messages at originating exchange due to temporary failures
UNAL	PEG - number of release messages at originating exchange due to unallocated numbers
BUSY	PEG - number of release messages at originating exchange due to busy condition
OOS	PEG - number of release messages at originating exchange due to out-of-service destinations
OTHR	PEG - number of release messages at originating exchange due to protocol errors, interworking, no route to destination, or other causes
SCOT	PEG - number of second continuity check failures
OCOT	PEG - number of calls performing outgoing continuity checks
DPCU	PEG - number of MSUs not sent to MTP due to DPC unavailability
NETC	PEG - number of MSUs not sent to MTP due to network congestion
LBLO	PEG - number of ISUP trunks locally blocked
SDIS	PEG - number of times a source disconnect was received during ISUP call setup

### Local Data Base Services (LDBS measurement block - OPM032)

The Local Data Base Services (LDBS) measurement block (Figure 4-124 and Table 4-AP) provides information about LDBS access. A flow chart showing the sequence of events that cause the LDBS LDMG peg to be incremented is shown in Figure 4-125.

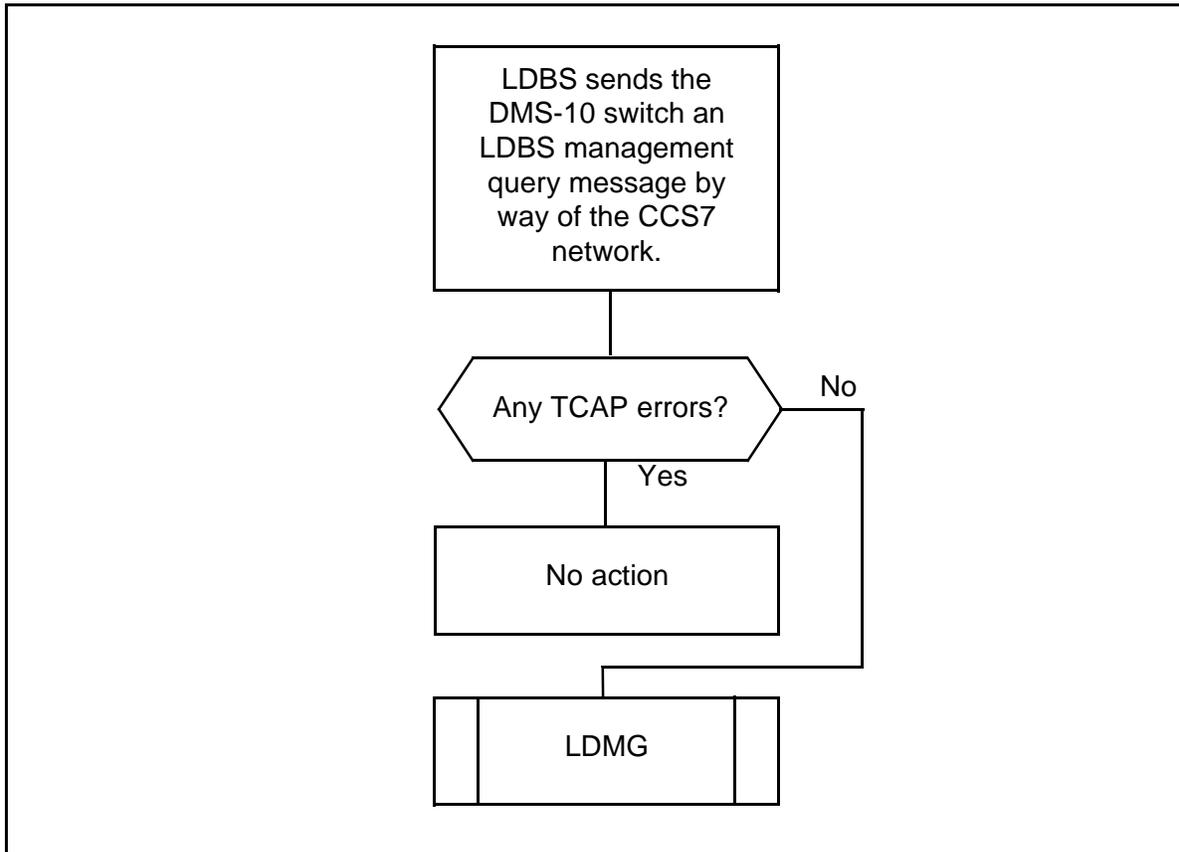
**Figure 4-124: LDBS measurement block (OPM032)**

OPM032	LDBS	CAPZ	THU	06/25/92	13:30:00	HRHF
		PEG				
LDCO		00000				
CTBQ		00000				
CTAQ		00000				
TMOT		00000				
LDMG		00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-AP: LDBS measurement block (OPM032) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
LDCO	LDBS Call Originations	PEG - a count of LDBS call originations made by the switch that have reached the dialing complete stage
CTBQ	Call Terminations Before Query	PEG - a count of all call terminations before the database query request
CTAQ	Call Terminations After Query	PEG - a count of all call terminations after the database query request, but before the query response
TMOT	Timeout at the SSP	PEG - a count of all occurrences of a timeout at the Service Switching Point (SSP)
LDMG	LDBS Management Query	PEG - a count of all queries from the LDBS unit received by the DMS-10 switch

Figure 4-125: LDBS measurement block (OPM032) flow chart - LDMG PEG register



### Line Concentrating Module (LCM measurement block - OPM033)

The Line Concentrating Module (LCM) measurement block (Figure 4-126 and Table 4-AQ) provides information about POTS and MDC LCM access. For selected changes made to the LCM block, flow charts showing the sequence of events that cause the LCM registers to be incremented and the relationship between the registers within the block are shown in Figures 4-127 through 4-129.

**Figure 4-126: LCM measurement block (OPM033)**

OPM033	LCM	CAPZ	THU	02/25/95	13:30:00	HRHF
		ORIG	TERM			
SITE	LCE/HUBE	B	S			
POTS	00000	00000				
MDC	00000	00000				
MDN	00000	00000				
SMDN		00000				
MBS	00000	00000				
MMDN	00000	00000				
SMMD		00000				
DMDC	00000	00000				
DMMD	00000	00000				
DMSM		00000				
#BLF		00000				
ISDN	00000	00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-AQ: LCM measurement block (OPM033) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
POTS	Plain Old Telephone Service	ORIG - a count of POTS origination attempts TERM - a count of POTS termination attempts
MDC	Meridian Digital Centrex (non-Meridian Business Sets [MBS])	ORIG - a count of MDC (non-MBS) origination attempts (includes CCF) TERM - a count of MDC (non-MBS) termination attempts (includes CCF)
MDN	Multiple Appearance Directory Number (non-MBS)	ORIG - a count of MDC (non-MBS) MADN origination attempts TERM - a count of MDC (non-MBS) MADN termination attempts
SMDN	Secondary Multiple Appearance Directory Number (non-MBS)	TERM - a count of MDC (non-MBS) secondary MADN member termination attempts

<b>Table 4-AQ: (Continued)</b>		
<b>LCM measurement block (OPM033) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
MBS	Meridian Business Sets (MBS without display)	ORIG - a count of MDC (MBS without display) origination attempts TERM - a count of MDC (MBS without display) termination attempts
MMDN	Multiple Appearance Directory Number (MBS without display)	ORIG - a count of MDC (MBS without display) MADN origination attempts TERM - a count of MDC (MBS without display) MADN termination attempts
SMMD	Secondary Multiple Appearance Directory Number (MBS without display)	TERM - a count of MDC (MBS without display) secondary MADN member termination attempts
DMDC	Meridian Digital Centrex (MBS display)	ORIG - a count of MDC (MBS display) origination attempts TERM - a count of MDC (MBS display) termination attempts
DMMD	Multiple Appearance Directory Number (MBS display)	ORIG - a count of MDC (MBS display) MADN origination attempts TERM - a count of MDC (MBS display) MADN termination attempts
DMSM	Secondary Multiple Appearance Directory Number (MBS display)	TERM - a count of MDC (MBS display) secondary MADN member termination attempts
#BLF	Meridian Digital Centrex (MBS display) Busy Lamp Field	TERM - a count of MDC (MBS display) messages sent to illuminate the Busy Lamp Field
ISDN	Integrated Services Digital Network	ORIG - a count of ISDN origination attempts TERM - a count of ISDN termination attempts

Figure 4-127: LCM measurement block (OPM033) flow chart - MBS origination

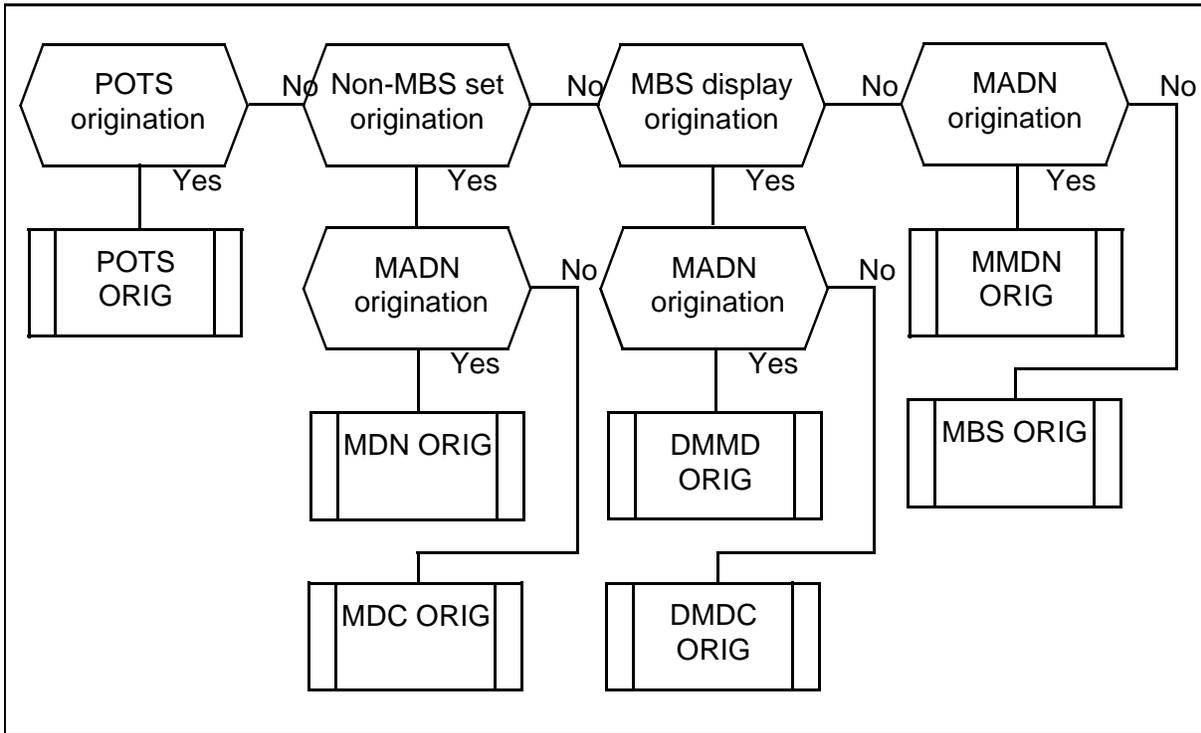


Figure 4-128: LCM measurement block (OPM033) flow chart - MBS termination

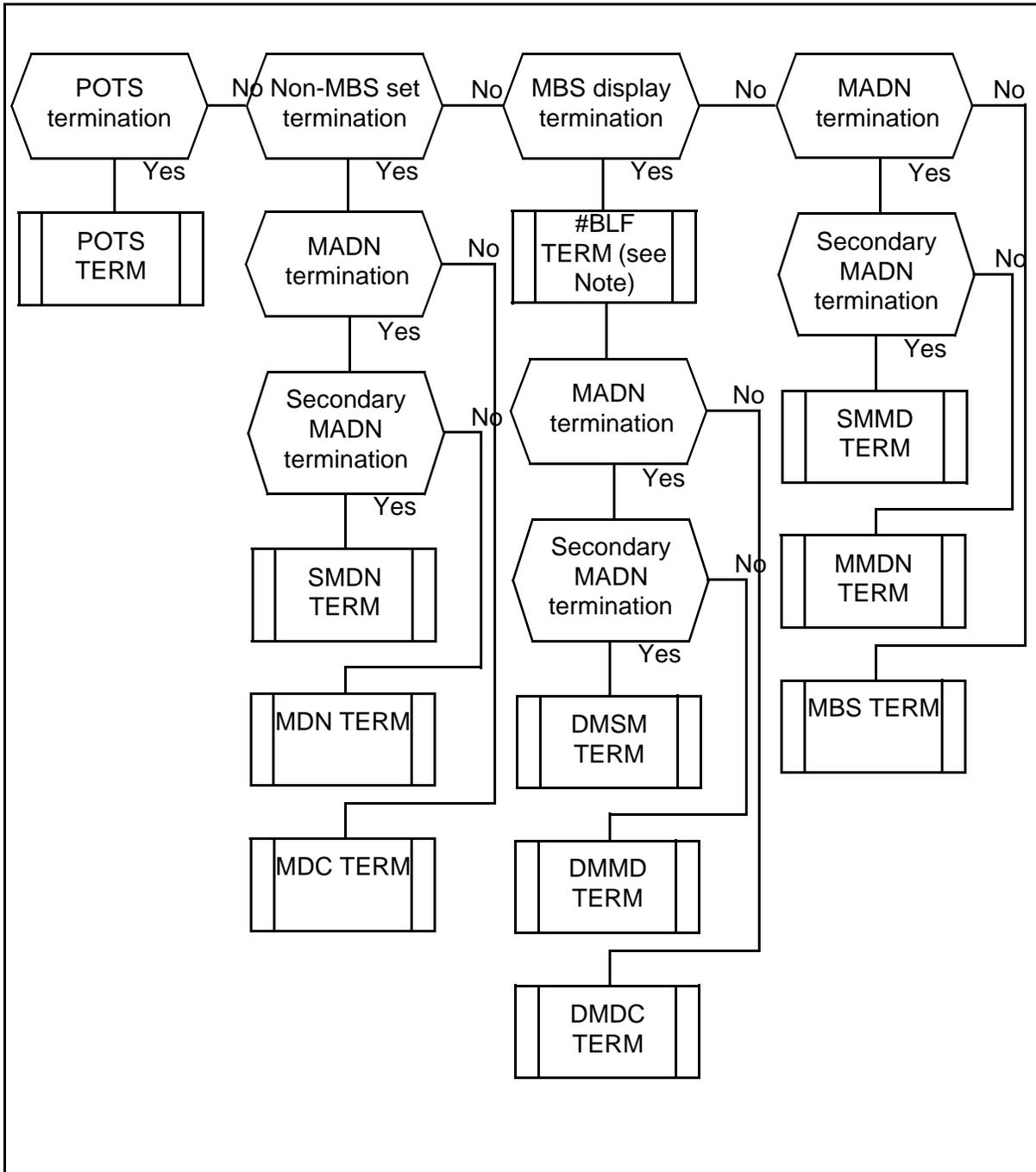
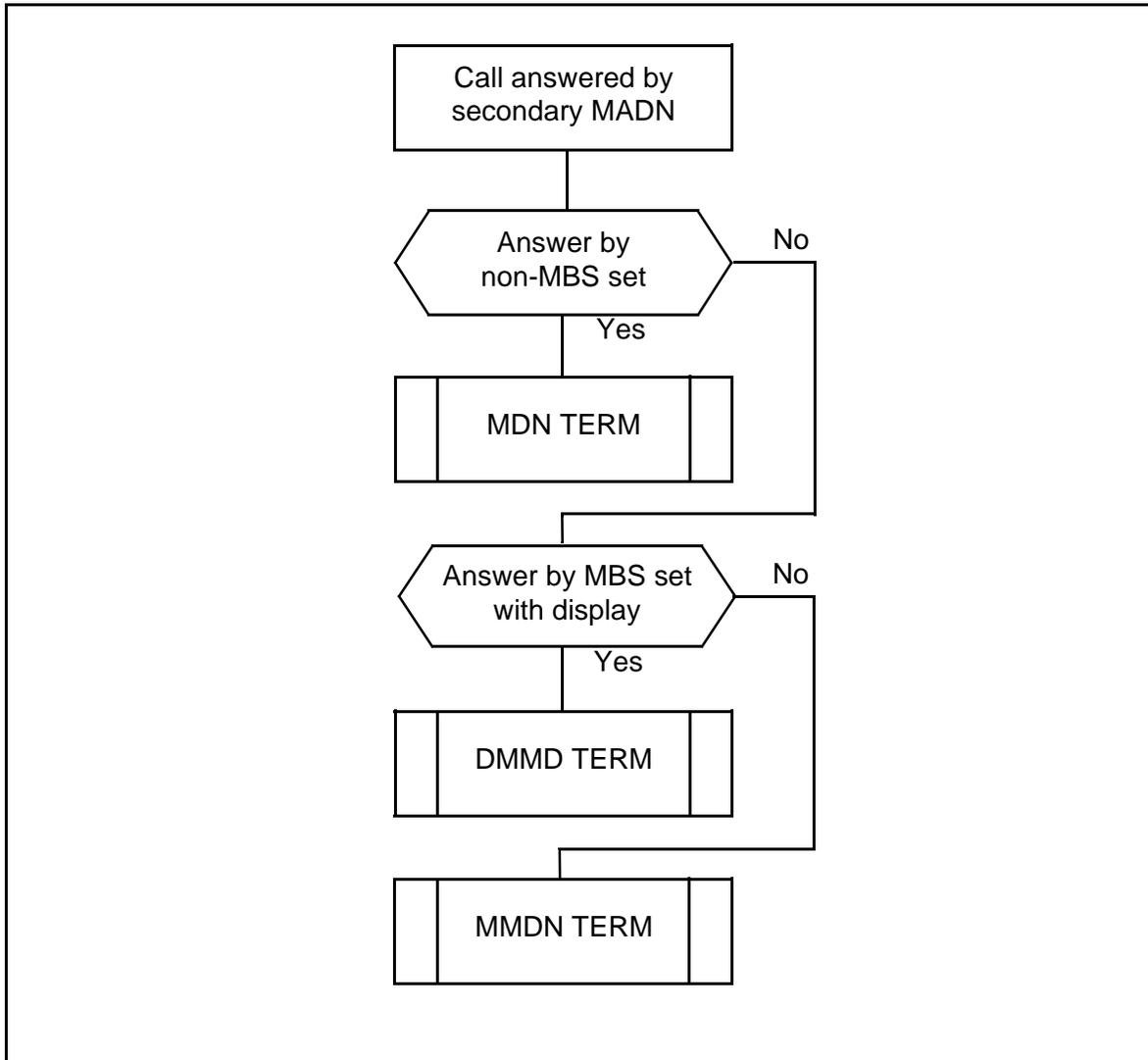


Figure 4-129: LCM measurement block (OPM033) flow chart - MBS MADN



## Multiple Appearance Directory Number (MADN measurement block - OPM034)

The Multiple Appearance Directory Number (MADN) measurement block (Figure 4-130, and Table 4-AR) provides information about MADN access for a single MADN group. A flow chart showing the sequence of events that cause the MADN registers to be incremented and the relationship between the registers within the block is shown in Figure 4-131.

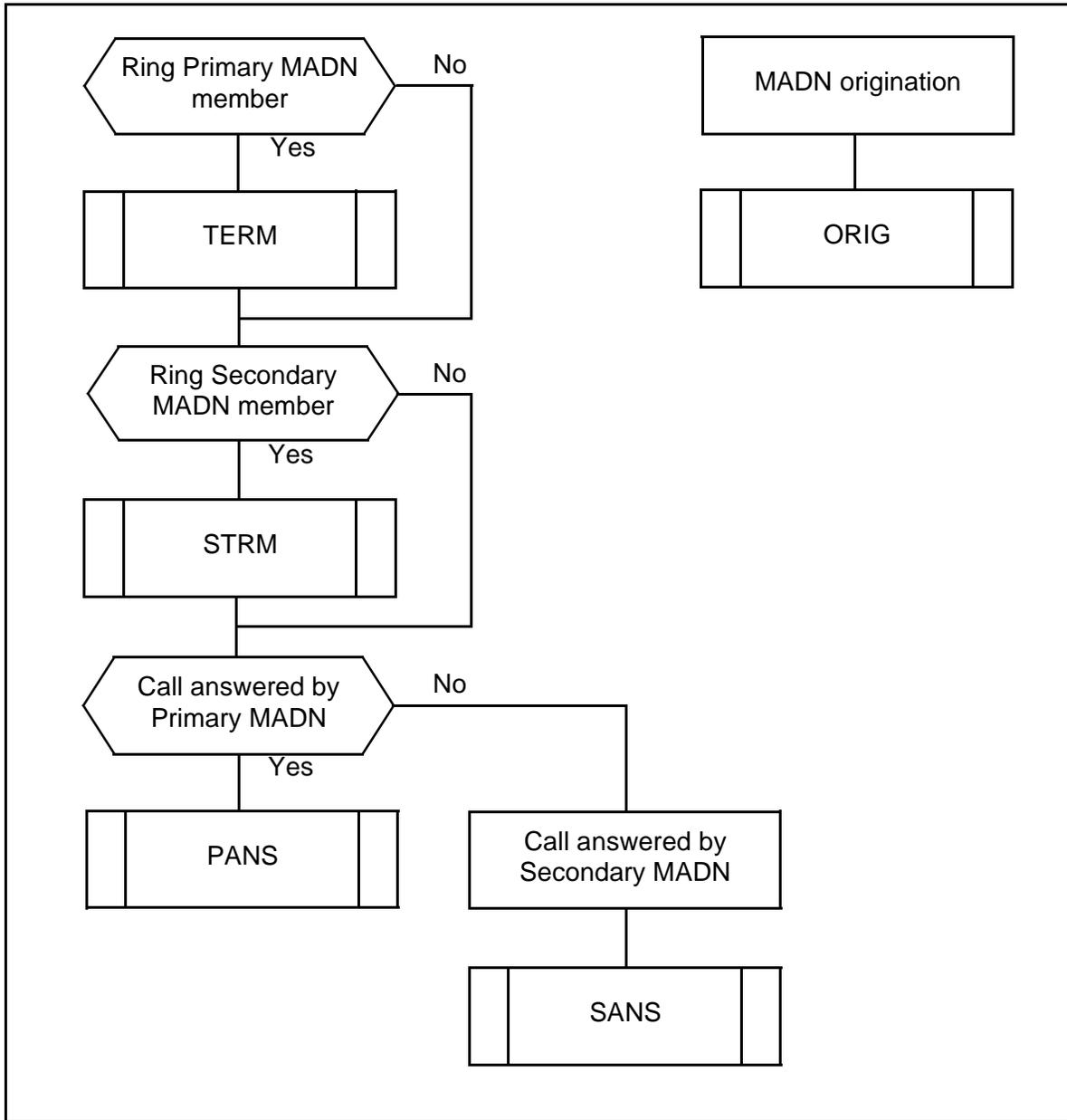
**Figure 4-130: MADN measurement block (OPM034)**

OPM034	MADN	CAPZ	THU	02/17/98	14:30:00	HRHF
MADN		ORIG	TERM	STRM	PANS	SANS
NPA-NXX-DEFG		00000	00000	00000	00000	00000
NPA-NXX-DEFG		00000	00000	00000	00000	00000
.						
.						
NPA-NXX-DEFG		00000	00000	00000	00000	00000

*Note:* DNs are displayed as 10-digit numbers if prompt DNXX = YES in Overlay CNFG (SYS) and as 7-digit numbers if prompt DNXX = NO in Overlay CNFG (SYS).

<b>Table 4-AR: MADN measurement block (OPM034) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
(NPA) NXX-DEFG	Multiple Appearance Directory Number	ORIG - a count of MADN origination attempts TERM - a count of MADN termination attempts STRM - a count of MADN secondary member termination attempts (pegs once for each secondary member in the group except non-ringing 500/2500 business sets) PANS - a count of answers by the primary MADN members SANS - a count of answers by secondary MADN members

Figure 4-131: MADN measurement block (OPM034) flow chart



## Span line errors (SPAN measurement block - OPM035)

The Span line errors (SPAN) measurement block (Table 4-AS) provides information about span line errors for each Digital Carrier Module (DCM) or Digital Signal Interface (DSI). Figure 4-132 shows the format of the SPAN measurement block printout. A flow chart showing the sequence of events that cause the SPAN registers to be incremented and the relationship between the registers within the block is shown in Figure 4-134.

If Facility Name printing in OPMs (FNOM prompt in DMO CNFG (SYS)) is enabled, a new line for the DSLK name will be added after each DSLK peg line prints.

**Figure 4-132: SPAN measurement block (OPM035)**

OPM035	SPAN	CAPZ	THU	12/18/98	13:30:00	HRHF
			SLIP	FRAM	BPLR	CRC
	<i>SITE PE B S P</i>		00000	00000	-N	-N
	<i>SITE CE B S P L</i>		00000	00000	-N	-N

**Note 1:** -N = negative power of ten exponent, for example, -3 = 10<sup>-3</sup>.

**Note 2:** Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

**Note 3:** For all OPM block changes due to Facility Identification by Name, in all modified sections facility names will only appear in OPM printouts if CNFG (SYS) PRFN=YES and CNFG (SYS) FNOM=YES.

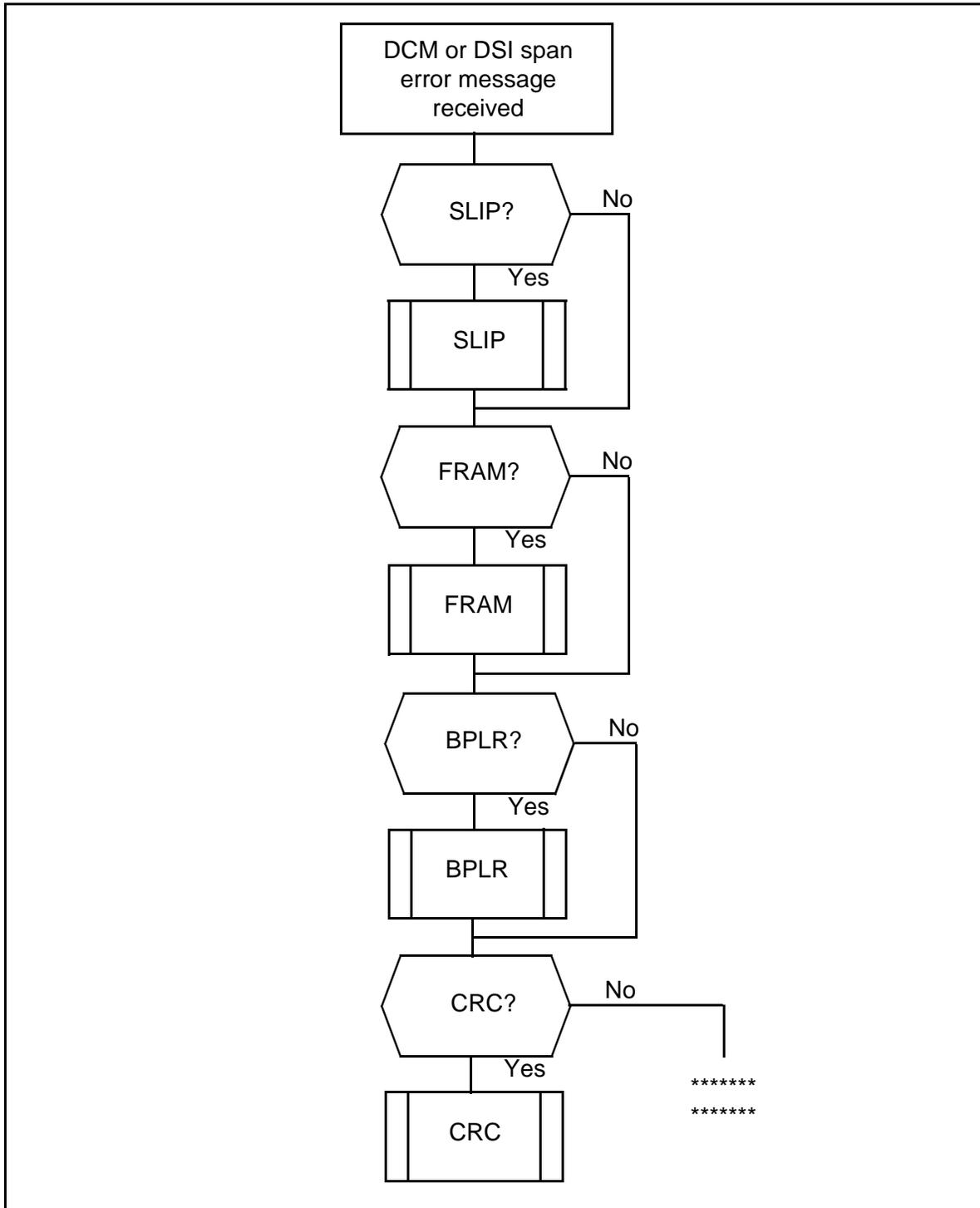
An example of the modified OPM block printout is shown below, with the new output lines:

Figure 4-133: SPAN measurement block when CNFG (SYS) FNOM=YES (OPM035)

OPM035	SPAN	NSS4	FRI	06/01/00	23:00:00	HRHR
			SLIP	FRAM	BPLR	CRC
NSS4	PE	02 5 08	000000	000000	-10	000
NSS4	PE	02 5 02	000000	000000	-10	000
NSS4	PE	02 5 05	000000	000000	-10	000
NSS4	PE	02 5 18	000000	000000	-10	000
NSS4	PE	02 5 12	000000	000000	-10	000
NSS4	PE	02 5 15	000000	000000	-10	000
NSS4	PE	03 2 02	000000	000000	-10	000
NSS4	PE	03 2 05	000000	000000	-10	000
NSS4	PE	03 2 12	000000	000000	-10	000
NSS4	PE	03 2 15	000000	000000	-10	000
NSS4	CE	1 1 06 0	000000	000000	000	-00
		DSLK NAME NSS4_DSLK_0_NSS3				
NSS4	CE	1 1 06 1	0000000000000000			-00
		DSLK NAME NSS4_DSLK_1_NSS3				
NSS4	CE	1 1 04 0	000000000000-00			000
		DSLK NAME NSS4_DSLK_0_NSS2				
NSS4	CE	1 1 04 1	000000000000-00			000
		DSLK NAME NSS4_DSLK_1_NSS2				
NSS4	CE	1 1 22 0	000000000000-00			000
		DSLK NAME				
NSS4	CE	1 1 22 1	000000000000-00			000
		DSLK NAME				

<b>Table 4-AS: SPAN measurement block (OPM035) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
<i>site PE b s p</i>	Location of a DCM	<p>SLIP - a count of the slips (disruption in data flow caused by an overflow or an underflow of a buffer due to variations in the transmit and receive rates) for the DCM.</p> <p>FRAM - a count of OOF (out-of-frame) errors. OOFs indicate that, for some period of time, the framing pattern was not present.</p> <p>BPLR - the bipolar error rate expressed as a negative power of ten. The normal line code on the DS-1 is for alternating polarity of ones (1), known also as <i>bipolar format</i>. A bipolar error occurs when two ones are received with the same polarity.</p> <p>CRC - unused; the value is zero.</p>
<i>site CE b s p l</i>	Location of a DSI link	<p>SLIP - a count of the slips (disruption in data flow caused by an overflow or an underflow of a buffer due to variations in the transmit and receive rates) for the DSI.</p> <p>FRAM - a count of OOF (out-of-frame) errors. OOFs indicate that, for some period of time, the framing pattern was not present.</p> <p>BPLR - the bipolar error rate expressed as a negative power of ten. The normal line code on the DS-1 is for alternating polarity of ones (1), known also as <i>bipolar format</i>. A bipolar error occurs when two ones are received with the same polarity.</p> <p><b>Note:</b> BPLR is zero-filled for PRI dsks.</p> <p>CRC - the cyclic redundancy check (CRC) error rate expressed as a negative power of ten. A cyclic redundancy check error occurs when the calculated CRC value does not match the CRC value received in the incoming frame. If the DSI link is not configured for ESF, then the value is zero.</p>

Figure 4-134: SPAN measurement block (OPM035) flow chart



The span line error measurement block can be requested on a quarter-hourly, half-hourly, hourly, daily, or weekly basis. The update schedule chosen affects the BPLR measurement because it defines the upper limit on error performance for any given update interval.

For the DCM, the best performance (that is, perfect span line with no bipolar violations) for quarter-hourly, half-hourly, and hourly updates will be  $10^{-10}$ . For daily and weekly updates, the best performance will be  $10^{-12}$ . For the DSI, the best performance (that is, perfect span line with no bipolar violations or CRC errors) for updates will be  $10^{-8}$ , regardless of update schedule chosen. These figures are derived from the following calculations:

Quarter-hourly	$(1.544 \times 10^6 \text{ bits/sec}) \times 900 \text{ sec} = 1.39 \times 10^9 \text{ bits}$ (only calculation used for DSI and also used for DCM)
Half-hourly	$(1.544 \times 10^6 \text{ bits/sec}) \times 1800 \text{ sec} = 2.78 \times 10^9 \text{ bits}$ (used for DCM only)
Hourly	$(1.544 \times 10^6 \text{ bits/sec}) \times 3600 \text{ sec} = 5.56 \times 10^9 \text{ bits}$ (used for DCM only)
Daily	$(1.544 \times 10^6 \text{ bits/sec}) \times (24 \times 3600 \text{ sec}) = 1.33 \times 10^{11} \text{ bits}$ (used for DCM only)
Weekly	$(1.544 \times 10^6 \text{ bits/sec}) \times (7 \times 24 \times 3600 \text{ sec}) = 9.34 \times 10^{11} \text{ bits}$ (used for DCM only)

where  $1.544 \times 10^6$  is the number of bits that the DCM/DSI receives/transfers per second.

The DCM/DSI hardware reports bipolar violations or CRC errors in units of 1024. Thus, the error rate shows no change until 1024 errors have occurred.

*Note: For the DSI, bipolar violations or CRC errors are reported exponentially, by the hardware. Since DSI bipolar violations or CRC errors are exponents and are not actual counts, their output results reflect the latest quarterly results regardless of update schedule and choice of add or replace mode.*

### Common Peripheral Module (CPM measurement block - OPM036)

CPM measurement block includes, in addition to measurements for the RSC-S, measurements for service equipment located on Enhanced Subscriber Carrier Module Access (ESMA) shelves, and measurements for DS1Ls hosted by the ESMA (Figure 4-135 and Table 4-AT). Flow charts showing the sequence of events that cause the CPM registers to be incremented and the relationship between the registers within the block are shown in Figures 4-136 through 4-156.

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

**Figure 4-135: CPM measurement block (OPM036)**

OPM036	CPM	NSS4	FRI	28/06/02	14:00:00	HRHR	
SITE	RSC011		PEG	BLK	USE	MTCE	
TONE			000000		000000		
CMR			000000	000000	000000		
UTR			000000	000000	000000		
DS1L	SITE RSC 01 1 P 01		000000	000000	000000	000000	
.							
D30L	SITE RSC 01 1 P 03		000000	000000	000000	000000	
.							
SITE	MVIE 01 1						
TONE			000000		000000		
CMR			000000	000000	000000		
UTR			000000	000000	000000		
DS1L	SITE MVIE 01 01 P 01		000000	000000	000000	000000	
.							

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

Table 4-AT: CPM measurement block (OPM036) registers		
Mnemonic	Explanation	Description
TONE	Tone and Digit Sender	PEG - a count of requests for services that require a Tone and Digit Sender or tone source BLK - not used USE - a usage measurement for the Message Card circuit. Usage starts when a circuit is seized and ends when it is released. MTCE - not used

<b>Table 4-AT: (Continued) CPM measurement block (OPM036) registers</b>		
<b>Mnemonic</b>	<b>Explanation</b>	<b>Description</b>
CMR	CLASS Modem Resource	<p>PEG - a count of requests to connect a CMR channel and provide service</p> <p>BLK - a count of requests to connect a CMR channel that cannot be satisfied because all channels are busy or all device registers of the RSC-S or ESMA services are busy</p> <p>USE - a usage measurement for CMR channels. Usage starts when a channel is seized and ends when it is released.</p> <p>MTCE - the amount of time a CMR is placed in a maintenance state (for example, man-made-busy, system-made-busy, or indirectly out-of-service)</p>
UTR	Universal Tone Receiver	<p>PEG - a count of requests to connect a Universal Tone Receiver and provide line and trunk service</p> <p>BLK - a count of requests to connect a Universal Tone Receiver channel that cannot be satisfied because all channels are busy or all device registers of the RSC-S or ESMA services are busy</p> <p>USE - a usage measurement for Universal Tone Receiver channels. Usage starts when a channel is seized and ends when it is released.</p> <p>MTCE - the amount of time a receiver is placed in a maintenance state (for example, man-made-busy, system-made-busy, or indirectly out-of-service)</p>
D30L	RSC-S P-side DS30A Link	<p>PEG - a count of origination attempts from Line Concentrating Module (LCM) lines and SLC equipment served by this link. Includes only counts for an active signaling link.</p> <p>BLK - a count of the number of unavailable channels. Includes only counts for an active signaling link to an LCM.</p> <p>USE - a usage measurement in hundred call seconds (ccs) for all channels on this link. Includes only counts for an active signaling link to an LCM.</p> <p>MTCE - the amount of time in hundred call seconds (ccs) that this link is placed in a maintenance state (for example, man-made-busy, system-made-busy, or indirectly out-of-service)</p>
DS1L	RSC-S / ESMA P-side DS-1 Link	<p>PEG - a count of origination attempts from remote lines served by this link. Includes only counts for an active signaling link.</p> <p>BLK - a count of the number of unavailable channels. subtending to this peripheral.</p> <p>USE - a usage measurement in hundred call seconds (ccs) for all channels on this link.</p> <p>MTCE - the amount of time in hundred call seconds (ccs) that this link is placed in a maintenance state (for example, man-made-busy, system-made-busy, or indirectly out-of-service)</p>

Figure 4-136: CPM measurement block (OPM036) flow chart - increment TONE USE register

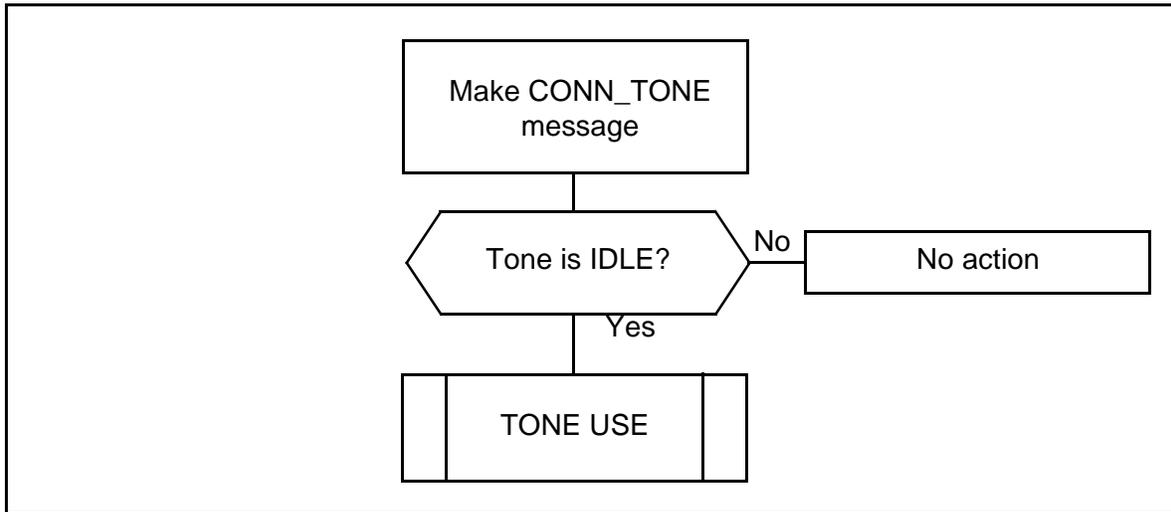


Figure 4-137: CPM measurement block (OPM036) flow chart - decrement TONE USE register

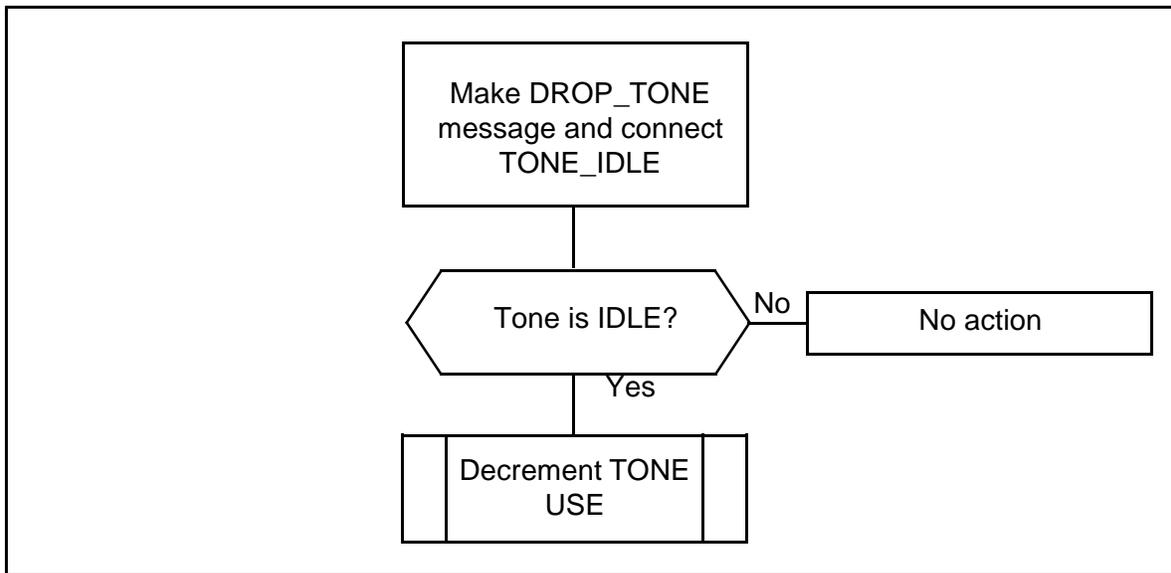


Figure 4-138: CPM measurement block (OPM036) flow chart - increment TONE USE register

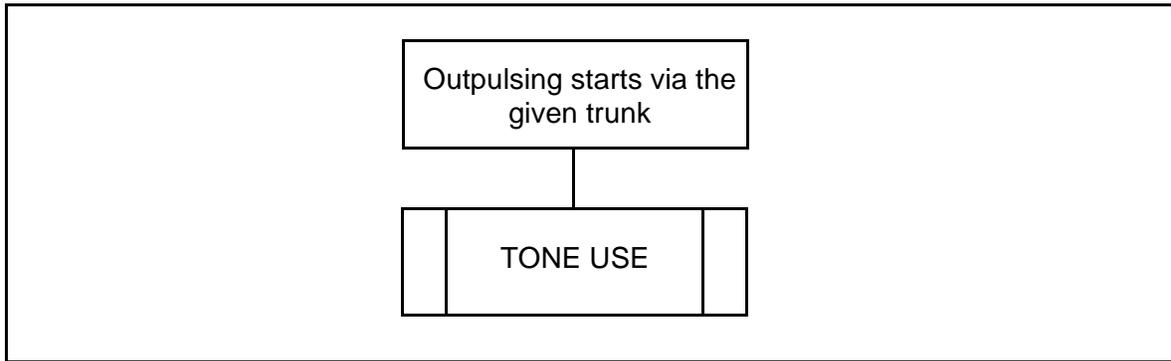


Figure 4-139: CPM measurement block (OPM036) flow chart - increment CLASS Modem Resource USE (CMR USE) register

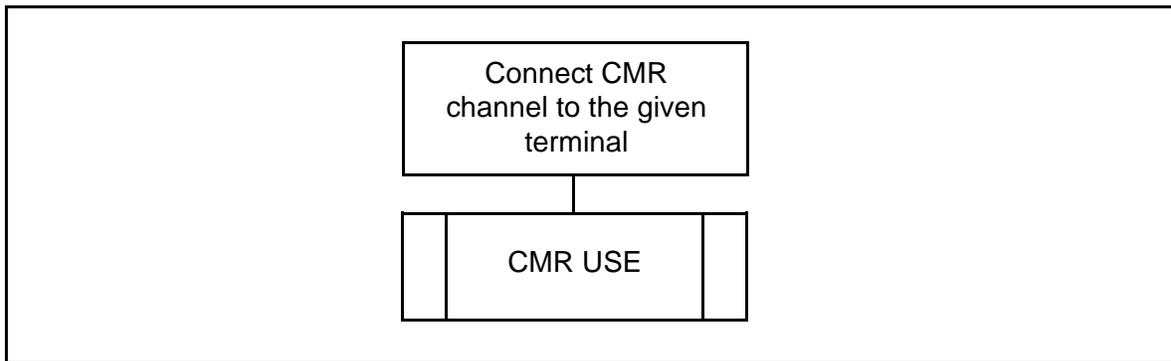


Figure 4-140: CPM measurement block (OPM036) flow chart - decrement CLASS Modem Resource USE (CMR USE) register

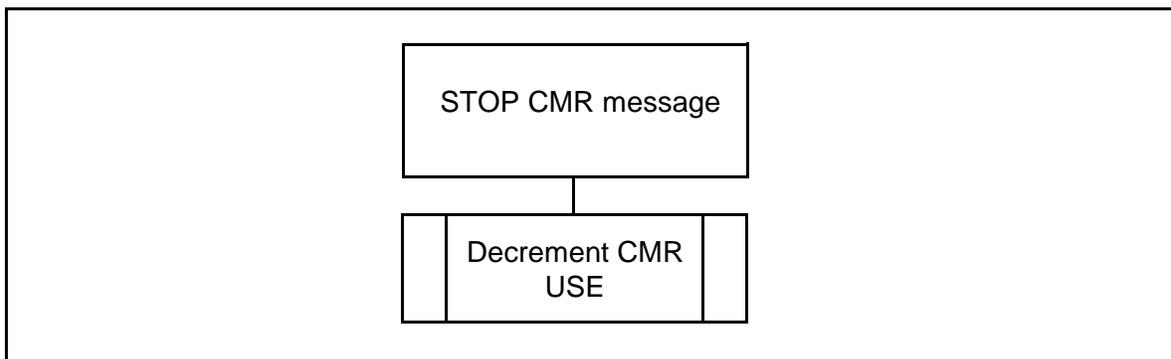


Figure 4-141: CPM measurement block (OPM036) flow chart - CLASS Modem Resource BLK (CMR BLK) register

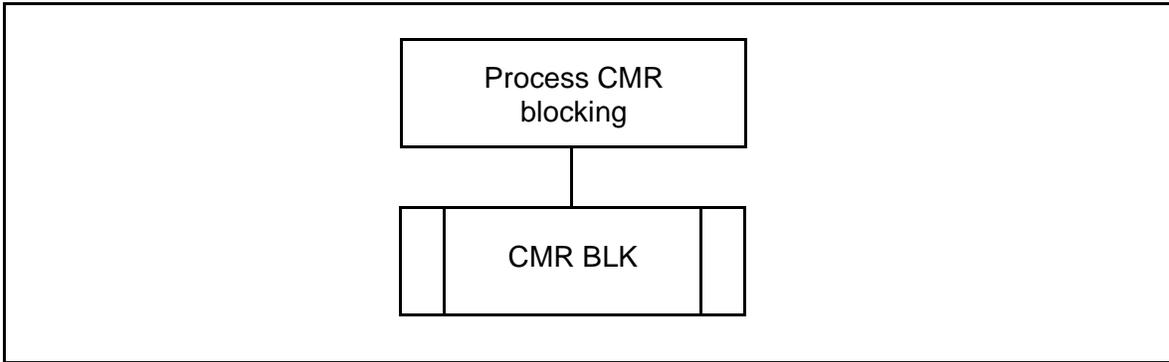


Figure 4-142: CPM measurement block (OPM036) flow chart - CLASS Modem Resource (CMR) PEG or TONE PEG register

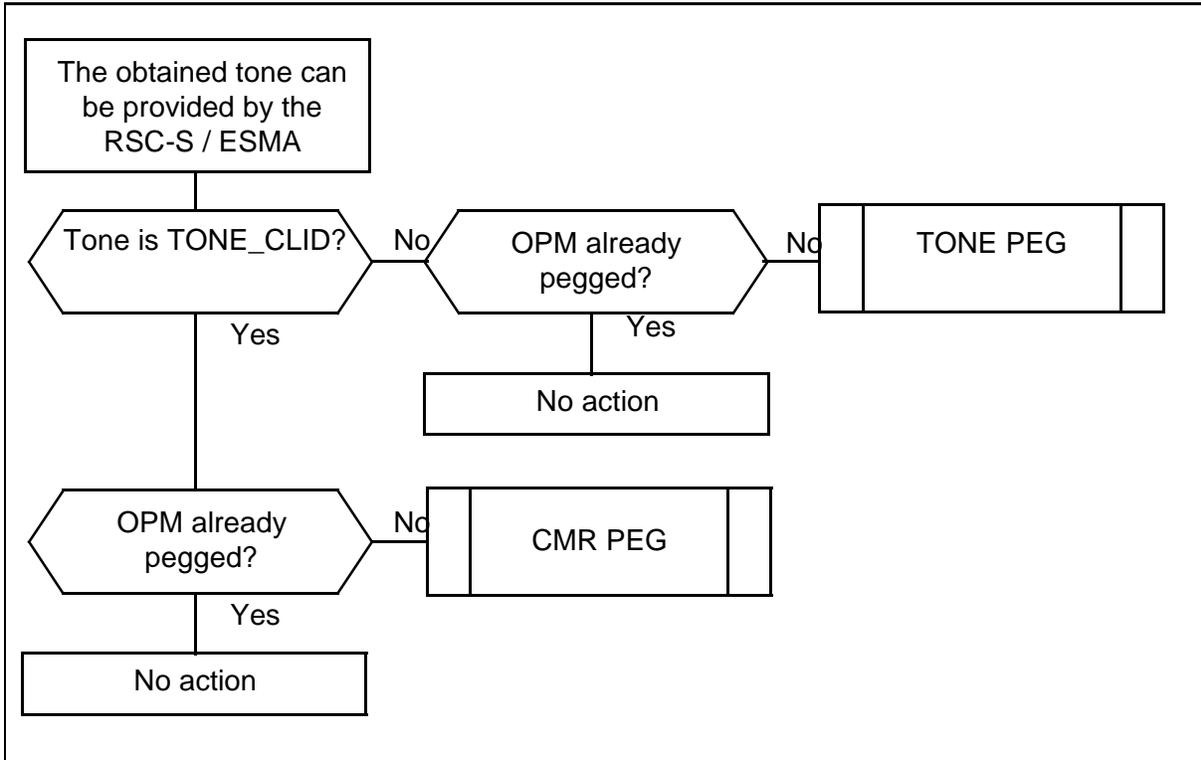


Figure 4-143: CPM measurement block (OPM036) flow chart - increment UTR PEG register

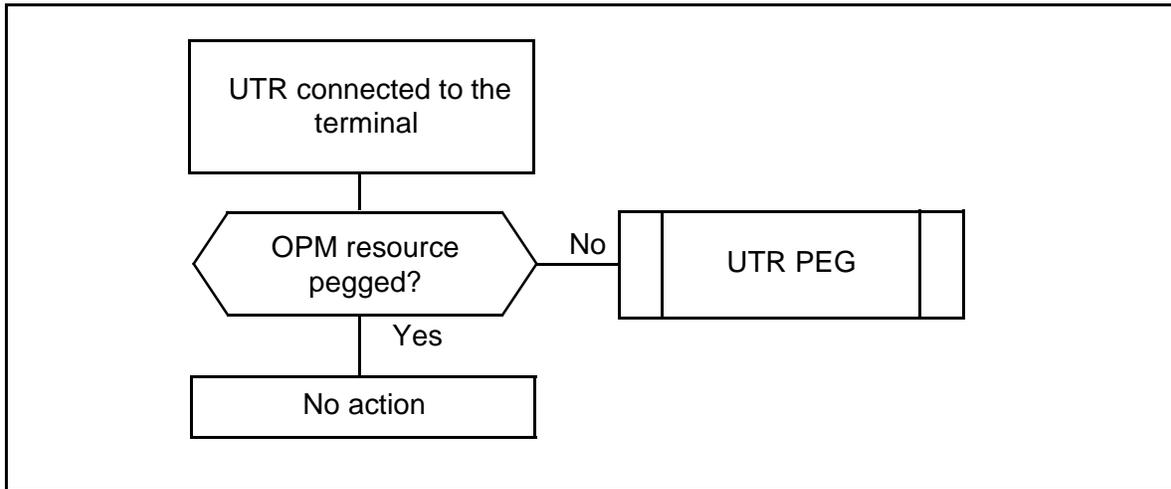


Figure 4-144: CPM measurement block (OPM036) flow chart - increment UTR PEG register

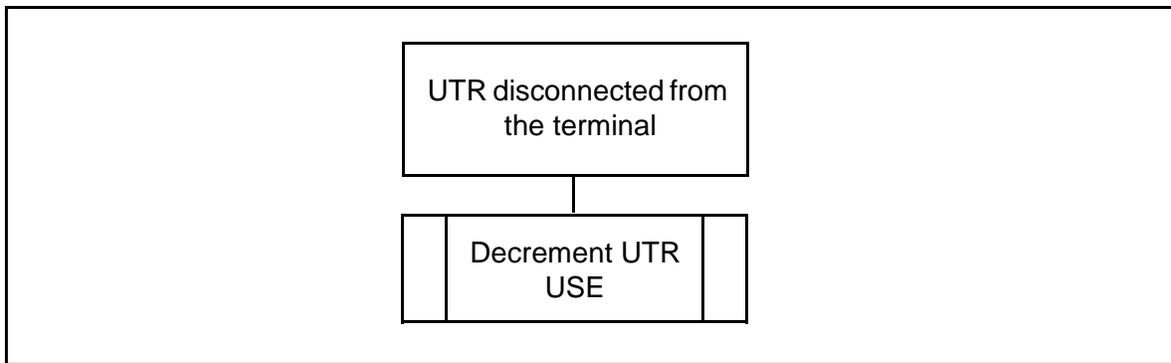


Figure 4-145: CPM measurement block (OPM036) flow chart - increment UTR USE register

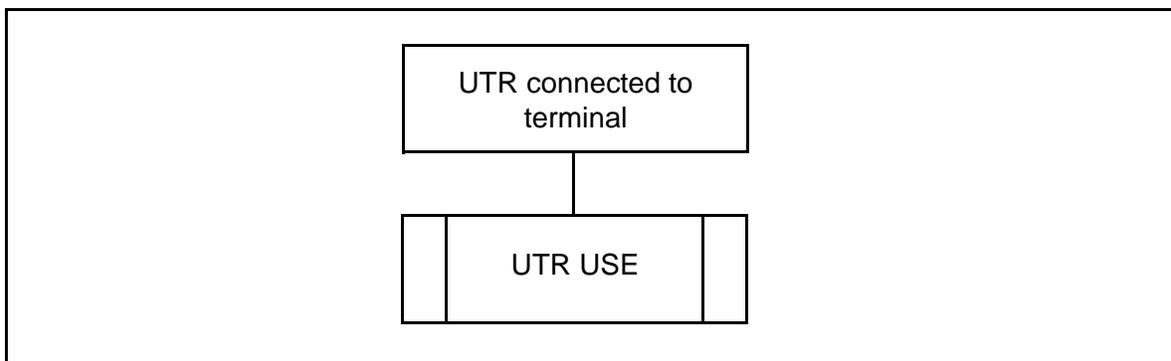


Figure 4-146: CPM measurement block (OPM036) flow chart - UTR BLK (UTR BLK) register

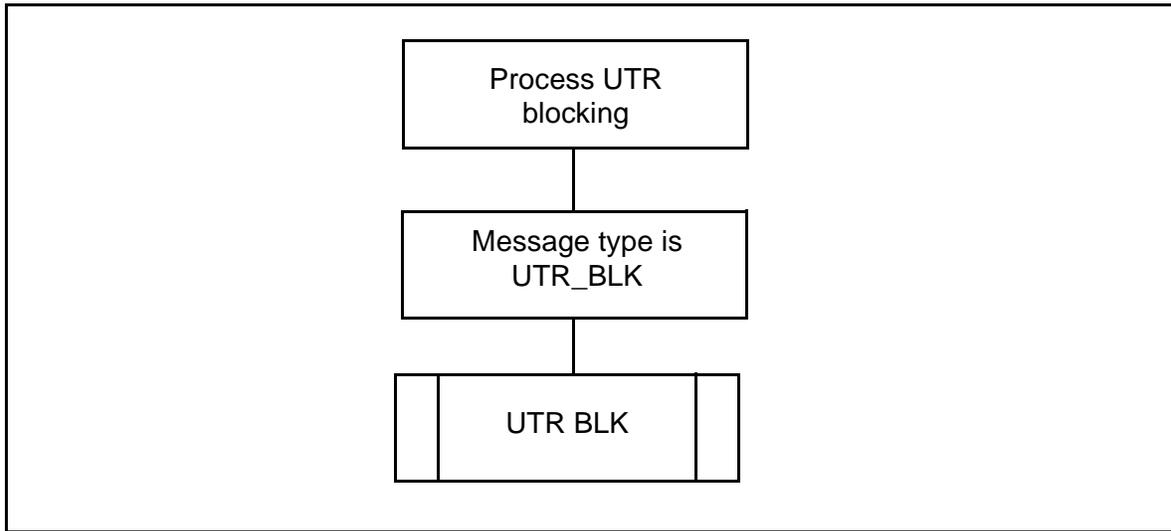


Figure 4-147: CPM measurement block (OPM036) flow chart - DS-30A Link PEG (D30L PEG) register

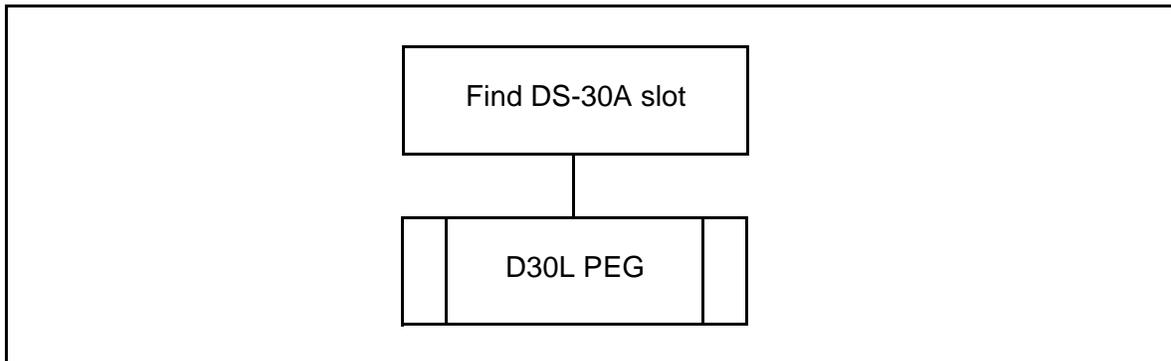


Figure 4-148: CPM measurement block (OPM036) flow chart - increment DS-30A Link USE (D30L USE) register

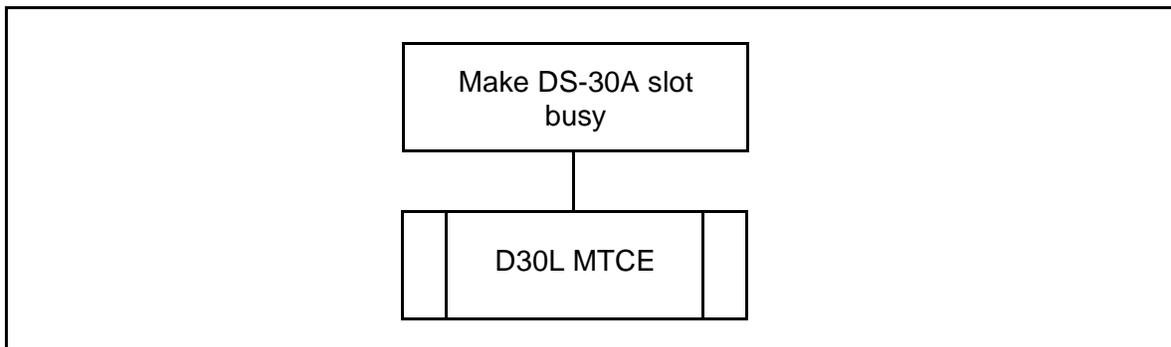


Figure 4-149: CPM measurement block (OPM036) flow chart - increment P-side DS-30A Link USE (D30L USE) register

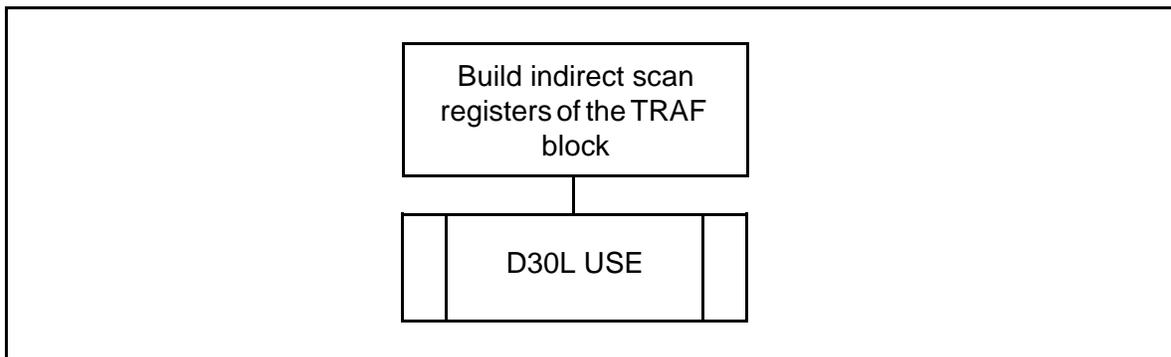


Figure 4-150: CPM measurement block (OPM036) flow chart - decrement P-side DS-30A Link USE (D30L USE) register

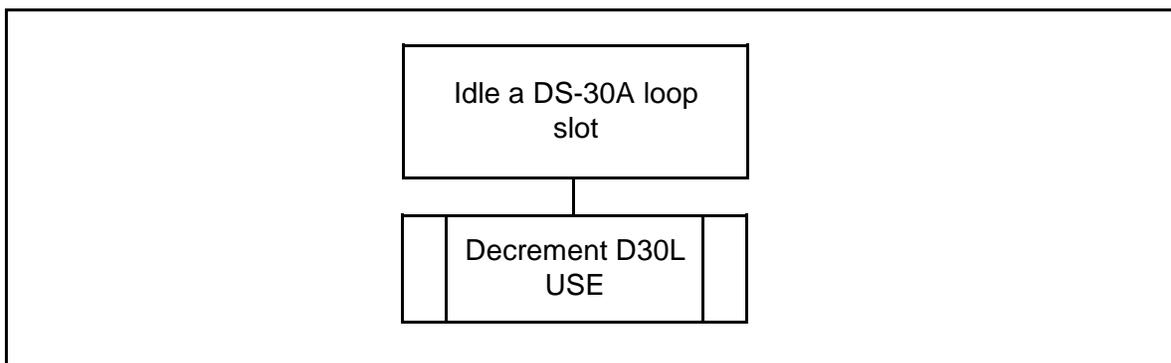


Figure 4-151: CPM measurement block (OPM036) flow chart - P-side DS-30A Link BLK (D30L BLK) register

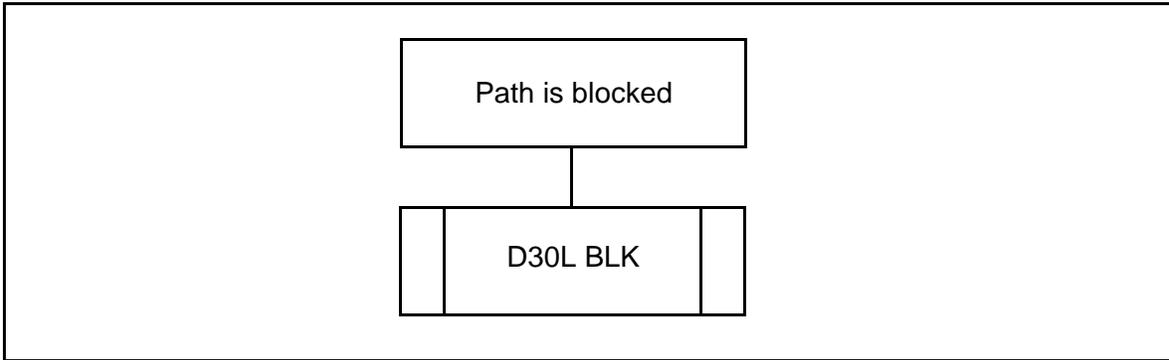


Figure 4-152: CPM measurement block (OPM036) flow chart - P-side DS-1 Link PEG (DS1L PEG) register

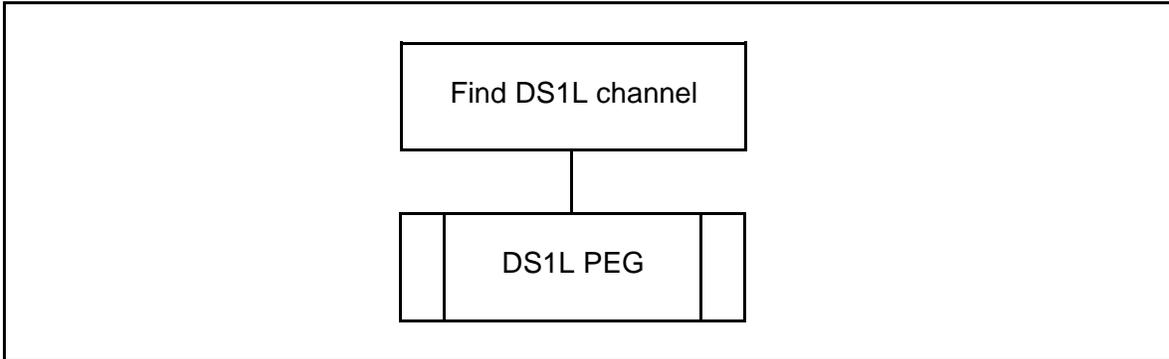


Figure 4-153: CPM measurement block (OPM036) flow chart - increment P-side DS-1 Link USE (DS1L USE) register

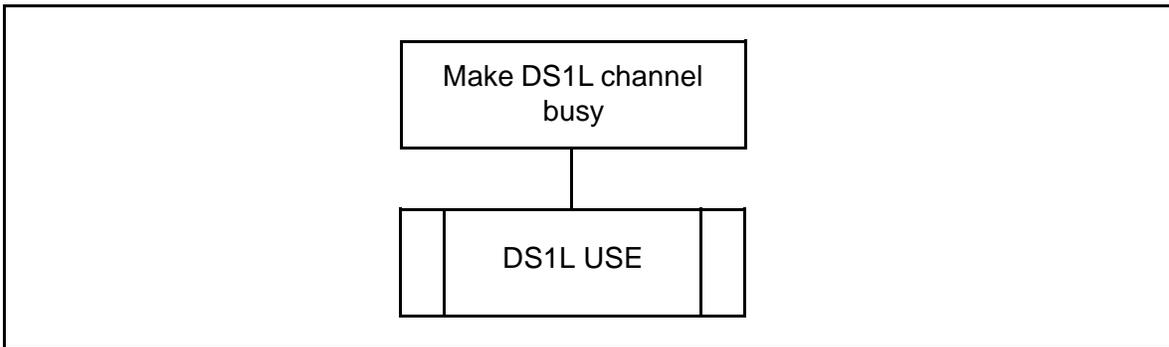


Figure 4-154: CPM measurement block (OPM036) flow chart - increment P-side DS-1 Link USE (DS1L USE) register

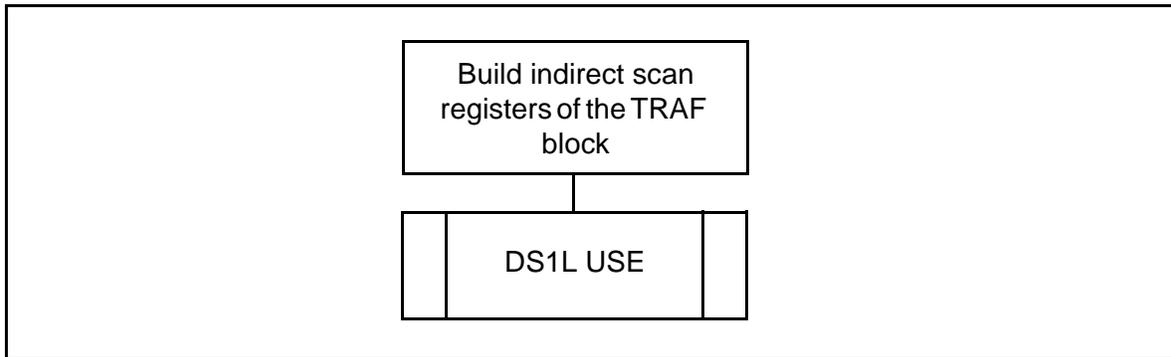


Figure 4-155: CPM measurement block (OPM036) flow chart - decrement P-side DS-1 Link USE (DS1L USE) register

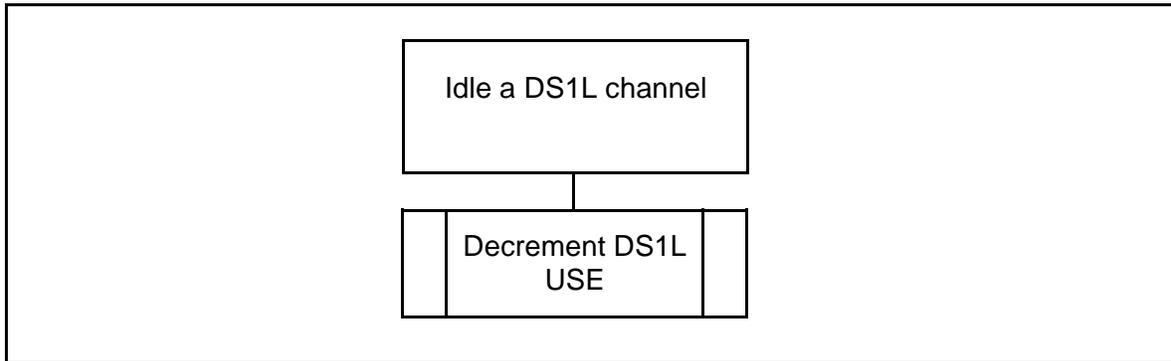
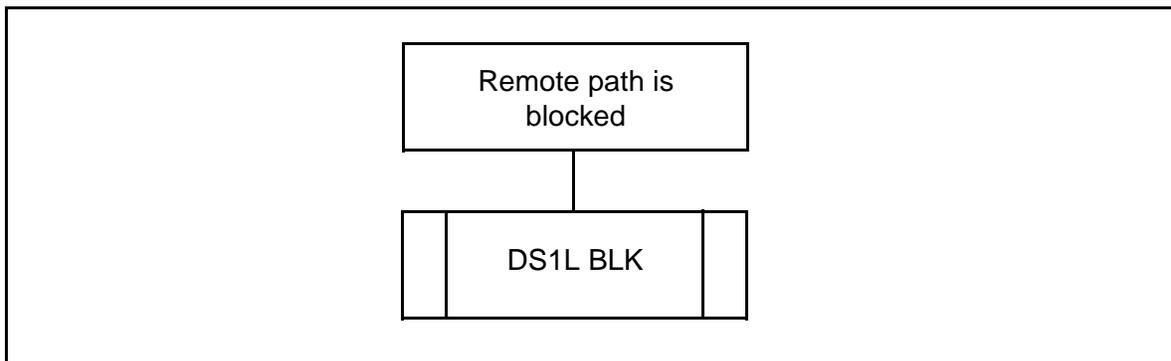


Figure 4-156: CPM measurement block (OPM036) flow chart - P-side DS-1 Link BLK (DS1L BLK) register



### Gateway Screening (GWS measurement block - OPM037)

The Gateway Screening (GWS) measurement block (Figure 4-157 and Table 4-AU) provides an MSU rejection count for specific Gateway Screening rules. A flow chart showing the sequence of events that cause the GWS registers to be incremented and the relationship between the registers within the block is shown in Figure 4-158.

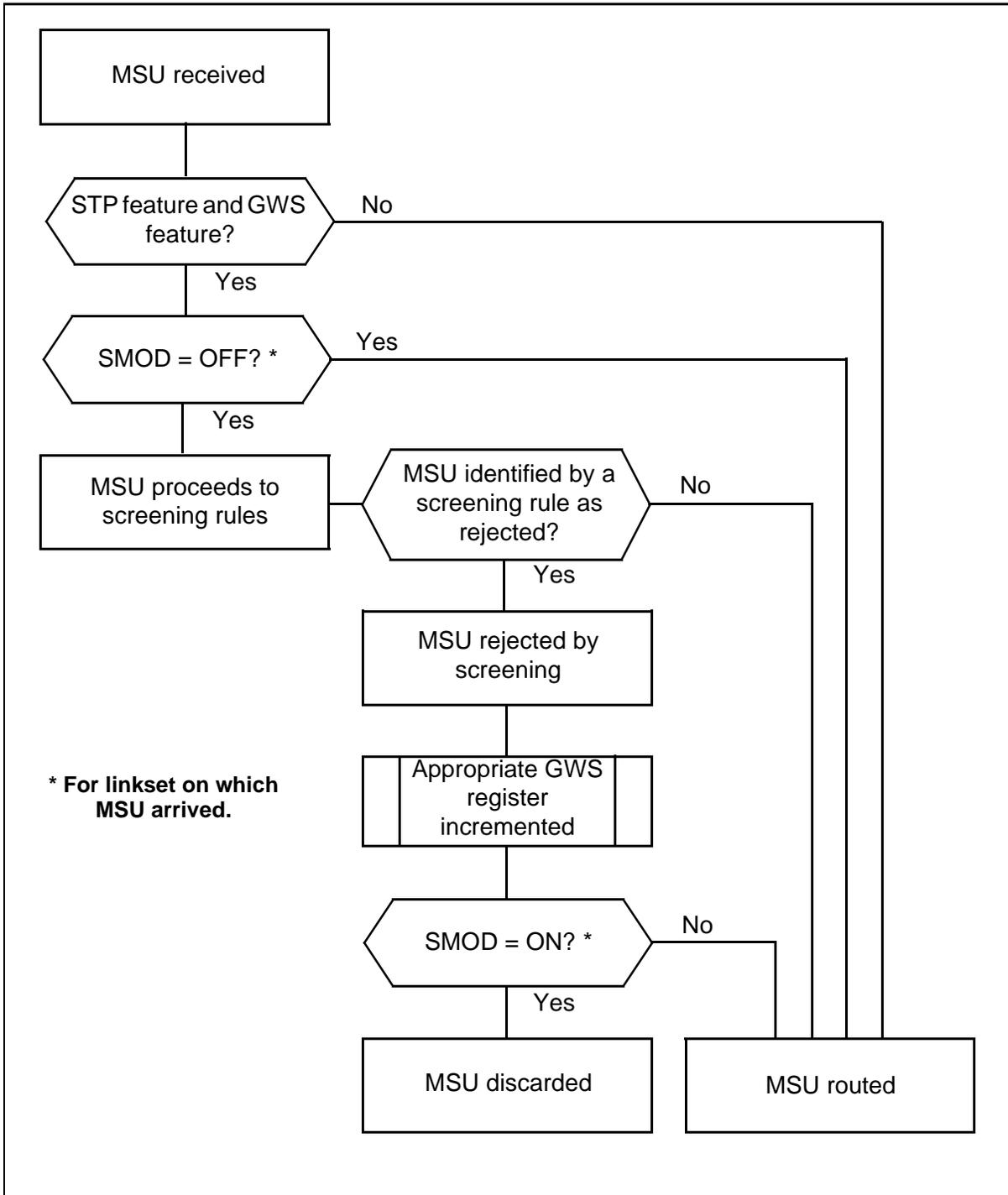
**Figure 4-157: -GWS measurement block (OPM037)**

OPM037	GWS	CAPZ	THU	01/15/95	14:30:00	QTR
INDX	CLSS	RTYP	RNAM	PEG		
001	ALW	DPC	MCI	000000		
002	ALW	DPC	23	000000		
.						
.						
027	ALW	DPC	MCI	000000		

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

Table 4-AU: - GWS measurement block (OPM037) registers	
Mnemonic	Description
INDX	Number used for internal tracking. This number should be ignored.
CLSS	The class of the rule being measured (ALW or BLK)
RTYP	The type of rule being measured (OPC, DPC, SIO, ADF)
RNAM	The name of the rule being measured (user-supplied in Overlay SNET)
PEG	A count of messages (MSU) rejected by this rule.

Figure 4-158: -GWS measurement block (OPM037) flow chart



### Advanced Intelligent Network (AIN measurement block - OPM038)

The Advanced Intelligent Network (AIN) measurement block (Figure 4-159 and Table 4-AV) provides information on the AIN triggers and network operation. Flow charts showing the sequence of events that cause the AIN registers to be incremented and the relationship between the registers within the block are shown in Figures 4-160 through 4-167.

Figure 4-159: -AIN measurement block (OPM038)

OPM038	AIN	CAPZ	THU	03/14/96	14:30:00	QRTR
		PEG				
OHI	00000					
OHD	00000					
SIT	00000					
FCD	00000					
CDP	00000					
DIG	00000					
N11	00000					
TA	00000					
LNPQ	00000					
SEO	00000					
NMBL	00000					
TMOT	00000					
INCM	00000					
INCS	00000					
REID	00000					
WPKG	00000					
MAXL	00000					
OCB	00000					
ONA	00000					

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-AV: - AIN measurement block (OPM038) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
OHI	PEG - Number of off-hook immediate triggers encountered
OHD	PEG - Number of off-hook delay triggers encountered
PRI	PEG - Number of ISDN channel setup PRI triggers encountered
SIT	PEG - Number of shared interoffice trunk triggers encountered
BRI	PEG - Number of ISDN BRI feature activation indicator triggers encountered
FCD	PEG - Number of feature code triggers encountered
CDP	PEG - Number of customized dialing plan triggers encountered
DIG	PEG - Number of Public Office Dialing Plan 3 through 10-digit triggers encountered
N11	PEG - Number of Public Office Dialing Plan N11 triggers encountered
AFR	PEG - Number of automatic flexible routing triggers encountered
TA	PEG - Number of termination attempt triggers encountered
LNPQ	PEG - Number of Local Number Portability SCP queries initiated by this switch
SEO	PEG - Number of AIN calls that have been received from a subtending end office
NMBL	PEG - Network management control blocks calls
TMOT	PEG - Number of time-outs at the SSP awaiting a reply from the SCP, HLR, or VLR
INCM	PEG - Number of invalid SCP, HLR, or VLR command messages (for example, bad data)
INCS	PEG - Number of invalid SCP, HLR, or VLR command sequences
REID	PEG - Number of return errors or reject components
WPKG	PEG - Number of times AMA data arrived in error (that is, without an AMAspID included in the message, or in the wrong package or component type)
MAXL	PEG - Number of times the maximum length of AMA TCAP parameters was exceeded
OCB	PEG - Number of O_Called_Party_Busy EDP triggers encountered
ONA	PEG - Number of O_No_Answer EDP triggers encountered

Figure 4-160: -AIN measurement block (OPM038) flow chart - trigger detection point encountered

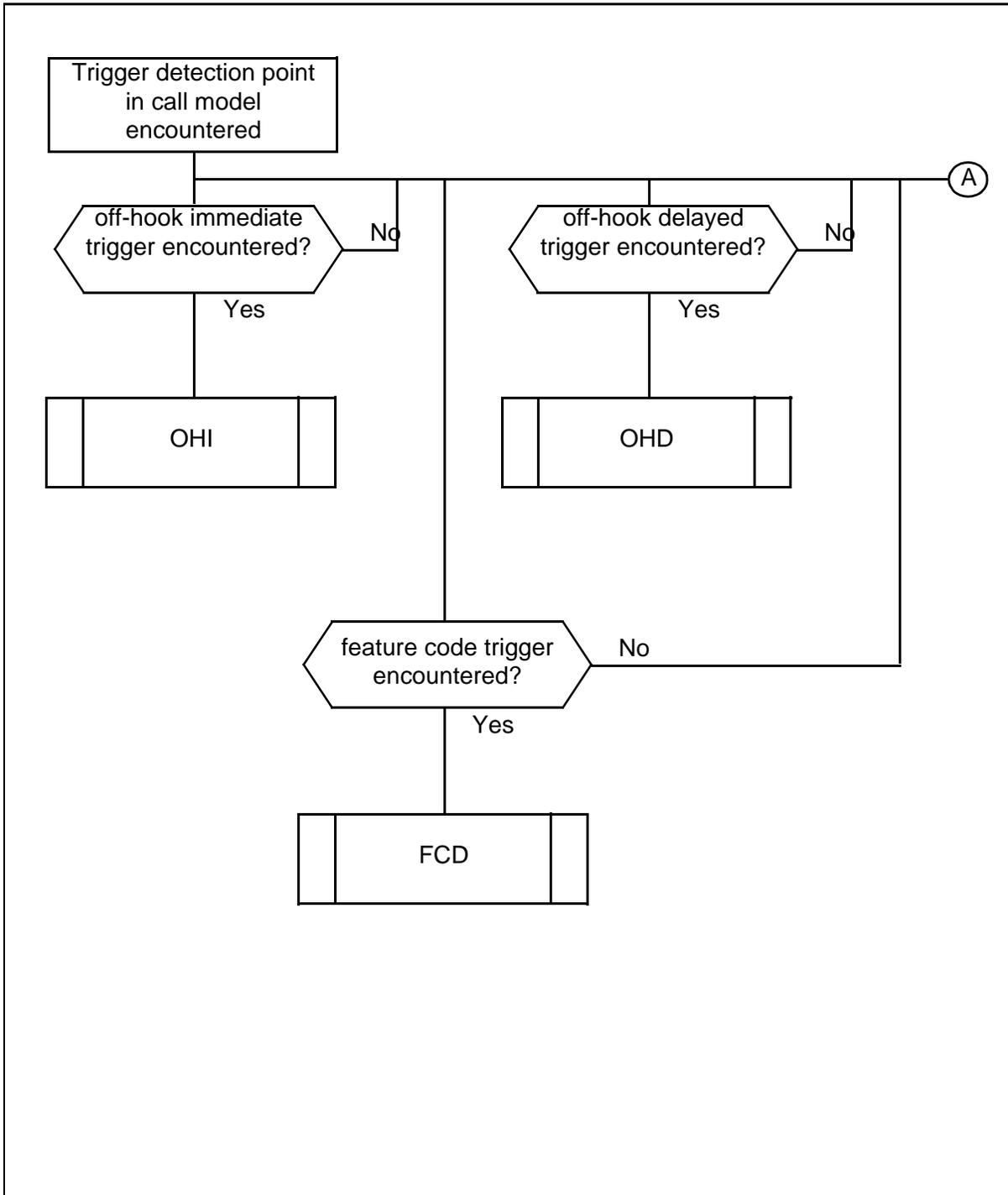


Figure 4-161: AIN measurement block (OPM038) flow chart - trigger detection point encountered (continued)

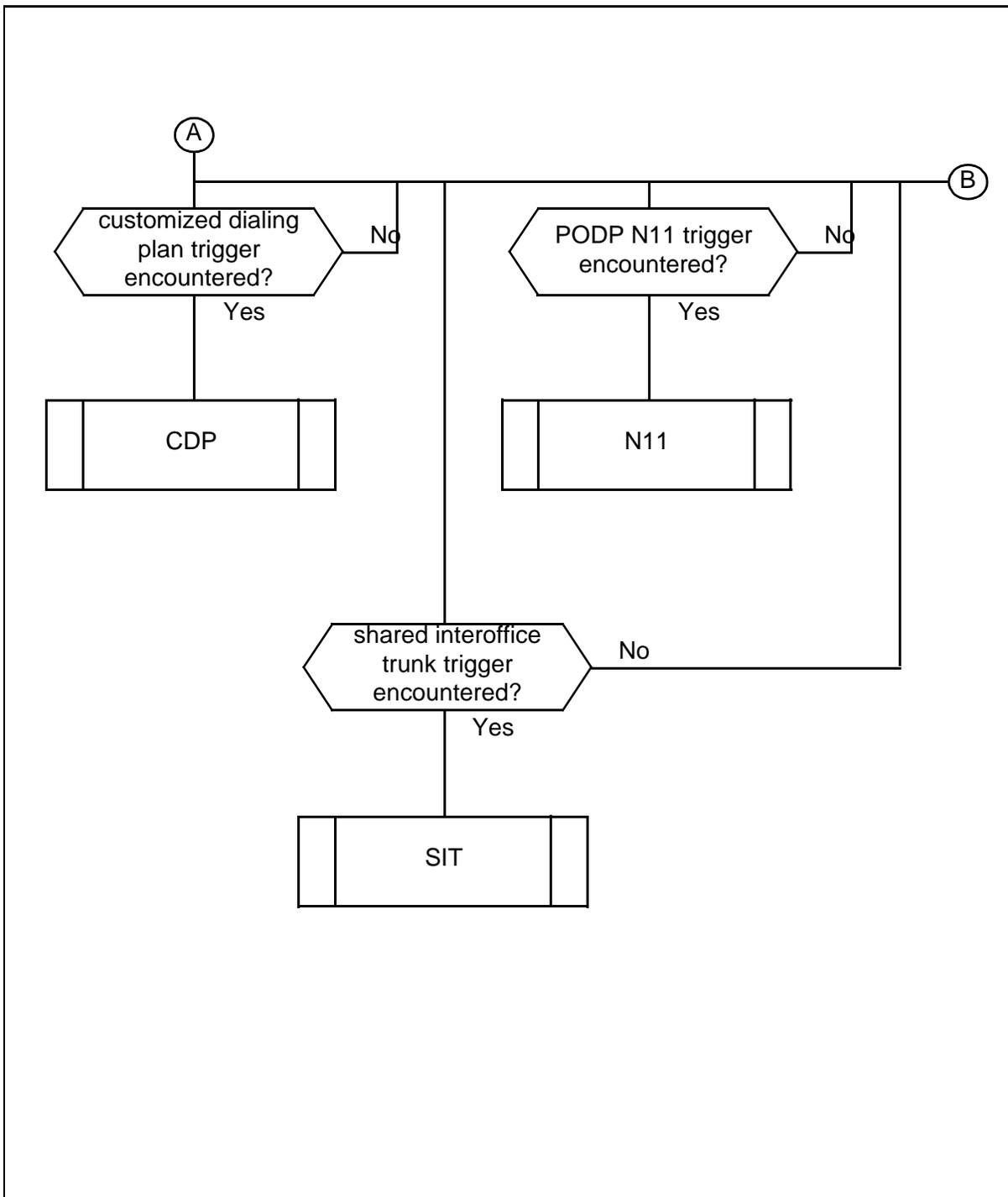


Figure 4-162: AIN measurement block (OPM038) flow chart - trigger detection point encountered (continued)

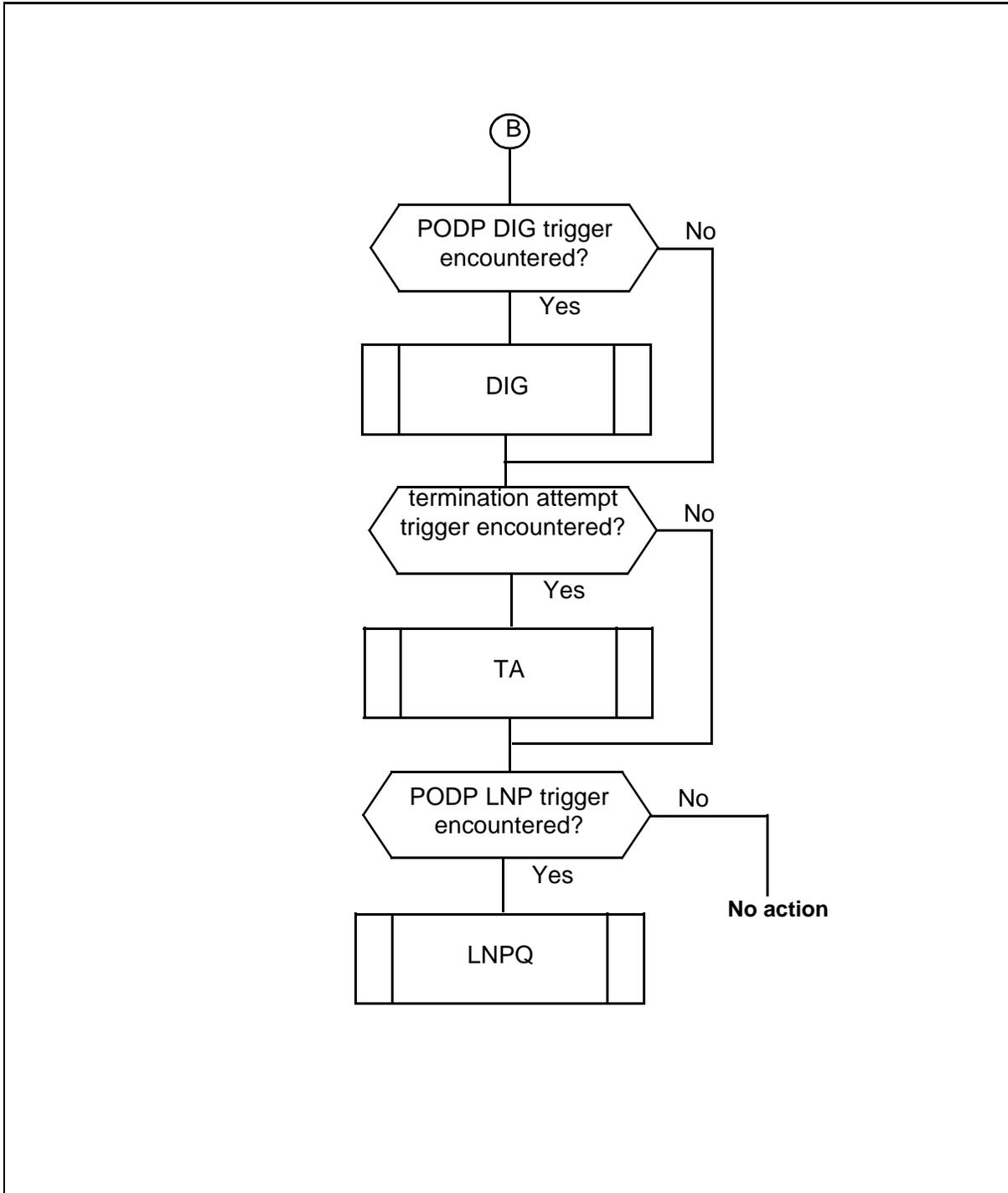


Figure 4-163: -AIN measurement block (OPM038) flow chart - call processing

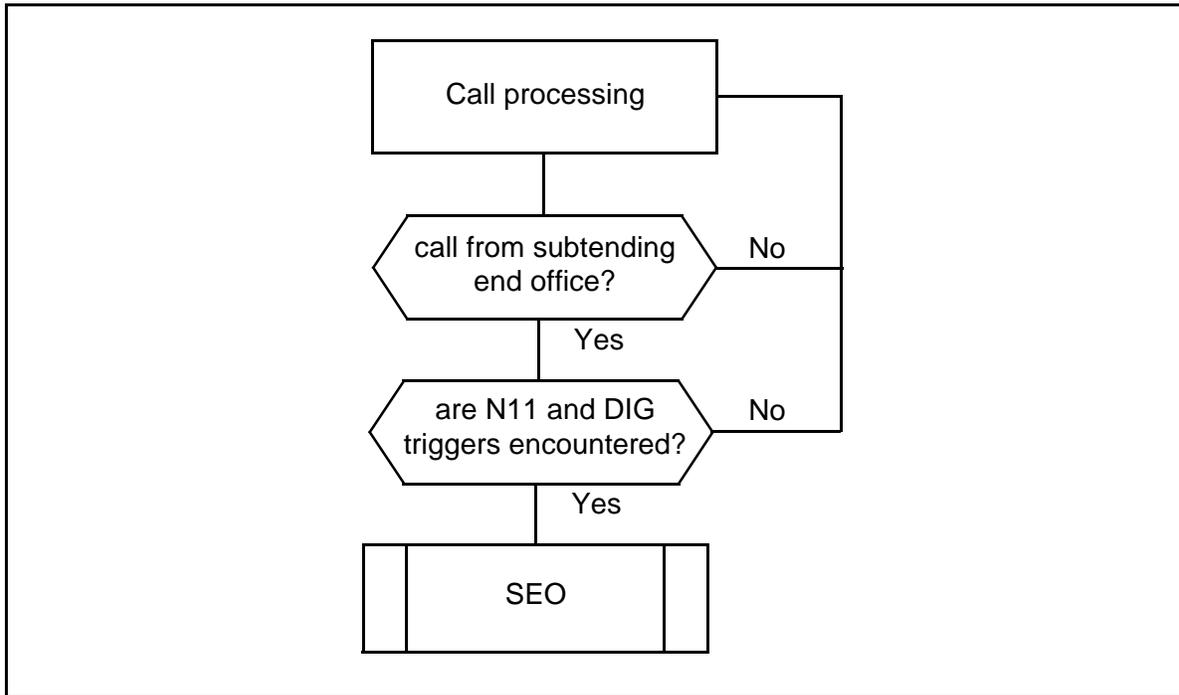


Figure 4-164: -AIN measurement block (OPM038) flow chart - at the trigger detection point

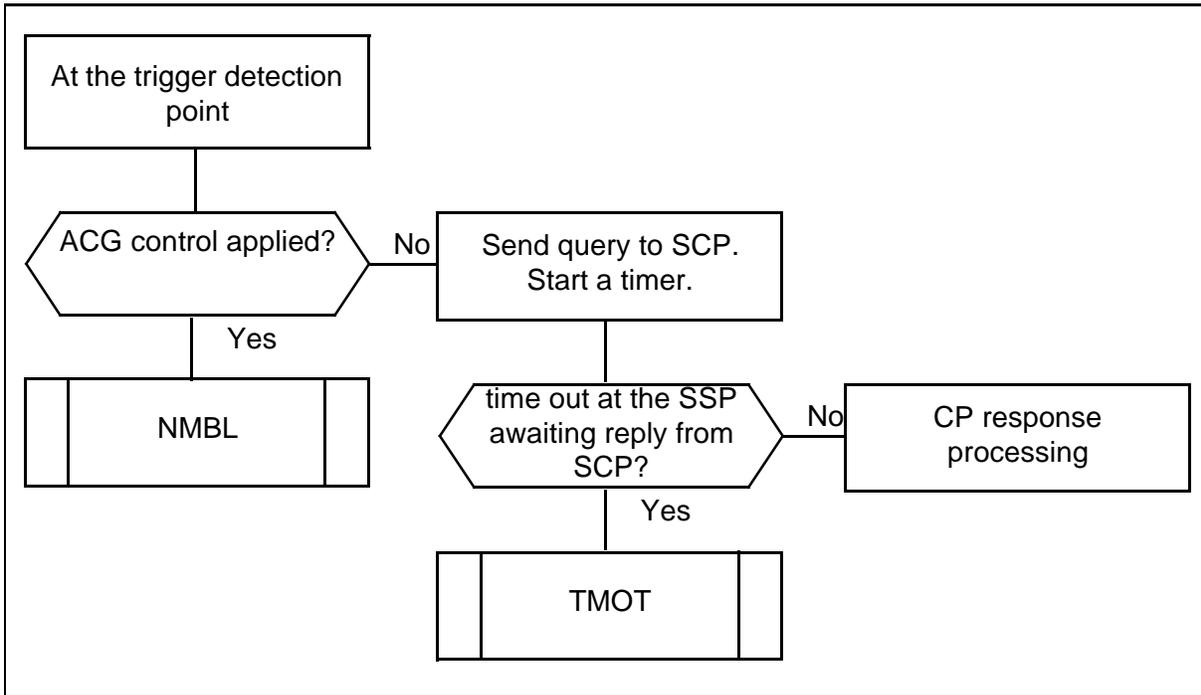


Figure 4-165: -AIN measurement block (OPM038) flow chart - received message from SCP

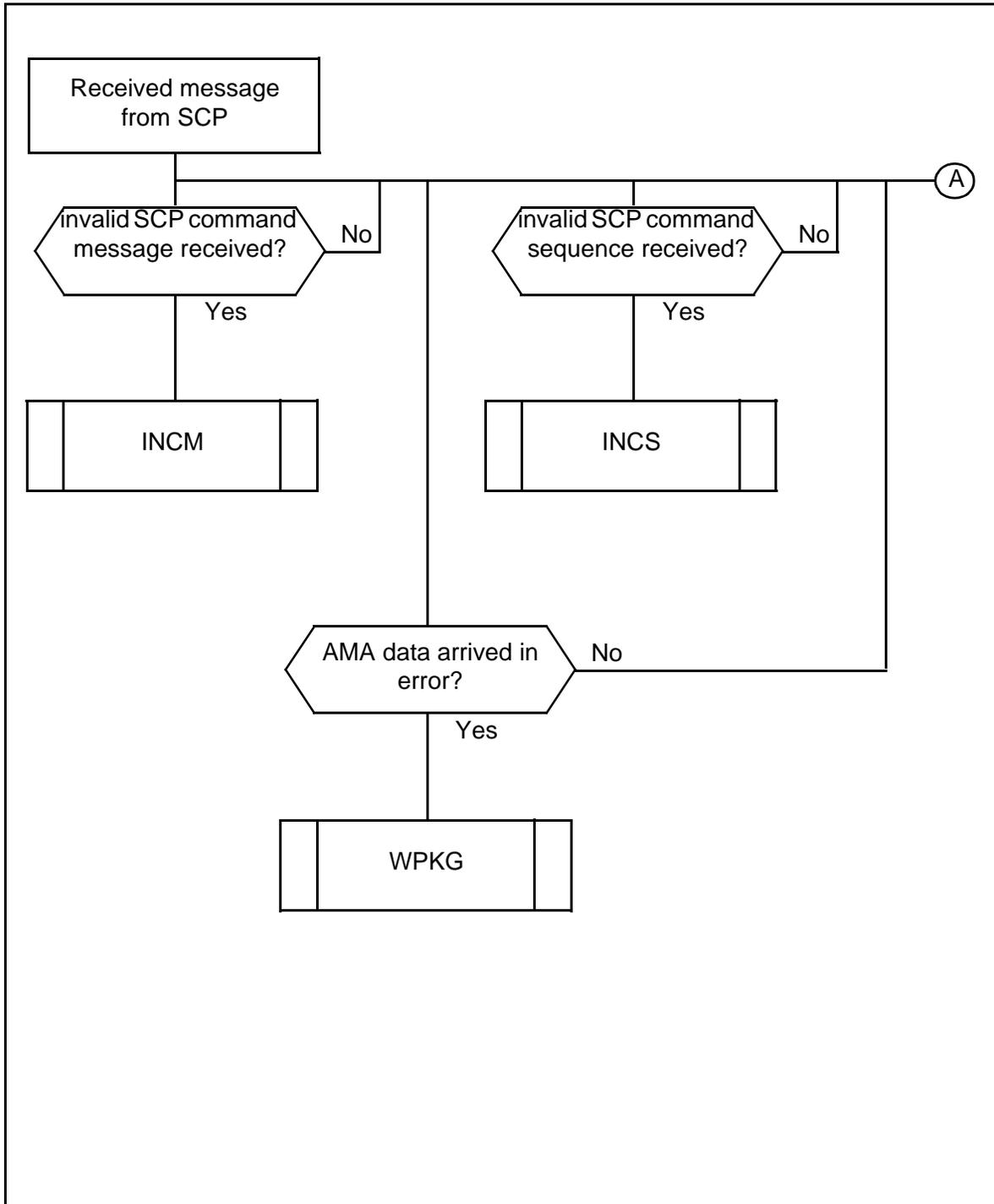


Figure 4-166: AIN measurement block (OPM038) flow chart - received message from SCP (continued)

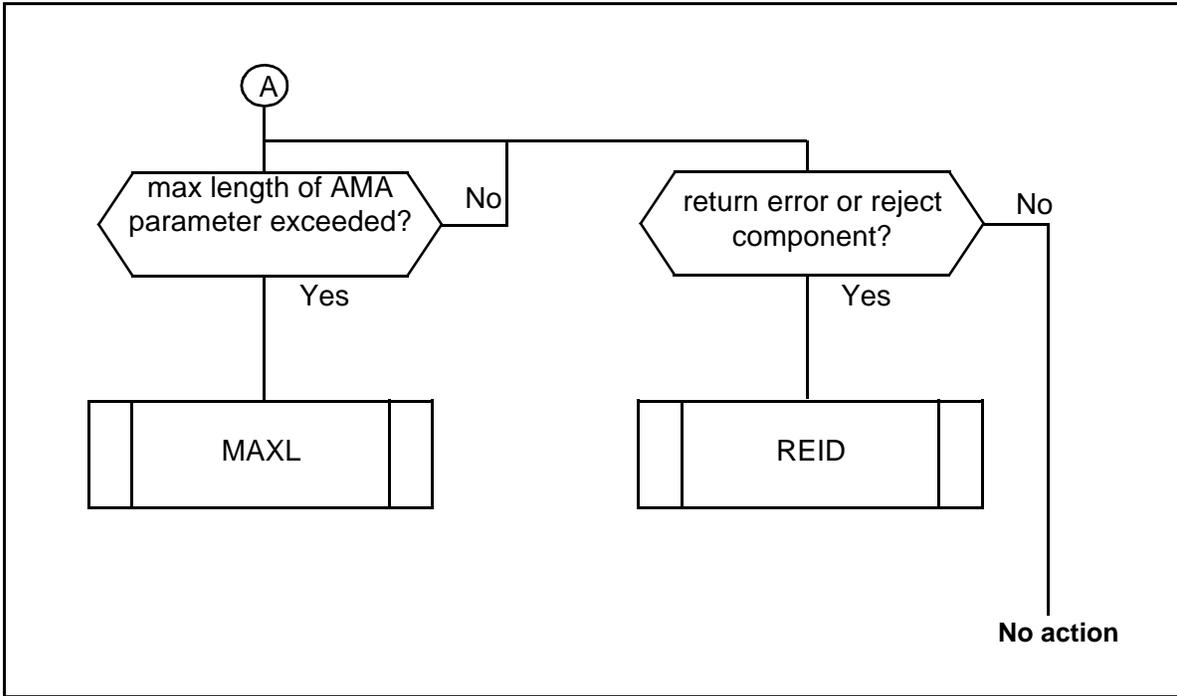
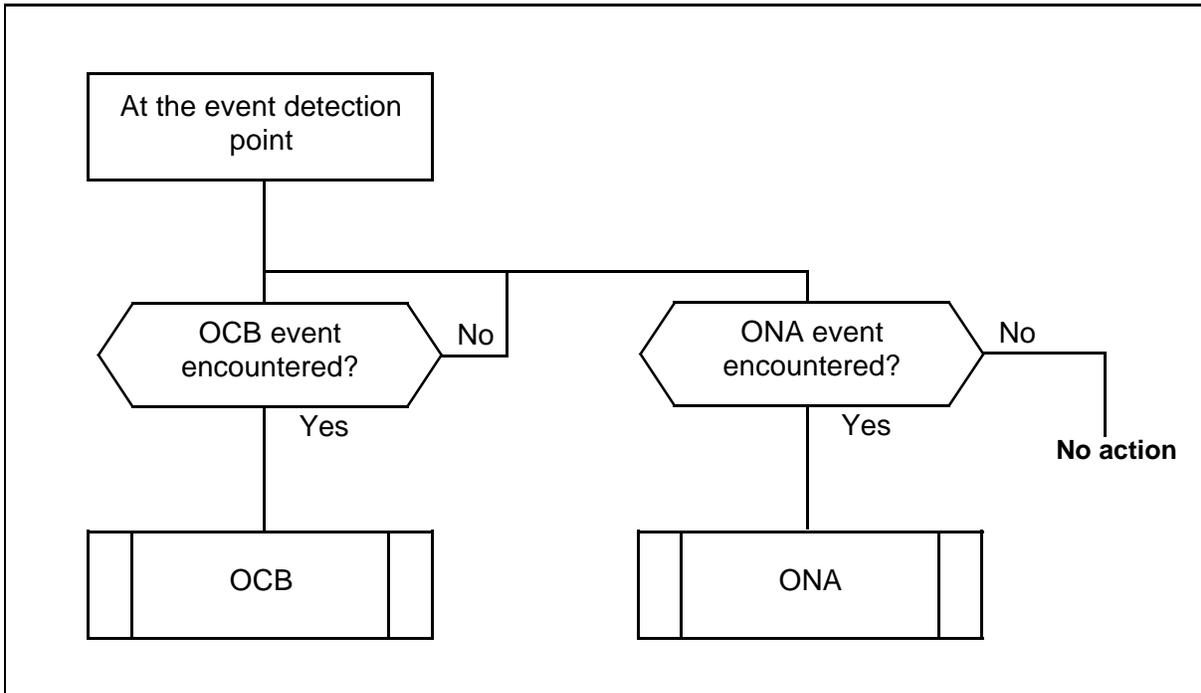


Figure 4-167: -AIN measurement block (OPM038) flow chart - Wireless EDP triggers encountered



## ISDN Line (ISLN measurement block - OPM039)

The ISDN Line (ISLN) measurement block (Figure 4-168 and Table 4-AW) provides an ISDN frame transmission and receive count for the D- and Bd-channels of up to 32 individual ISDN lines. Flow charts showing the sequence of events that cause the ISLN registers to be incremented and the relationship between the registers within the block, for transmit and receive, are shown in Figures 4-170 and 4-171.

**Figure 4-168: -ISLN measurement block (OPM039)**

```

OPM039 ISLN  CAPZ  THU   04/15/96   14:30:00  QRTR
      PEG
      SITE LCE B S LSG L [OR] IDE N L [OR] HUBE B S P
D-CH
  FRTX  000000
  FRRX  000000
  FRXT  000000
  RNRT  000000
  RNRR  000000
BD-CH
  RNRR  000000

```

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-AW: - ISLN measurement block (OPM039) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
FRTX	PEG - Number of frames transmitted by the D-channel handler (DCH)
FRRX	PEG - Number of frames received by the DCH
FRXT	PEG - Number of retransmitted frames transmitted by the DCH
RNRT	PEG - Number of Received Not Ready (RNR) frames generated and transmitted by the DCH
RNRR	PEG - For a D-channel: number of RNR frames received by the DCH. For a Bd-channel: number of RNR frames generated by the packet handler and received through the DCH.

Figure 4-169: -ISLN measurement block (OPM039) flow chart - Message Transmit

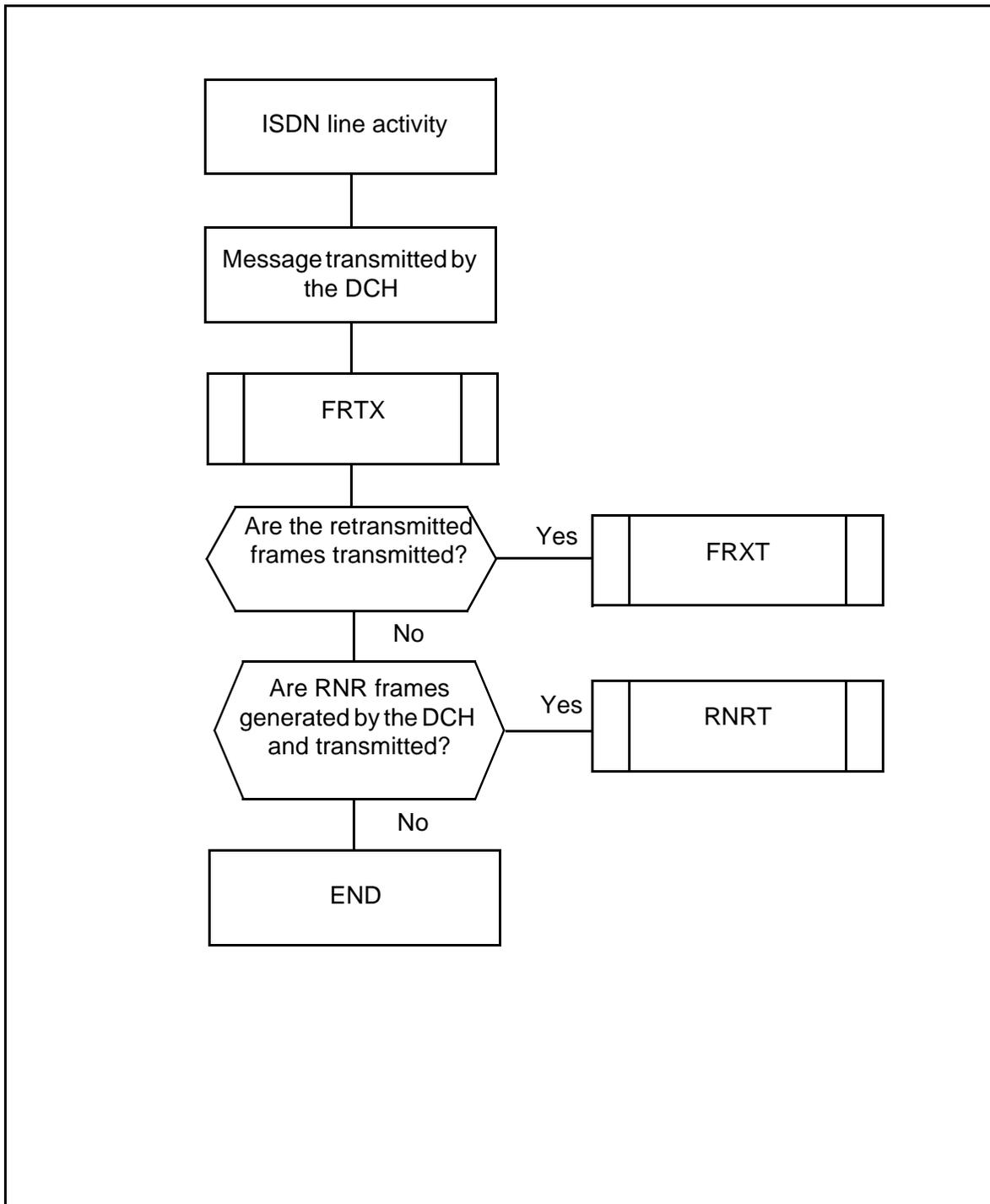
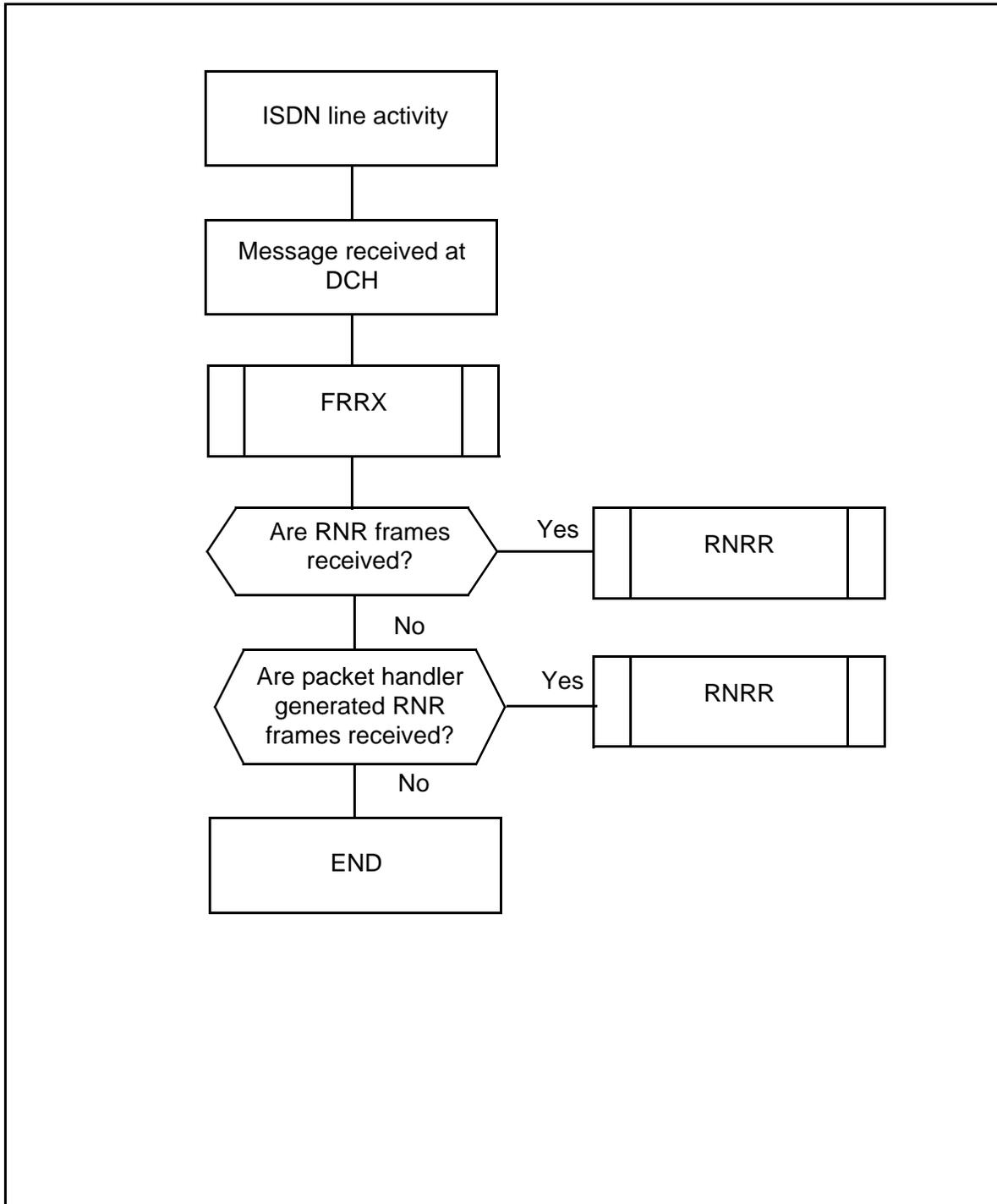


Figure 4-170: -ISLN measurement block (OPM039) flow chart - Message Receive



### ISDN Drawer (IDRW measurement block - OPM040)

The ISDN Drawer (IDRW) measurement block (Figure 4-171 and Table 4-AX) provides an ISDN frame transmission and receive count for the D- and Bd-channels of an ISDN drawer. Flow charts showing the sequence of events that cause the IDRW registers to be incremented and the relationship between the registers within the block are shown in Figures 4-174 through 4-180.

**Figure 4-171: -IDRW measurement block (OPM040)**

OPM040	IDRW	CAPZ	THU	04/15/96	14:30:00	QRTR
		PEG				
		SITE	LCE	B	S	LSG [OR] HUBE B S P
		ORIG	00000			
		TERM	00000			
		NCAD	00000			
		NCAR	00000			
		D-CH				
		FRTX	00000			
		FRRX	00000			
		FRXT	00000			
		RNRT	00000			
		RNRR	00000			
		BD-CH				
		FRTX	00000			
		FRRX	00000			
		FRXT	00000			
		RNRT	00000			
		RNRR	00000			

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-AX: - IDRW measurement block (OPM040) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
ORIG	PEG - Originating setup attempts. The number of subscriber attempts to setup circuit-mode calls where the switch receives at least one digit of addressing information.
TERM	PEG - Terminating setup attempts. The number of ISDN call completion attempts terminating in the DMS-10 switch. A count is made when the switch recognizes the intended destination.
NCAD	PEG - Number of NCA_data messages sent
NCAR	PEG - Number of NCA_data messages received
FRTX	PEG - For a D-channel: number of frames transmitted by the D-channel handler (DCH). For a Bd-channel: number of frames transmitted to the packet handler (PH) on a Bd-type D-channel.
FRRX	PEG - For a D-channel: number of frames frames received by the DCH. For a Bd-channel: number of frames received from the PH on a Bd-type D-channel.
FRXT	PEG - For a D-channel: number of retransmitted frames transmitted by the DCH. For a Bd-channel: number of retransmitted frames transmitted to the PH on a Bd-type D-channel.
RNRT	PEG - For a D-channel: number of Received Not Ready (RNR) frames generated and transmitted by the DCH. For a Bd-channel: number of RNR frames generated by the DCH and transmitted to the PH.
RNRR	PEG - For a D-channel: number of RNR frames received by the DCH. For a Bd-channel: number of RNR frames generated by the packet handler and received through the DCH.

Figure 4-172: -IDRW measurement block (OPM040) flow chart - Call Origination and Termination

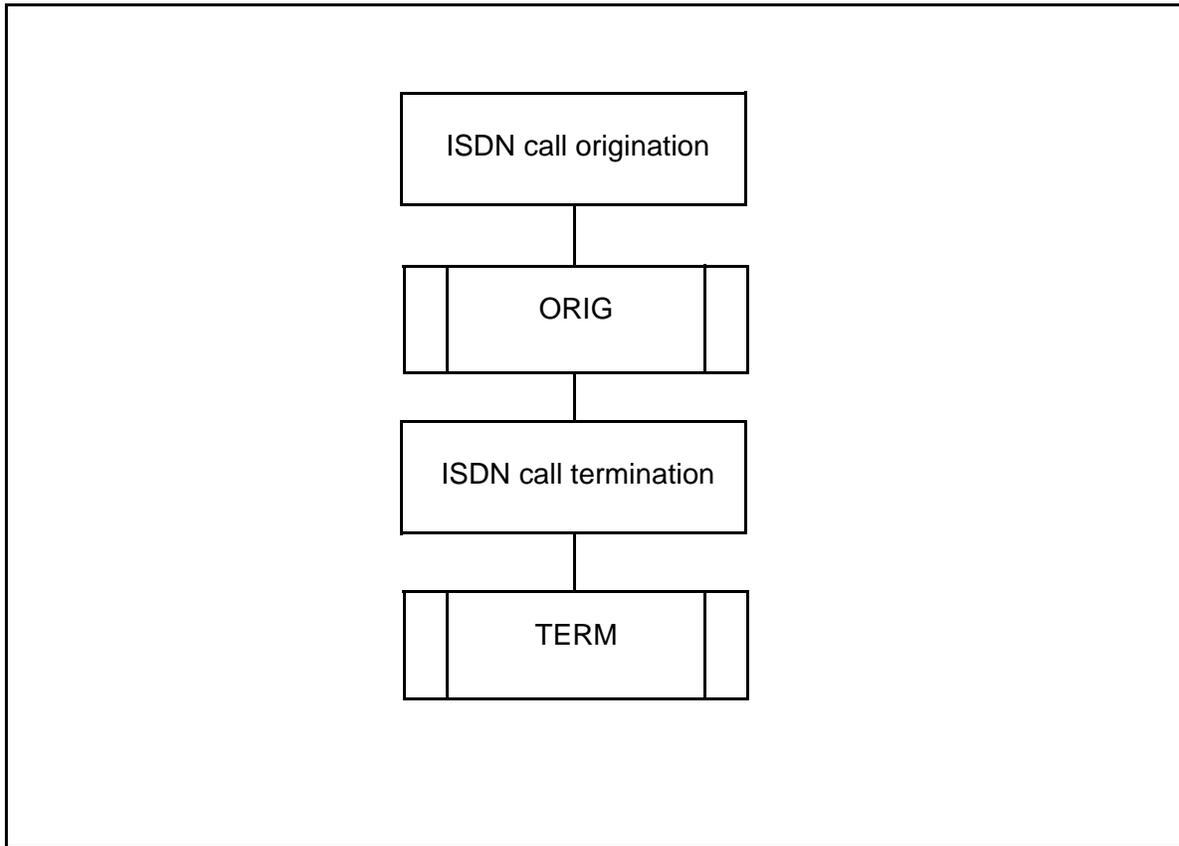


Figure 4-173: -IDRW measurement block (OPM040) flow chart - D-Channel Message Transmit

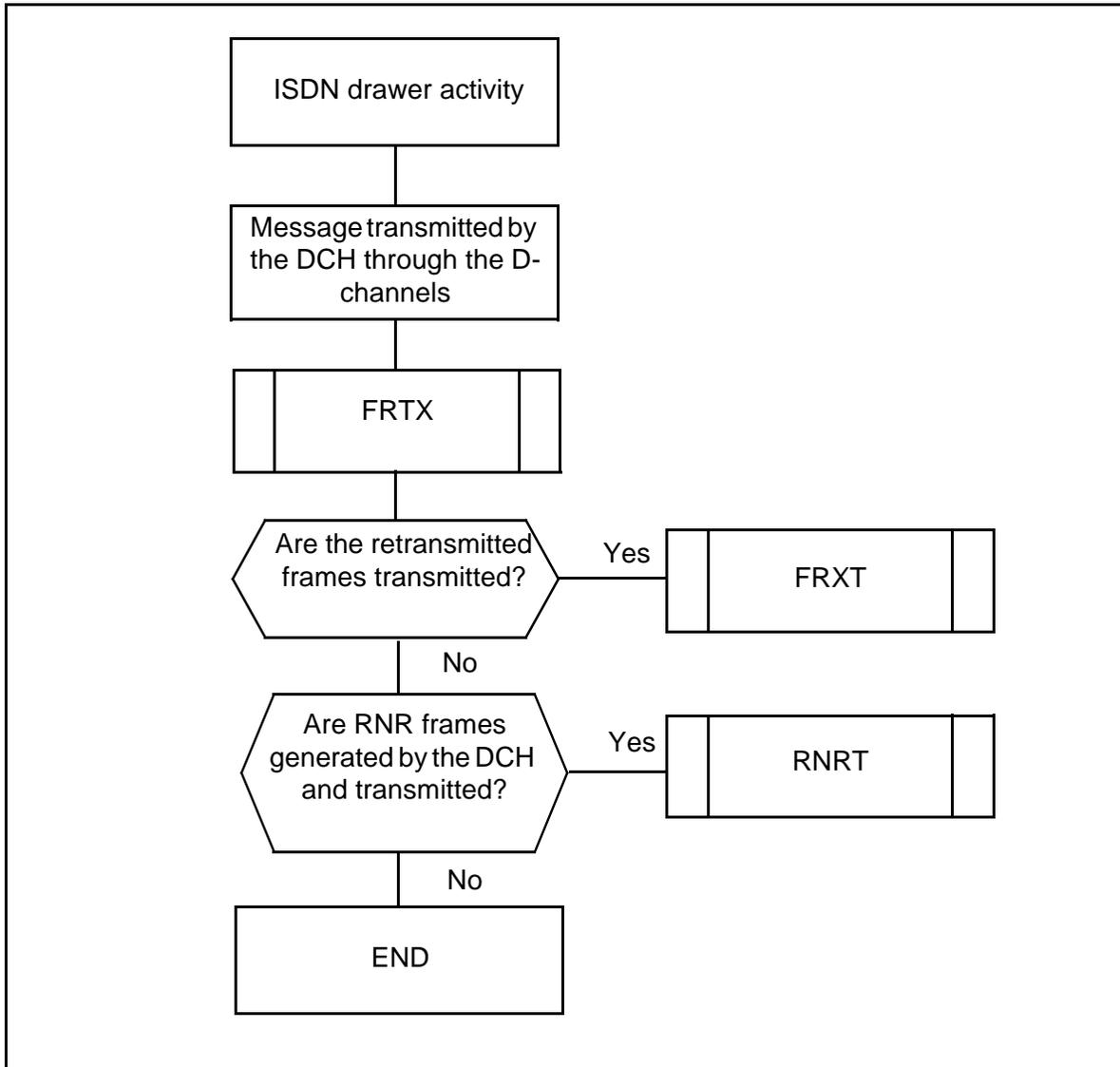


Figure 4-174: -IDRW measurement block (OPM040) flow chart - D-Channel Message Receive

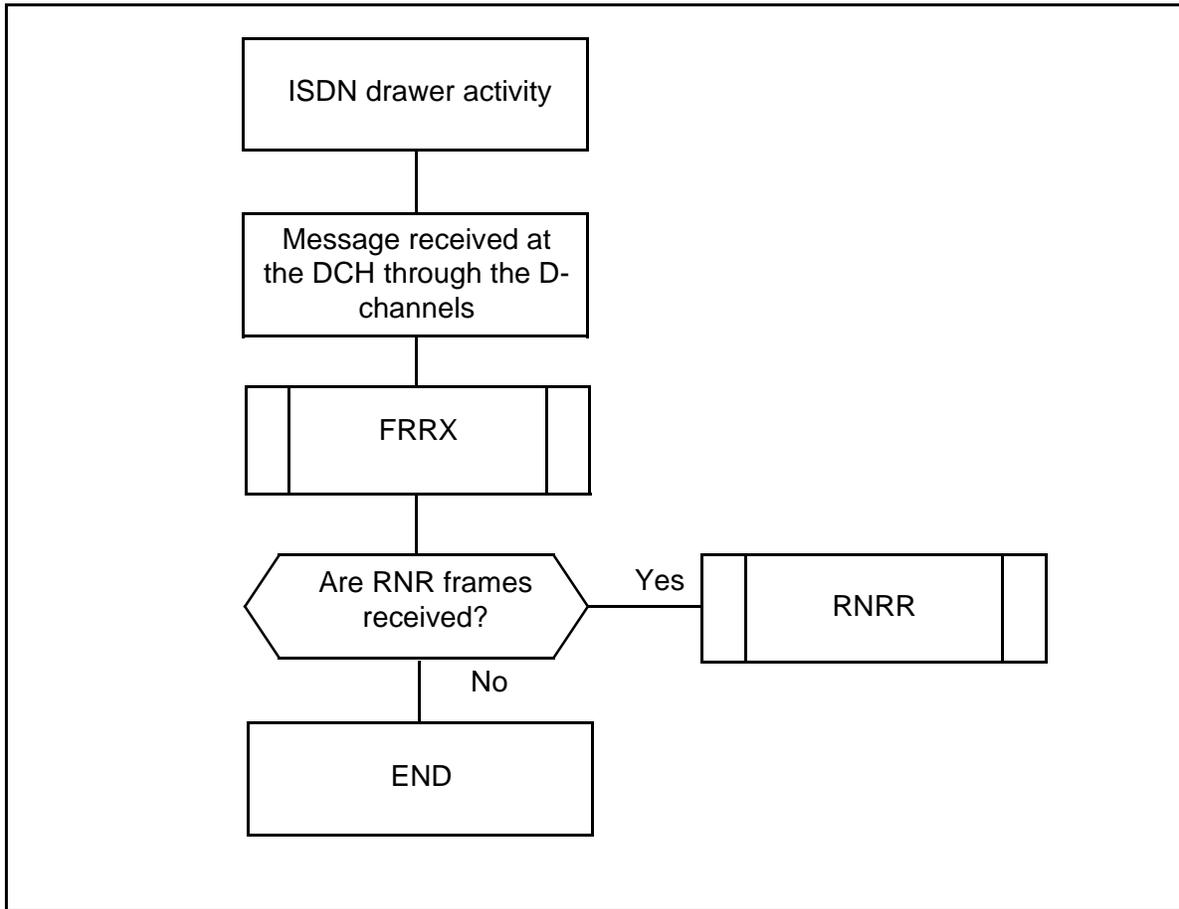


Figure 4-175: -IDRW measurement block (OPM040) flow chart - Bd-Channel Message Transmit

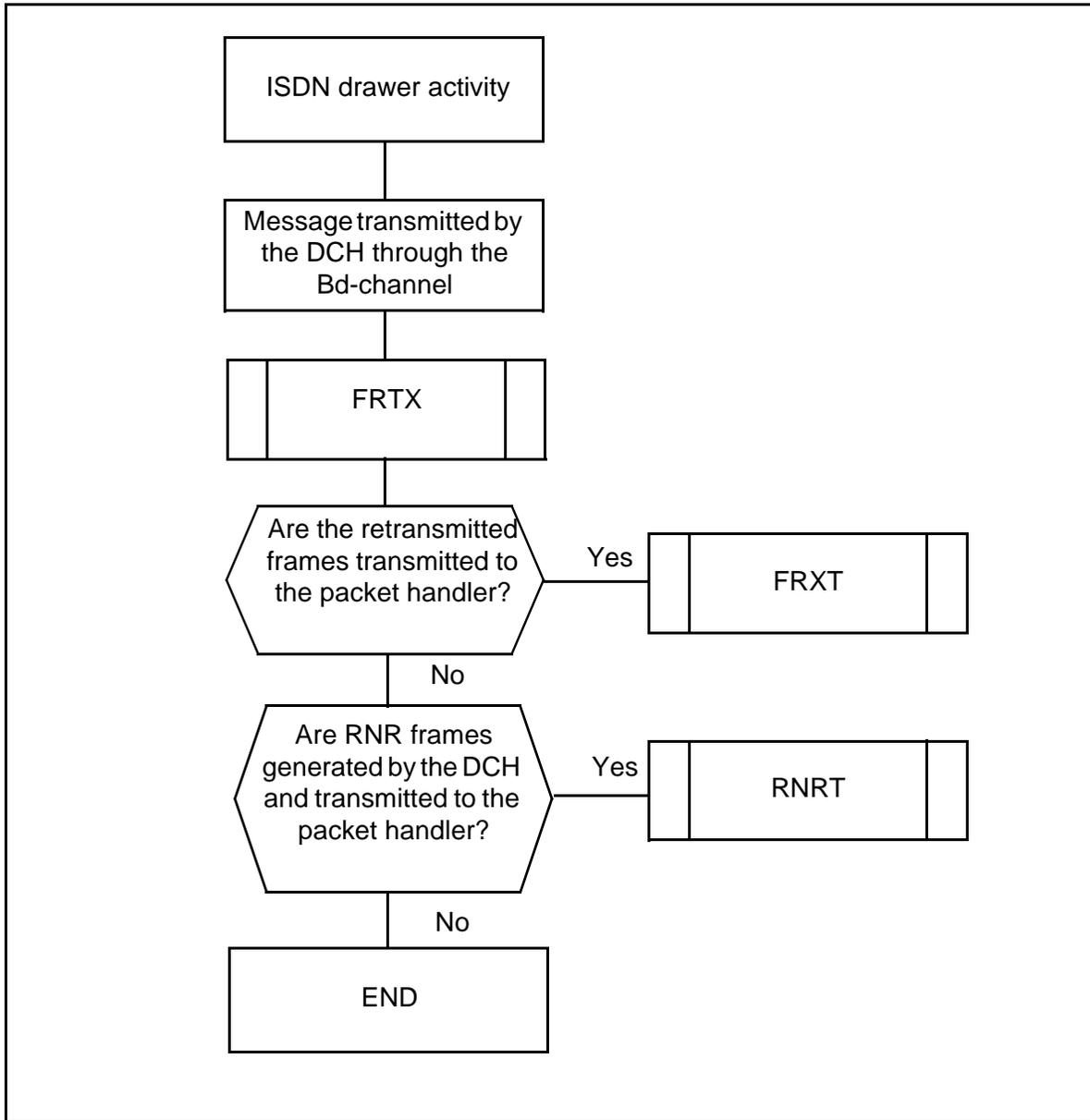


Figure 4-176: -IDRW measurement block (OPM040) flow chart - Bd-Channel Message Receive

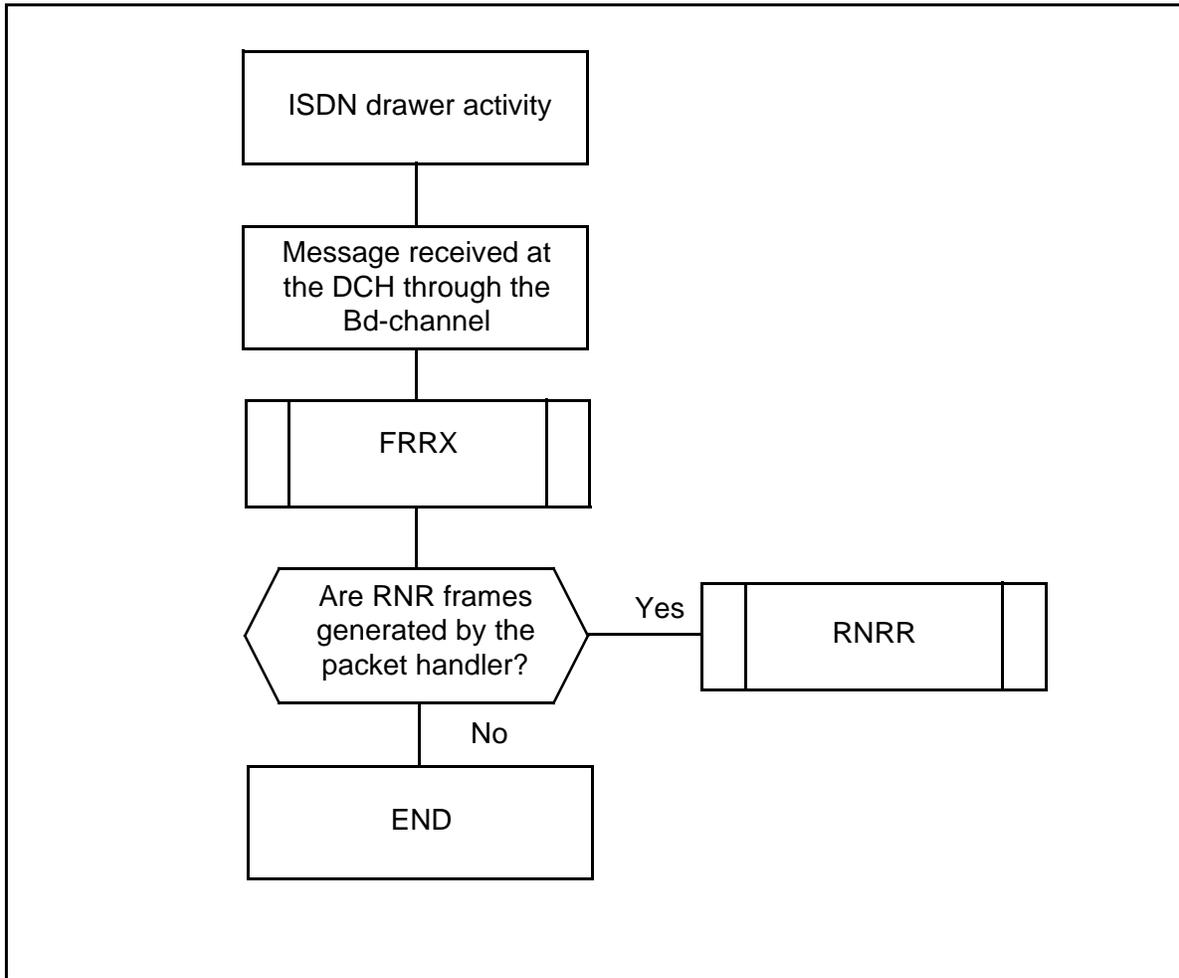


Figure 4-177: -IDRW measurement block (OPM040) flow chart - Message Received from the IDRW

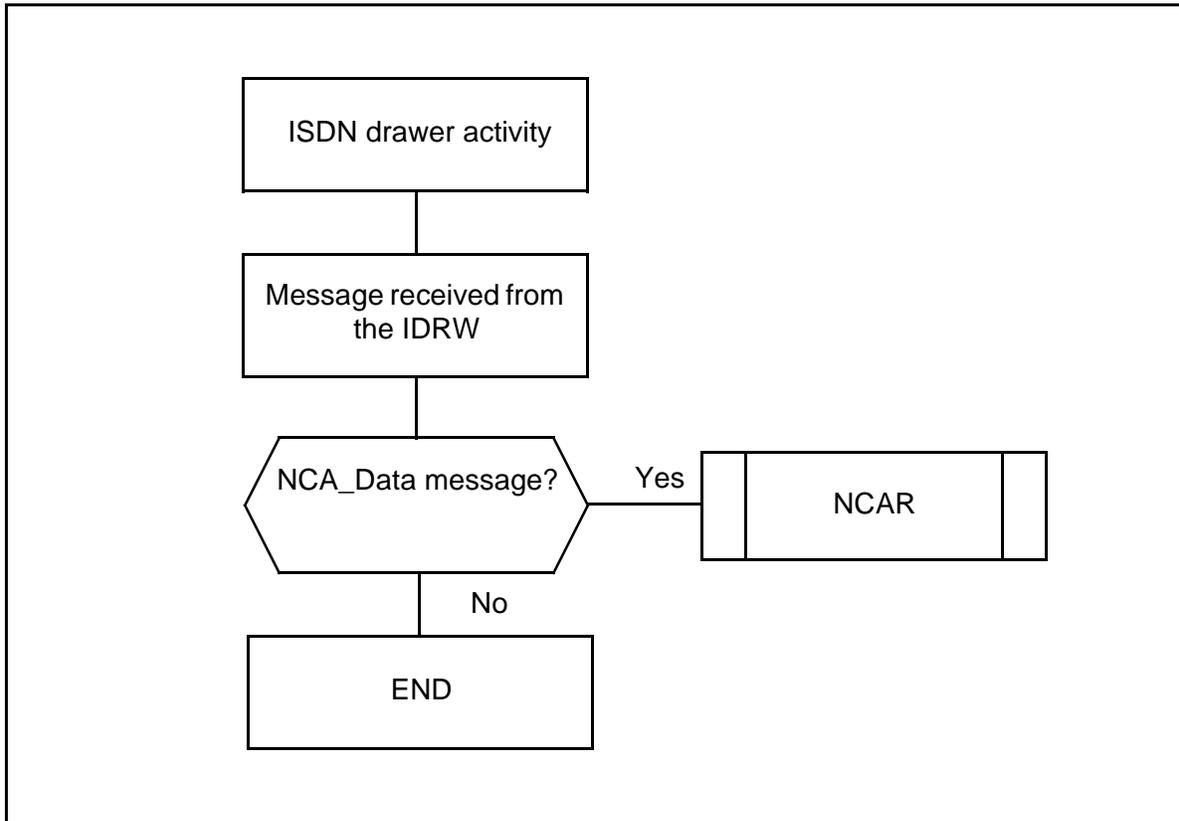
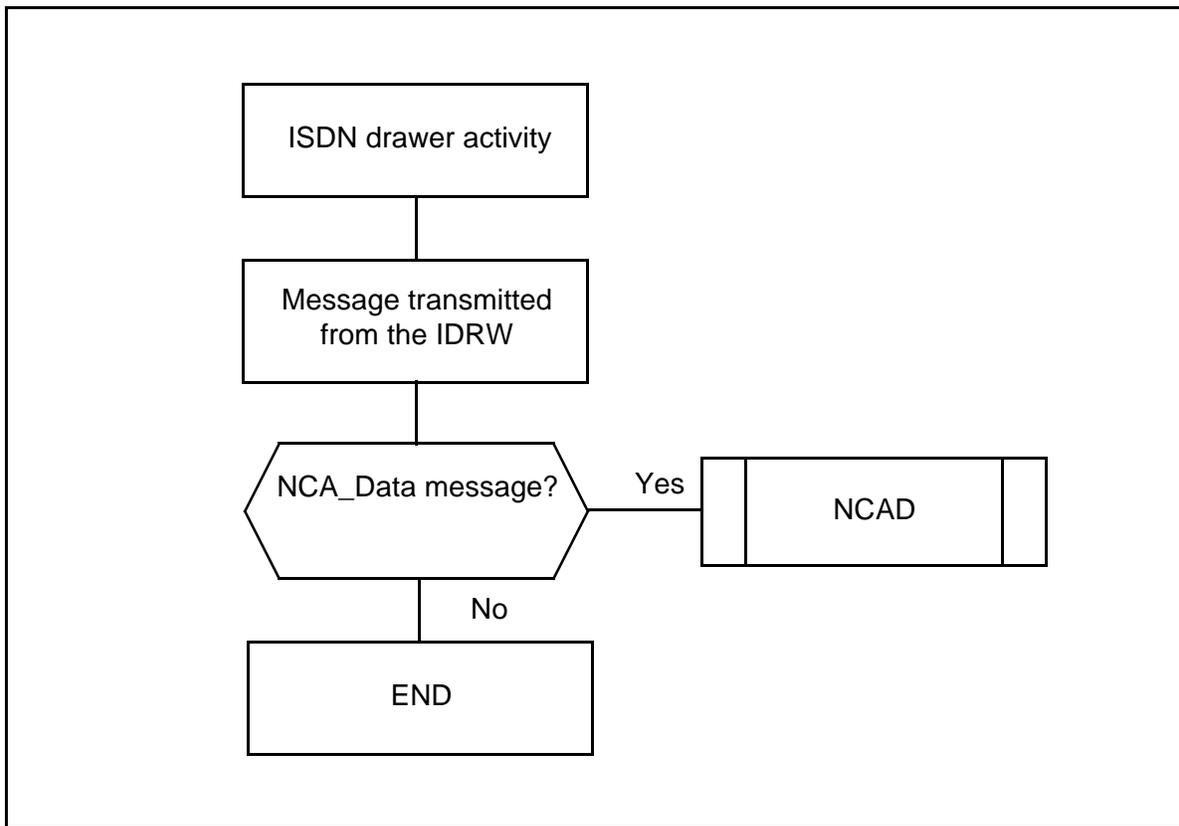


Figure 4-178: -IDRW measurement block (OPM040) flow chart - Message Transmitted from the IDRW



## Local Number Portability (LNP measurement block - OPM041)

The Local Number Portability (LNP) measurement block (Figure 4-179 and Table 4-AY) provides information about LNP operation. Flow charts showing the sequence of events that cause the LNP registers to be incremented and the relationship between the registers within the block are shown in Figures 4-182 through 4-186.

**Figure 4-179: -LNP measurement block (OPM041)**

OPM041	LNP	CAPZ	THU	03/14/96	14:30:00	QTR
		PEG				
	LNPF	00000				
	LNPP	00000				
	MISR	00000				
	UNAL	00000				
	LRNI	00000				
	QORA	00000				
	QORF	00000				
	QORI	00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-AY: - LNP measurement block (OPM041) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
LNPF	PEG - Number of LNP query failures
LNPP	PEG - Number of LNP queries which result in a response containing an LRN
MISR	PEG - Number of ISUP REL messages received at the originating exchange (indicating mis-routed call to ported number)
UNAL	PEG - Number of calls which encounter a vacant DN following an LNP query <i>Note 1:</i> This peg is not incremented when the DN is marked "NP-Reserved."
LRNI	PEG - Number of calls which encountered a vacant DN when the switch's own LRN has been detected after an LNP query <i>Note 1:</i> This peg is not incremented when the DN is marked "NP-Reserved."
QORA	PEG - Number of QOR (query on release) routing attempts
QORF	PEG - Number of QOR routing attempt failures
QORI	PEG - Number of QOR routing attempts initiated by this switch that encounter interworking

Figure 4-180: -LNP measurement block (OPM041) flow chart - received message from SCP

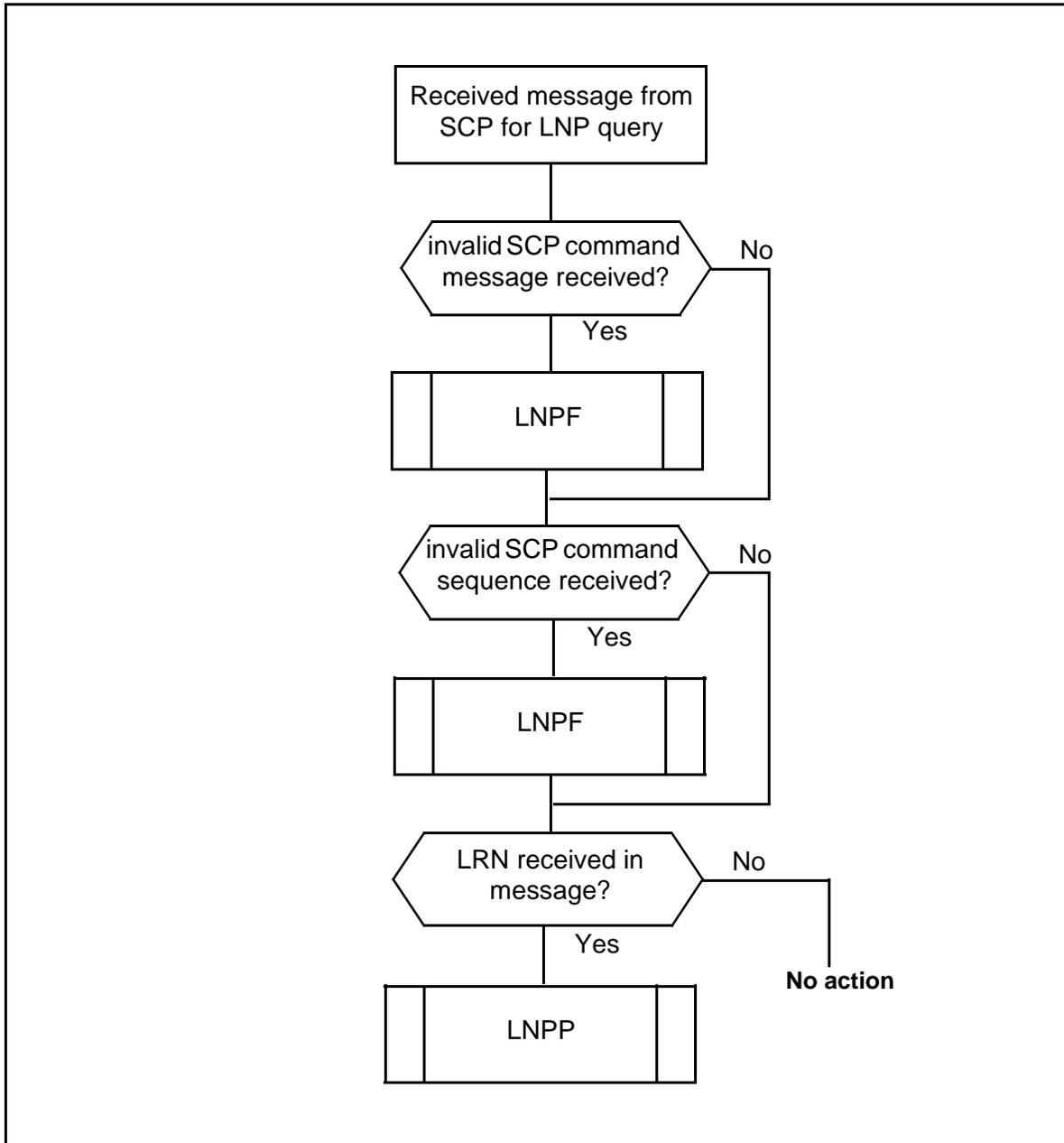


Figure 4-181: -LNP measurement block (OPM041) flow chart - call processing

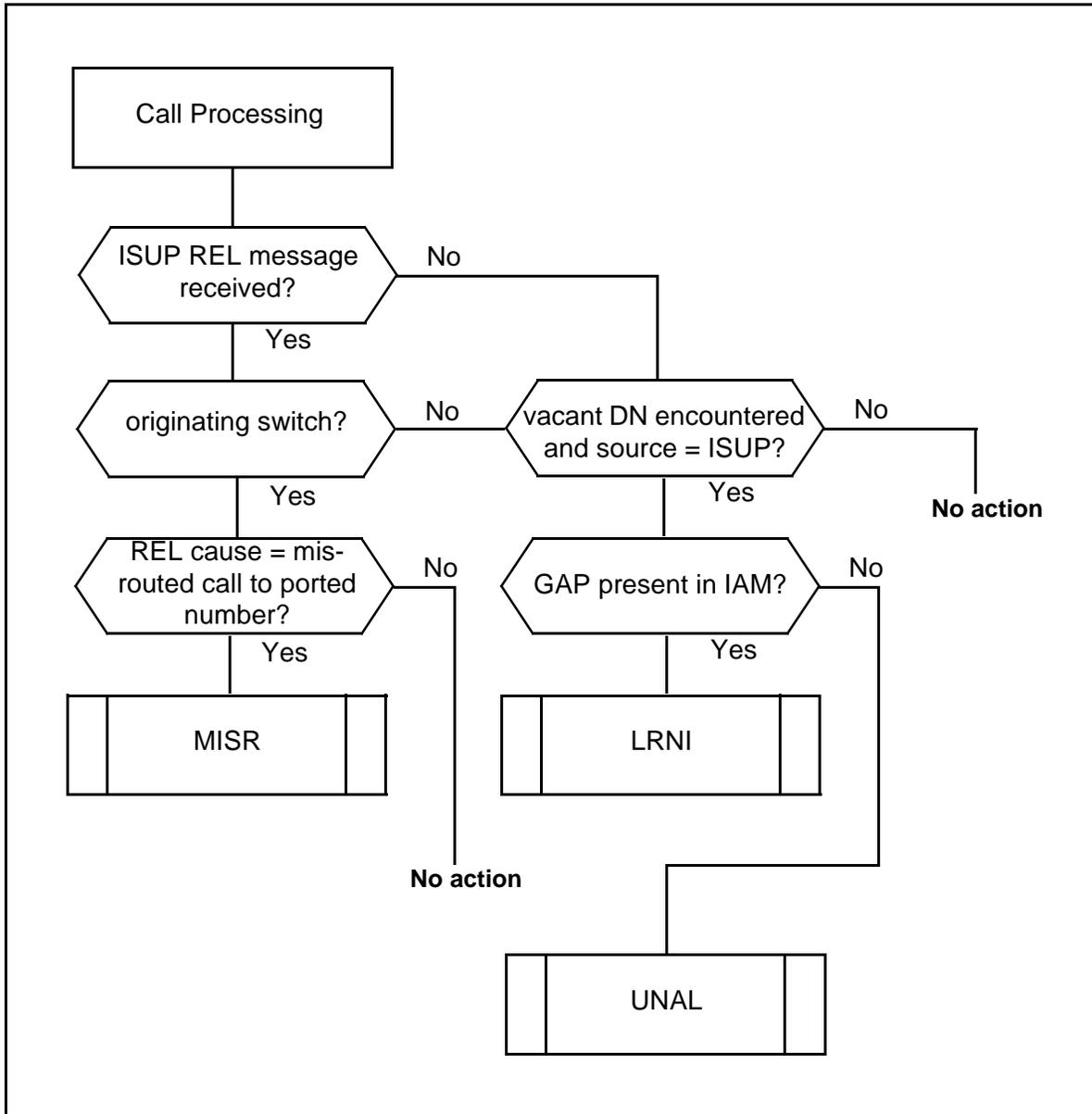


Figure 4-182: -LNP measurement block (OPM041) flow chart - QORA peg

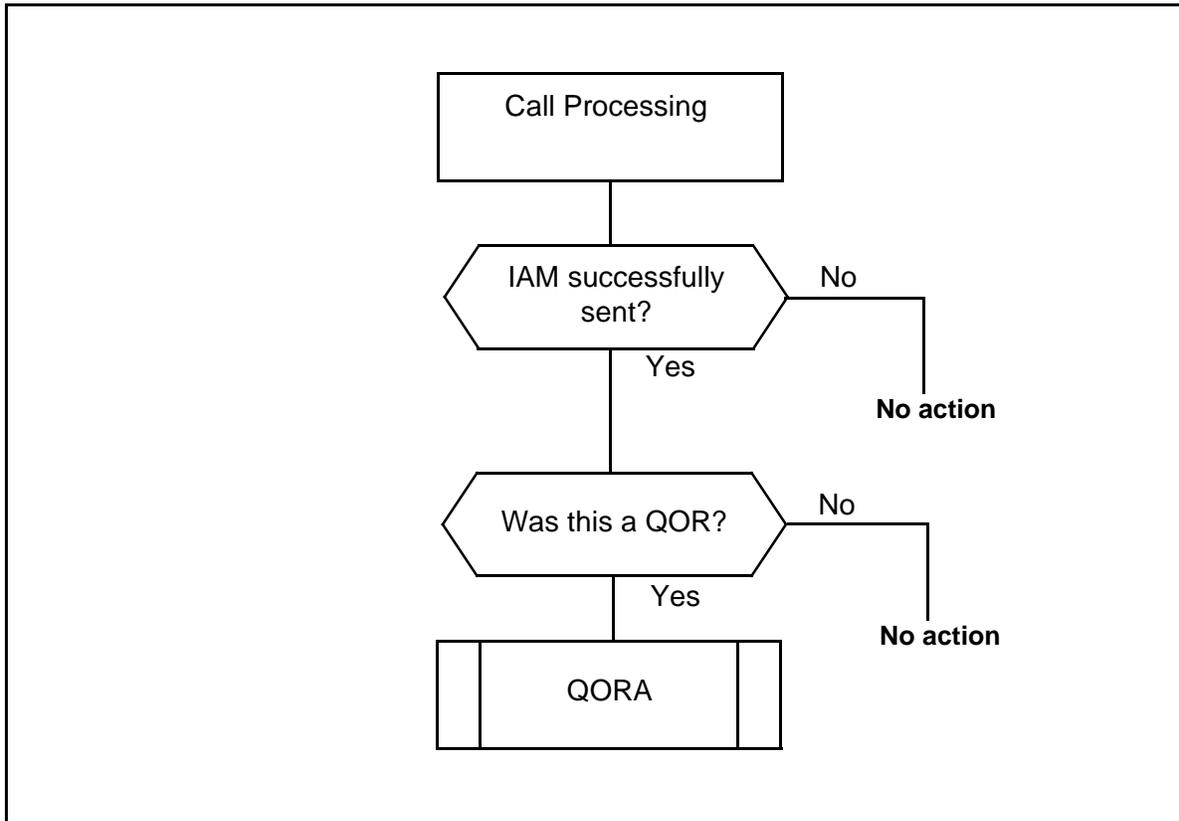


Figure 4-183: -LNP measurement block (OPM041) flow chart - QORF peg

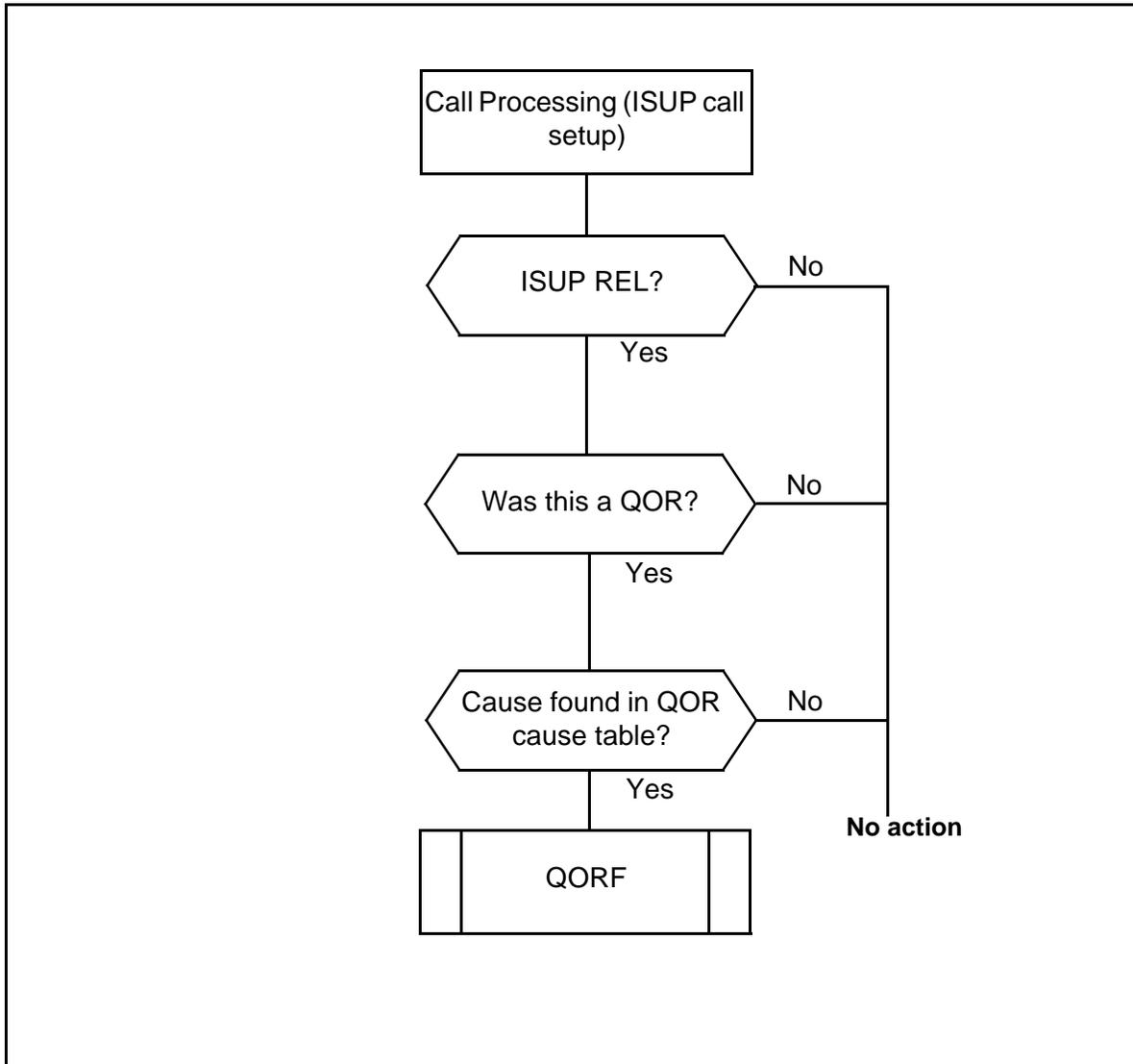


Figure 4-184: -LNP measurement block (OPM041) flow chart - QORI peg

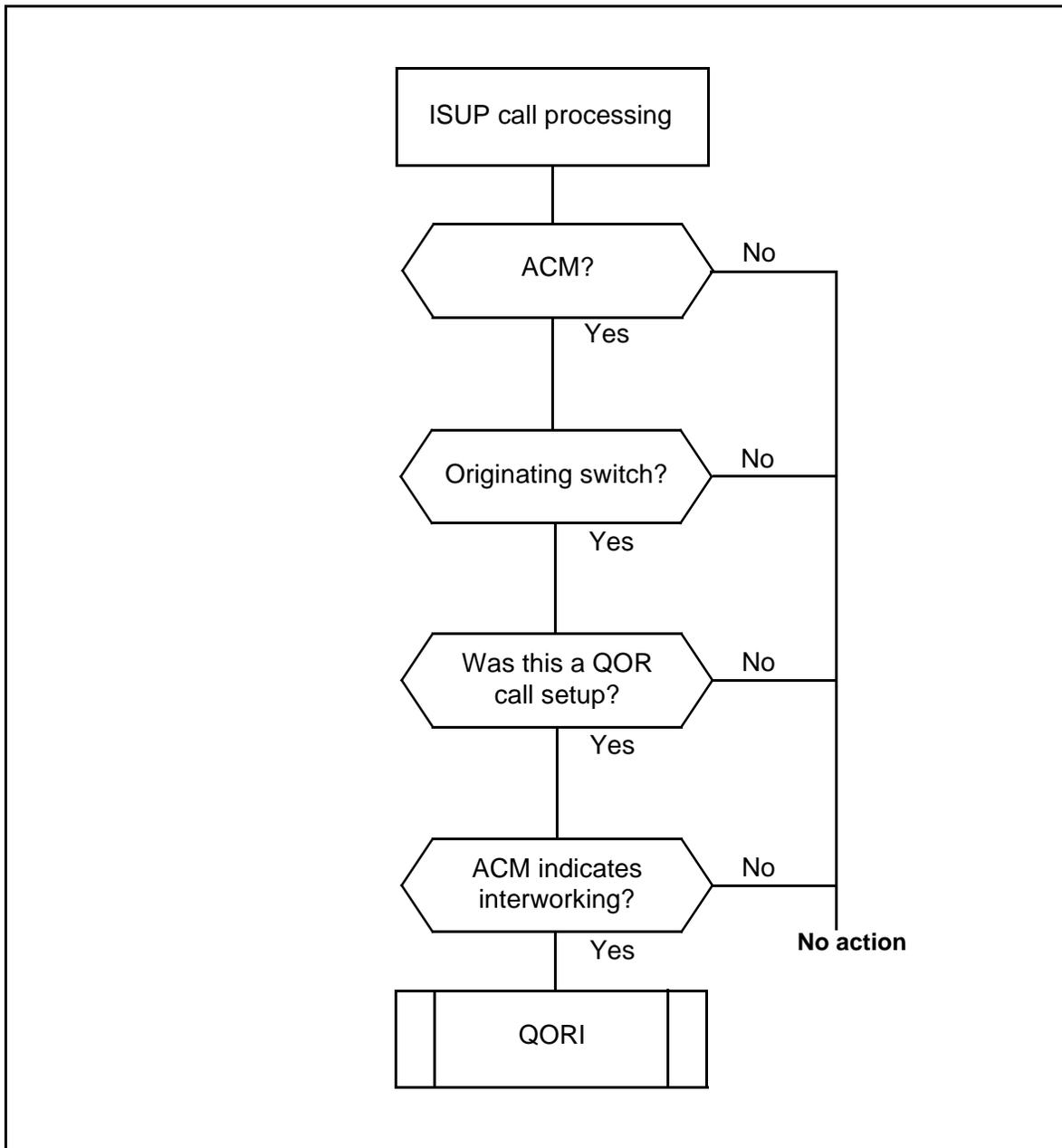
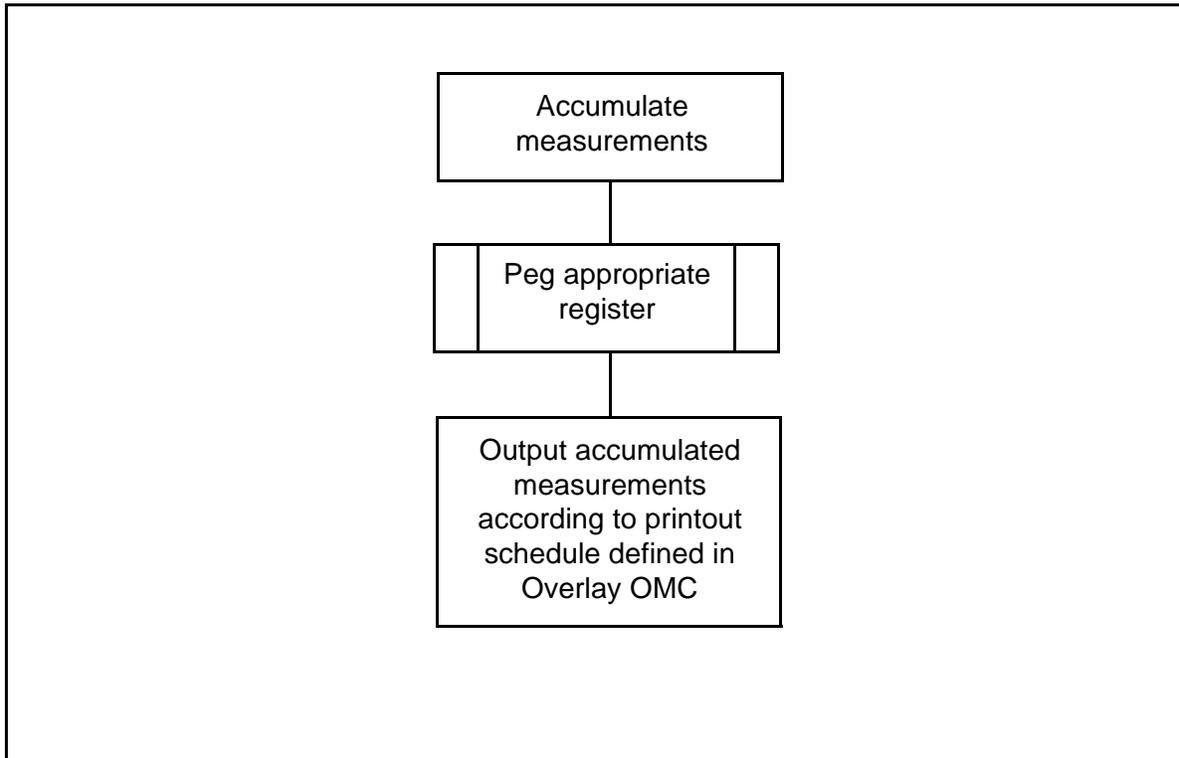




Figure 4-186: -IDT measurement block (OPM042) flow chart - general OPM data flow operation



## ISDN group (ISG measurement block - OPM043)

The ISDN group (ISG) measurement block (Figure 4-187 and Table 4-BA) provides information about ISG operation. Flow charts showing the sequence of events that cause the ISG registers to be incremented and the relationship between the registers within the block are shown in Figures 4-191 through 4-194.

**Figure 4-187: -ISG measurement block (OPM043)**

```

OPM043 ISG  CAPZ  THU   03/14/97   14:30:00  QRTR
          PEG

ISG MVIE <ESMA SHELF #> <ISG NUMBER>
  ORIG  00000
  TERM  00000
D-CH
  FRTX  00000
  FRRX  00000
  FRXT  00000
  RNRT  00000
  RNRR  00000
BD-CH<CHANNEL NUMBER>
  FRTX  00000
  FRRX  00000
  FRXT  00000

```

*Note:* Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

<b>Table 4-BA: - ISG measurement block (OPM043) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
ORIG	PEG - Number of origination set-up attempts
TERM	PEG - Number of termination set-up attempts
FRTX	PEG - For a D-channel: number of frames transmitted by D-channel handler (EDCH) For a Bd-channel: number of frames transmitted to the packet handler (PH) on a Bd-channel
FRRX	PEG - For a D-channel: number of frames received on D-channel handler (EDCH) For a Bd-channel: number of frames received from the packet handler (PH) on a Bd-channel
FRXT	PEG - For a D-channel: number of frames retransmitted by D-channel handler (EDCH) For a Bd-channel: number of retransmitted frames transmitted to the packet handler (PH) on a Bd-channel
RNRT	PEG - Number of receiver-not-ready (RNR) frames generated by EDCH and transmitted
RNRR	PEG - Number of receiver-not-ready (RNR) frames received by EDCH

Figure 4-188: -ISG measurement block (OPM043) flow chart - ISG BRA message received at EDCH

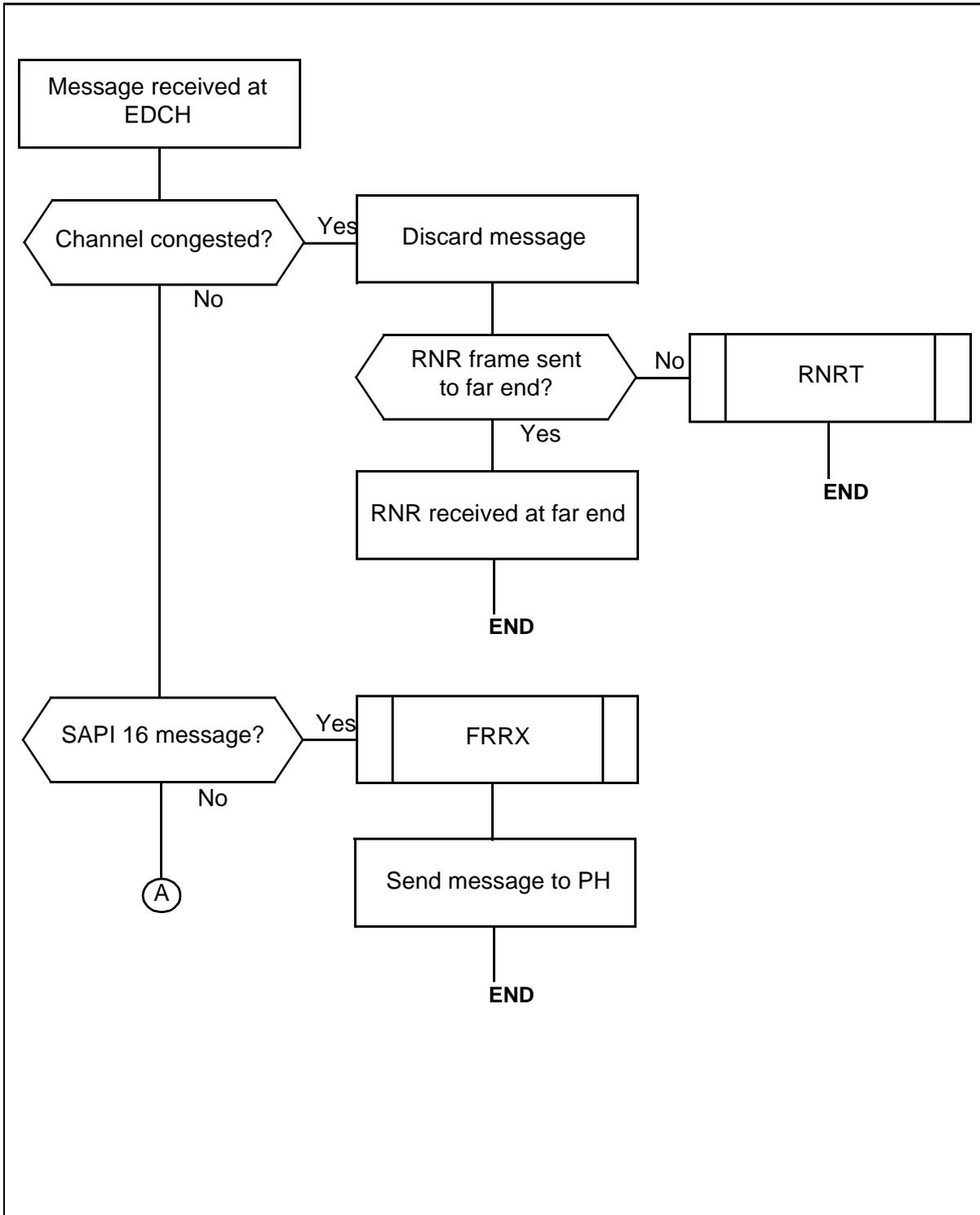


Figure 4-189: ISG measurement block (OPM043) flow chart - ISG BRA message received at EDCH - Continued

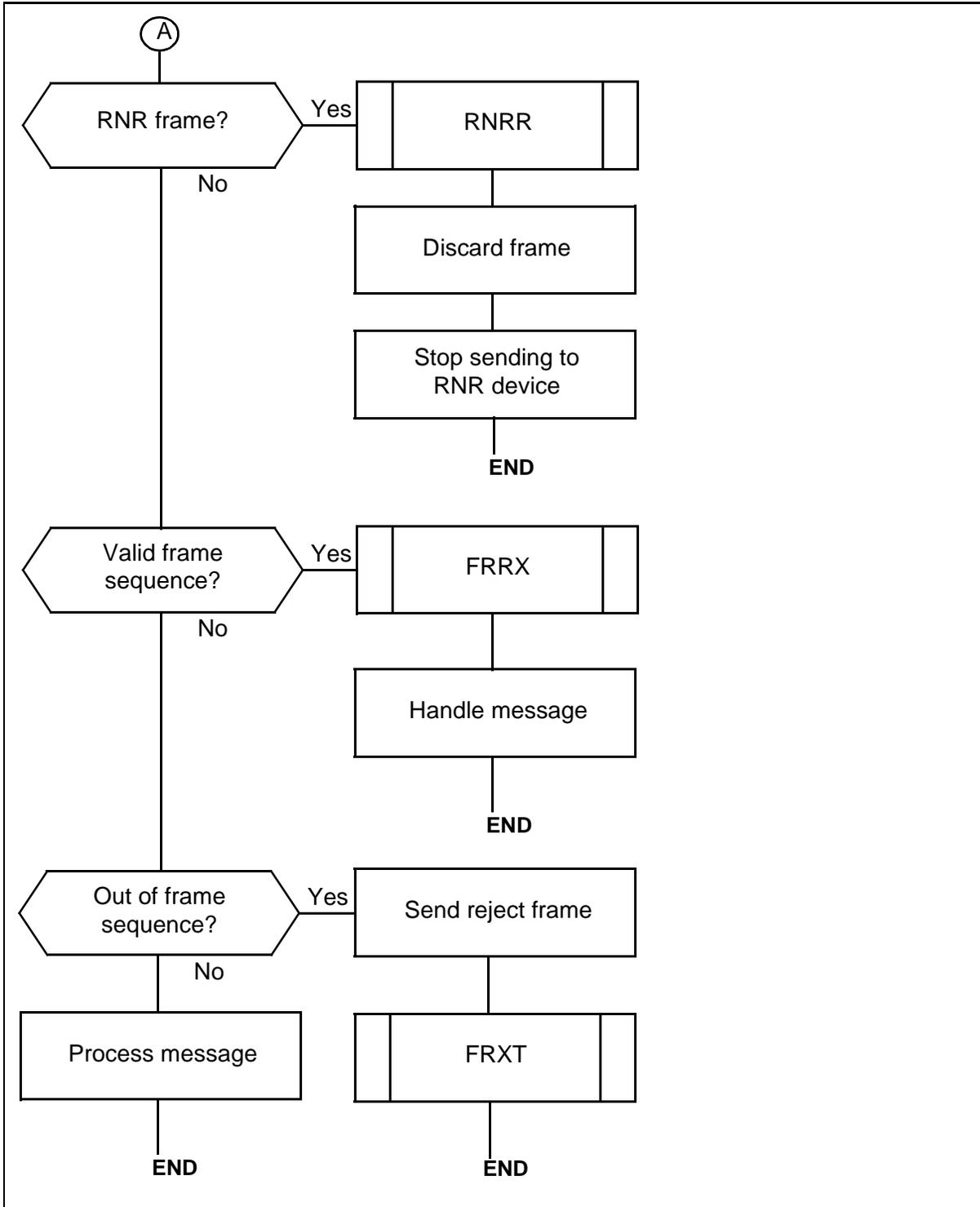


Figure 4-190: -ISG measurement block (OPM043) flow chart - ISG BRA message transmitted by EDCH

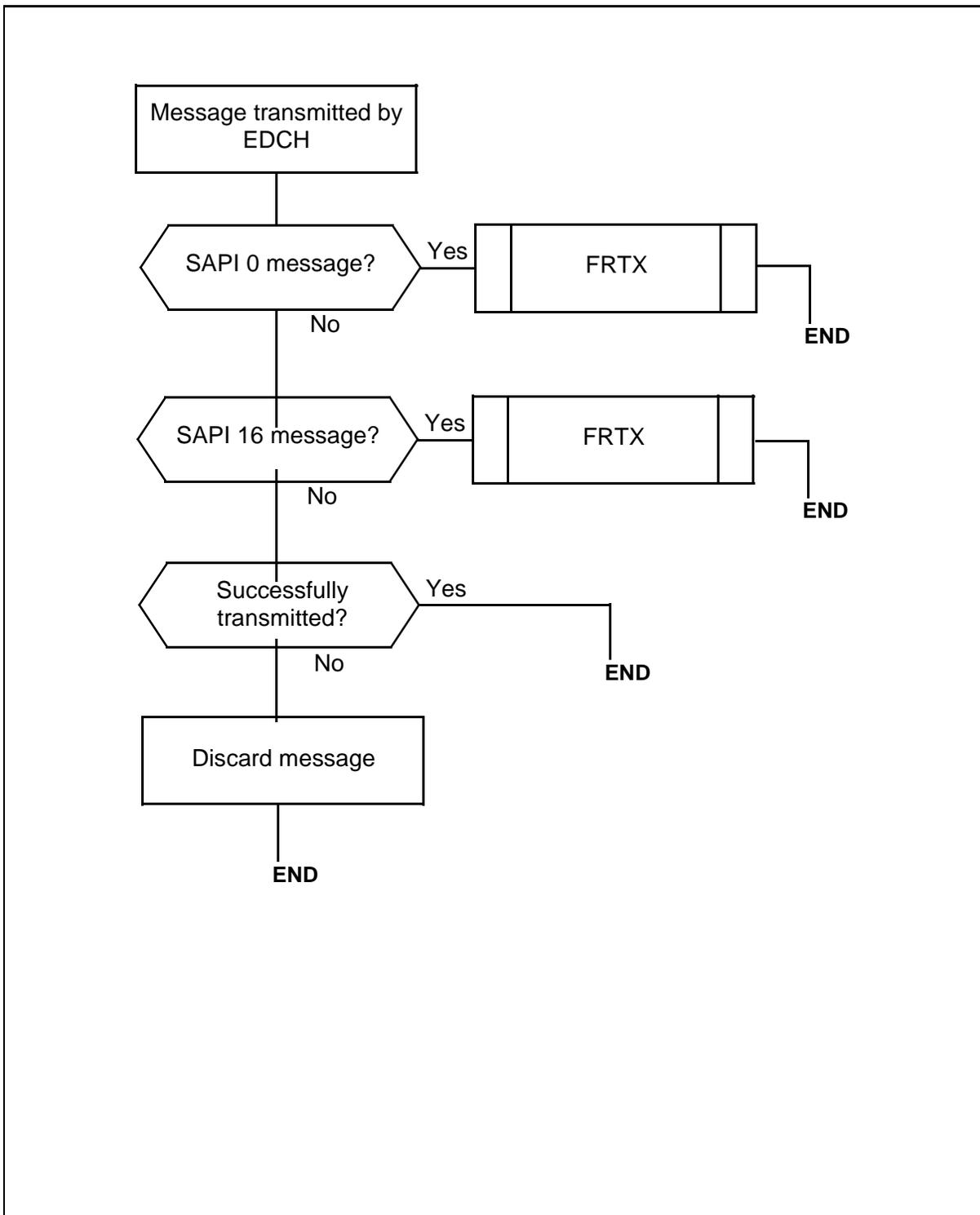


Figure 4-191: -ISG measurement block (OPM043) flow chart - ISG Bd-channel message received

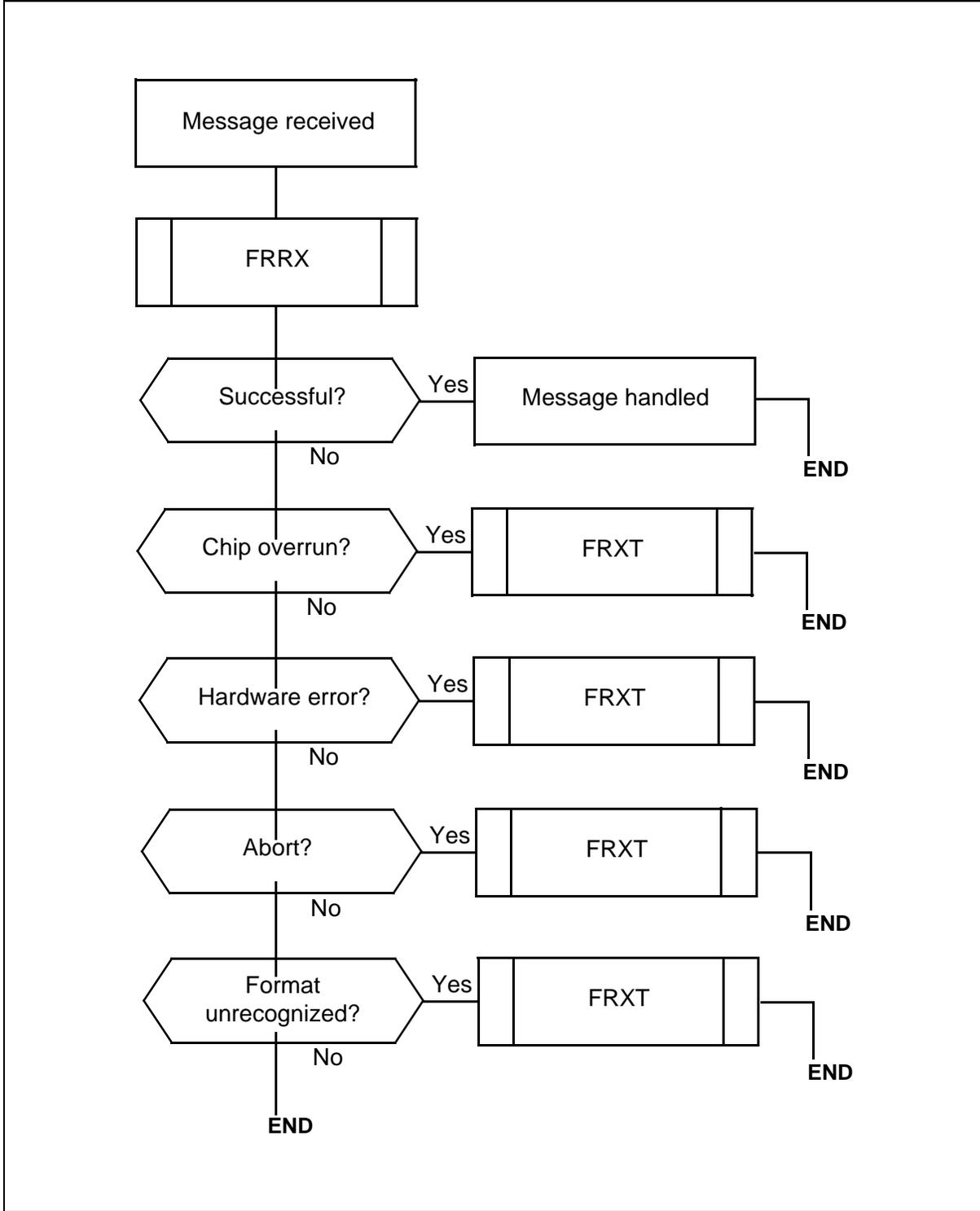
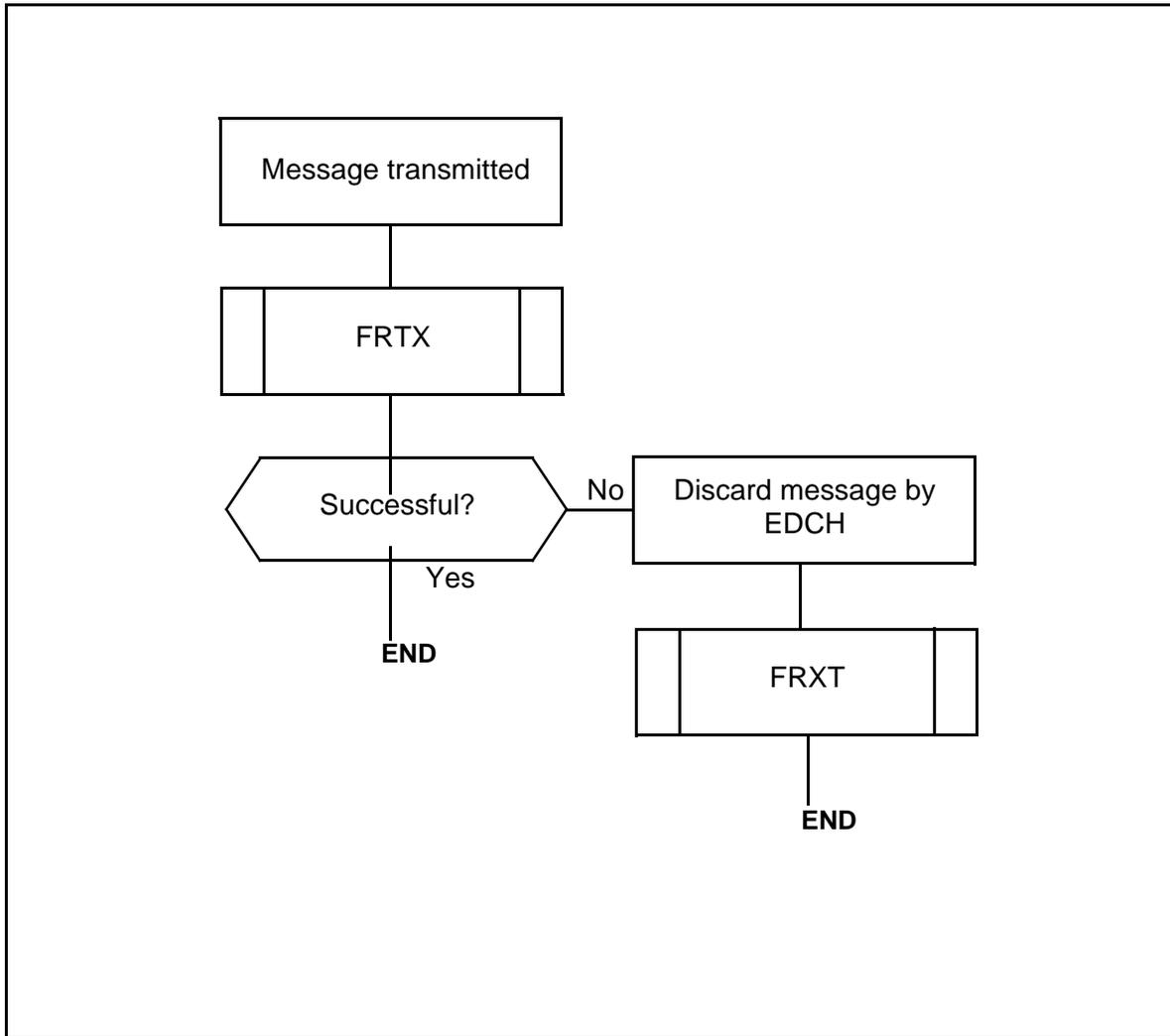


Figure 4-192: -ISG measurement block (OPM043) flow chart - ISG BRA message transmitted



### Wireless (WBAS measurement block - OPM044)

The Wireless measurement block (Figure 4-193 and Table 4-BB) provides information about Wireless operation. Flow charts showing the sequence of events that cause the WBAS registers to be incremented and the relationship between the registers within the block are shown in Figures 4-196 through 4-198.

**Figure 4-193: -WBAS measurement block (OPM044)**

OPM044	WBAS	CAPZ	THU	11/10/97	14:30:00	QRTR
		PEG				
	WBASO	00000				
	WBAST	00000				
	WNCM	00000				
	WNCC	00000				
	IALM	00000				
	IRPA	00000				
	IRPC	00000				
	ARLM	00000				
	ARBR	00000				
	ARCC	00000				
	ARNP	00000				

*Note: Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).*

<b>Table 4-BB: - WBAS measurement block (OPM044) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
WBASO	PEG - Number of origination Wireless call attempts
WBAST	PEG - Number of termination Wireless call attempts
WNCM	PEG - Number of NCA_Data messages received from the AIN requiring use of the multicasting table.
WNCC	PEG - Number of NCA_Data messages received from the AIN not requiring use of the multicasting table.
IALM	PEG - Number of invalid ALT messages received from the RPCU
IRPA	PEG - Number of inter-RPCU ALT attempts
IRPC	PEG - Number of inter-RPCU ALT completions
ARLM	PEG - Number of ALTs not recorded due to exceeding the limit of allowed ALTs
ARBR	PEG - Number of ALTs not recorded due to unavailability of ALT-BRs
ARCC	PEG - Number of ALTs rejected due to unavailability of conference circuits
ARNP	PEG - Number of ALTs rejected because network path associated with the ALT could not be obtained

Figure 4-194: -WBAS measurement block (OPM044) flow chart - Wireless call origination and termination

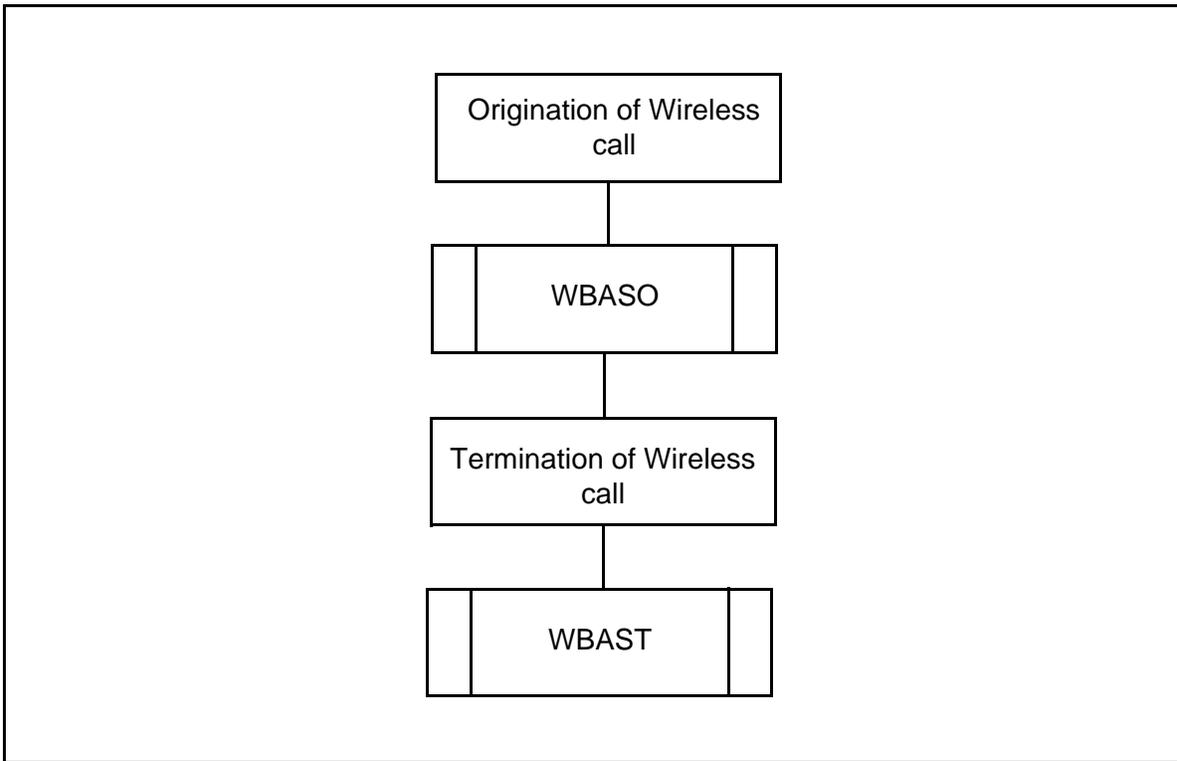


Figure 4-195: -WBAS measurement block (OPM044) flow chart - message received from AIN network

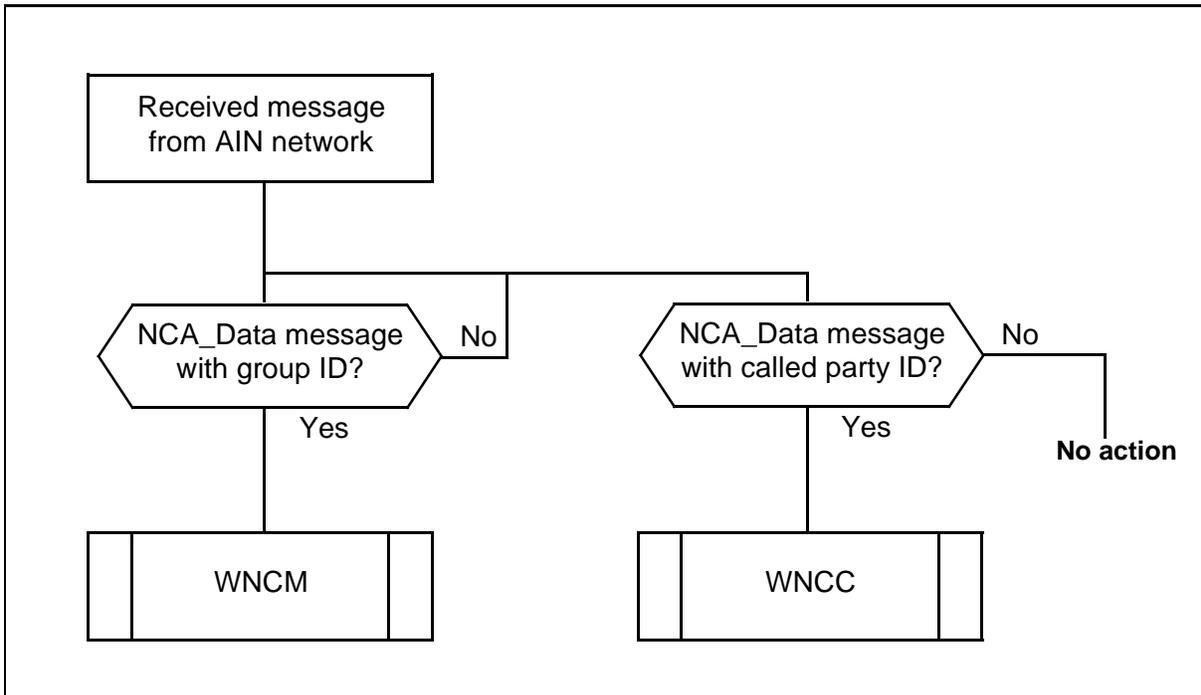
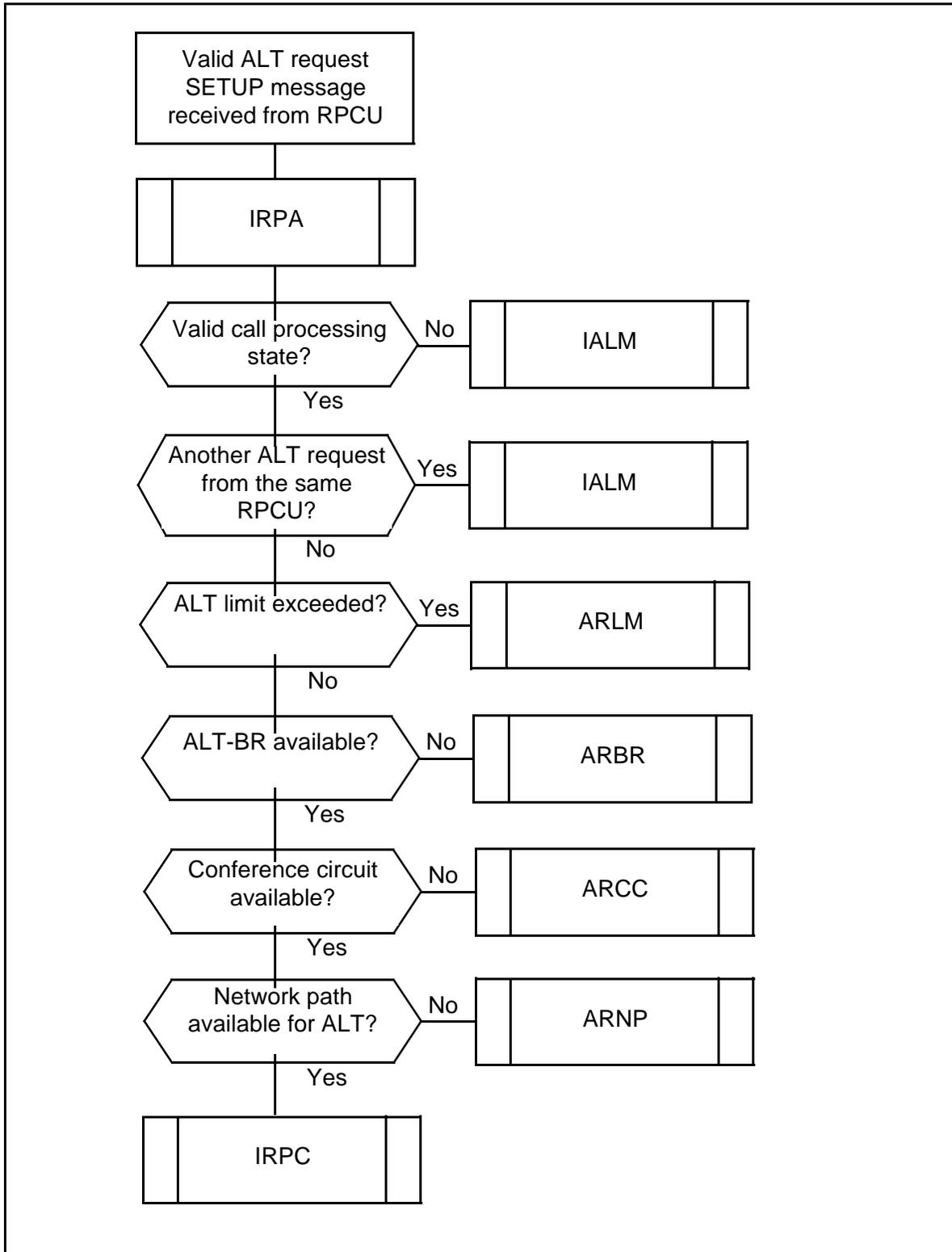


Figure 4-196: -WBAS measurement block (OPM044) flow chart - valid ALT message received



## Primary Rate Interface (PRI measurement block - OPM045)

The Primary Rate Interface (PRI) measurement block provides information about ISDN PRI Layer 2. Figure 4-197 and Table 4-BC: show, respectively, a sample report and descriptions of the block registers. Flow charts showing the sequence of events that cause the PRI registers to be incremented and the relationship between the registers within the block are shown in Figures Figure 4-199: through Figure 4-200:.. Flow charts showing the sequence of events that cause the PRI registers to be incremented and the relationship between the registers within the block are shown in Figures Figure 4-199: and Figure 4-200:..

If Facility Name printing in OPMs (FNOM prompt in DMO CNFG (SYS)) is enabled, the LTG name will be inserted between the LTG number and the channel designation, that is, DCH on each header output line. Adequate space exists on the output line to insert the LTG name with no truncation.

**Figure 4-197: PRI measurement block (OPM045)**

```
OPM045 PRI    CAPZ  THU    17/3/99    22:30:00  QRTR
          PEG
PRI LTG 002  DCH CAPL CE 1 1 04 1 24
  FRTX 00000
  FRRX 00000
  FRXT 00000
  FRXR 00000
```

**Note 1:** Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

**Note 2:** For all OPM block changes due to Facility Identification by Name, in all modified sections facility names will only appear in OPM printouts if CNFG (SYS) PRFN = YES and CNFG (SYS) FNOM = YES.

An example of the modified OPM block printout is shown below, with the new output lines:

**Figure 4-198: PRI measurement block when CNFG (SYS) FNOM=YES (OPM045)**

```
OPM045 PRI    400G  MON    12/08/02    14:0:00  HRHR
          PEG
PRI LTG 0126 PIVL_LTG_126 DCH 400G CE 1 1 06 0 24
  FRMT 000000
  UIFT 000000
  FRMR 000000
  UIFR 000000
  USPV 000000
```

<b>Table 4-BC: PRI measurement block (OPM045) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
FRTX	PEG - Number of frames transmitted by D-channel handler
FRRX	PEG - Number of frames received by D-channel handler
FRXT	PEG - Number of frames re-transmitted by D-channel handler
FRXR	PEG - Number of frames received in error by D-channel handler

**Figure 4-199: PRI measurement block (OPM045) flow chart - FRRX and FRXR registers**

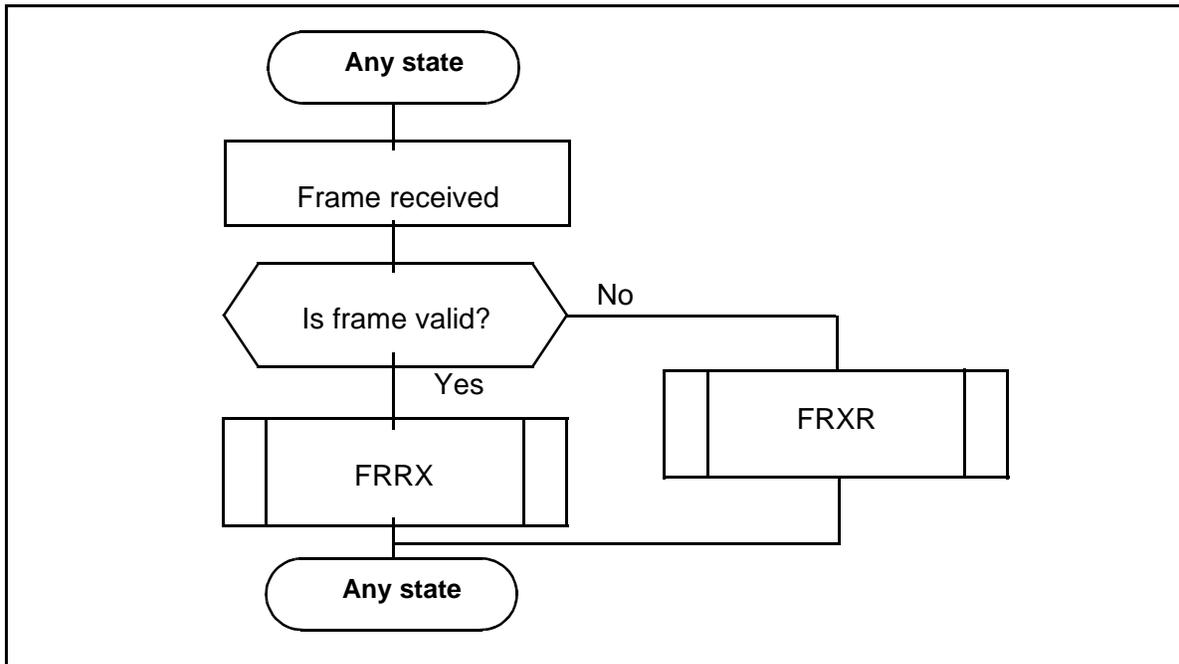
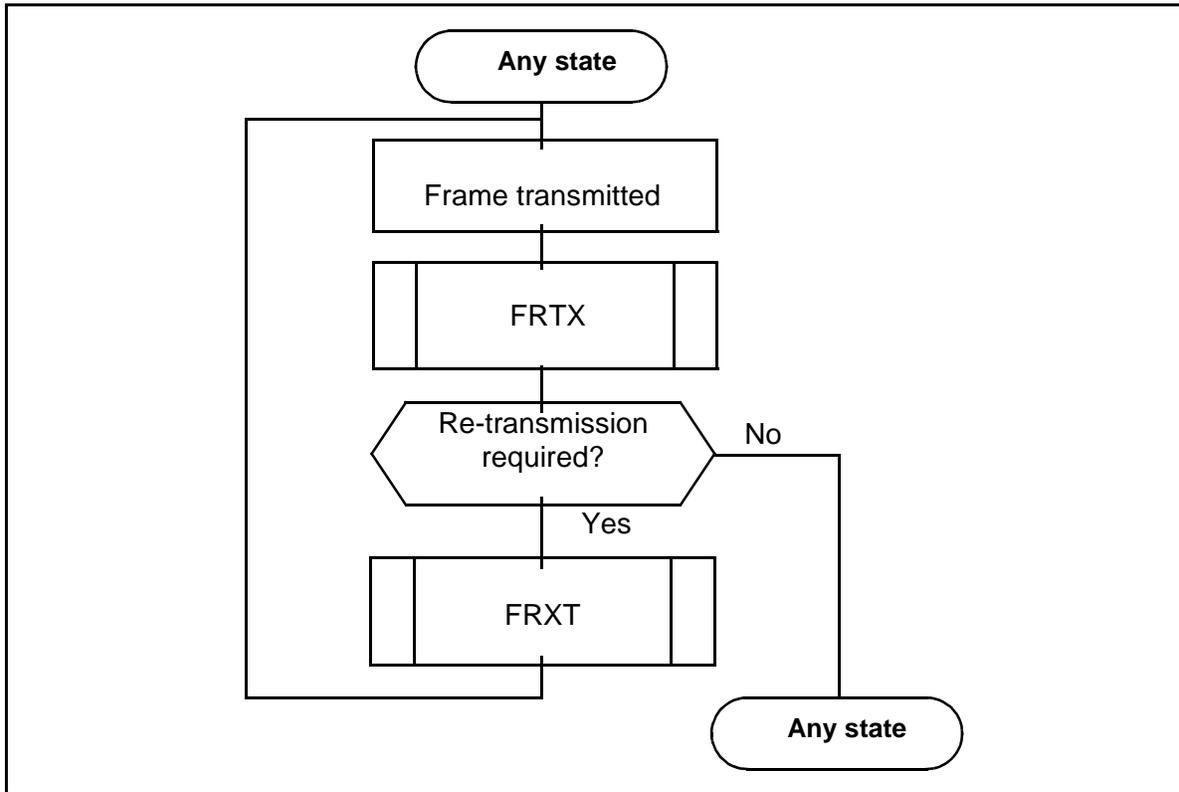


Figure 4-200: PRI measurement block (OPM045) flow chart - FRTX and FRXT registers



## Simulated Facility Group (SFG measurement block - OPM046)

The Simulated Facility Group (SFG) measurement block (Figure 4-201:, Figure 4-202: and Table 4-BD:) provides information about each Simulated Facility Group associated with an ISDN PRI line trunk group. Flow charts showing the sequence of events that cause the SFG registers to be incremented and the relationship between the registers within the block are shown in Figure 4-203: and Figure 4-204:.

If Facility Name printing in OPMs (FNOM prompt in DMO CNFG (SYS)) is enabled, a new line for the SFG name will be added after each SFG peg line prints, indented slightly under the SFG number.

**Figure 4-201: SFG measurement block (OPM046)**

OPM046	PRI	CAPZ	MON	07/06/98	22:30:00	QTR
		PEG	BLK	USE		
SFG	23	00000	00000	00000		
SFG	45	00000	00000	00000		
SFG	46	00000	00000	00000		
SFG	55	00000	00000	00000		
SFG	60	00000	00000	00000		
SFG	61	00000	00000	00000		
SFG	62	00000	00000	00000		
SFG	1001	00000	00000	00000		
SFG	1002	00000	00000	00000		

**Note 1:** Registers in the report can be displayed in either five-digit or six-digit format. See prompt DIG in Overlay OMC (OMC).

**Note 2:** For all OPM block changes due to Facility Identification by Name, in all modified sections facility names will only appear in OPM printouts if CNFG (SYS) PRFN = YES and CNFG (SYS) FNOM = YES.

An example of the modified OPM block printout is shown below, with the new output lines:

**Figure 4-202: SFG modified measurement block (OPM046)**

OPM046	SFG	400G	MON	12/08/02	14:00:00	HRHR
		PEG	BLK	USE		
SFG	0001	000000	000000	000000		
		SFG NAME	PIVL_SFG_1			
SFG	0002	000000	000000	000000		
		SFG NAME				

<b>Table 4-BD: SFG measurement block (OPM046) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
SFG <i>n ... n</i>	PEG - Number of calls that are routed to this Simulated Facility Group
SFG <i>n ... n</i>	BLK - Number of calls that are unable to pass through this Simulated Facility Group
SFG <i>n ... n</i>	USE - Usage measurement, in ccs, for facilities in this Simulated Facility Group. Measurement begins when a facility is attached to a call and ends when the facility is released from the call.

Figure 4-203: SFG measurement block (OPM046) flow chart - Origination

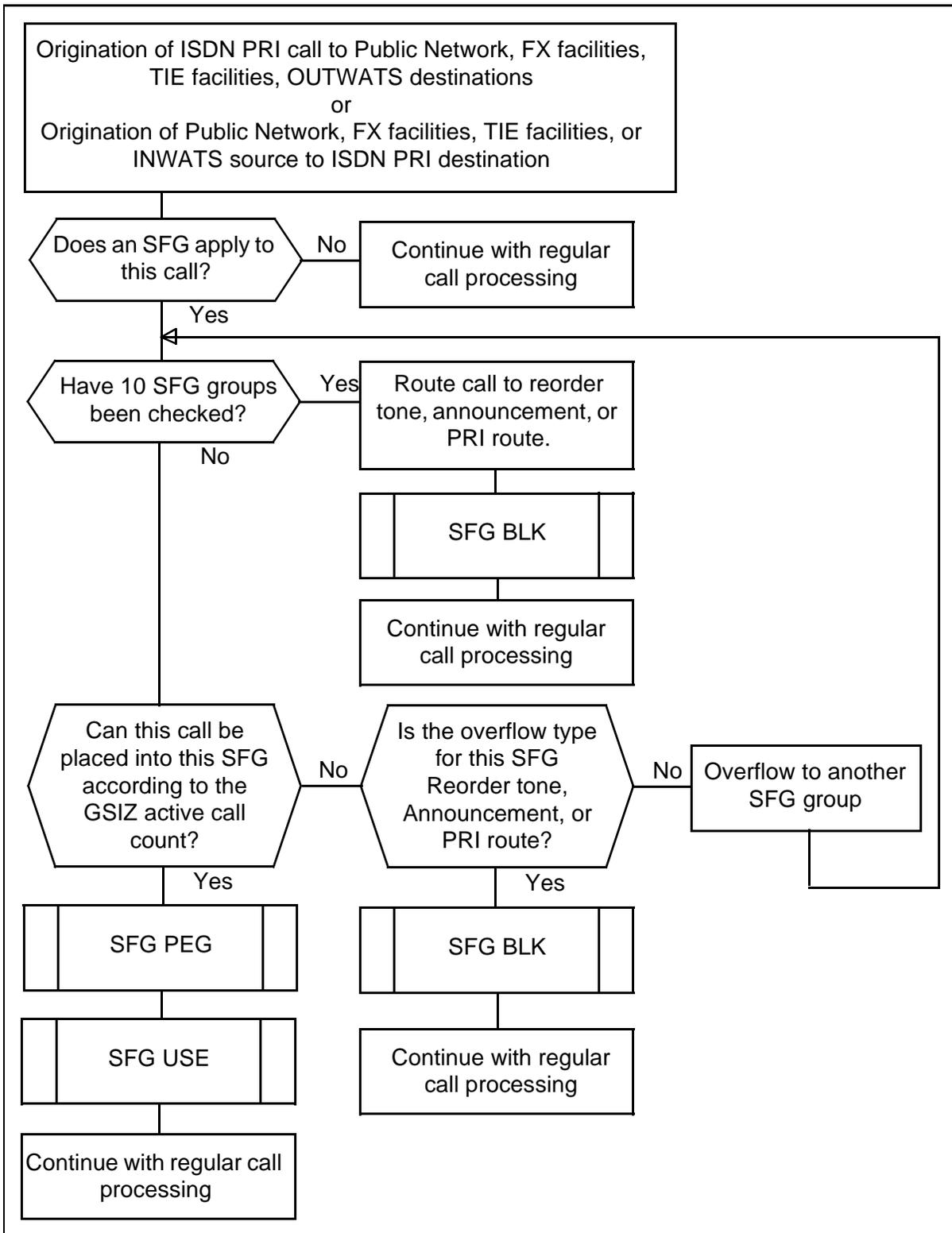
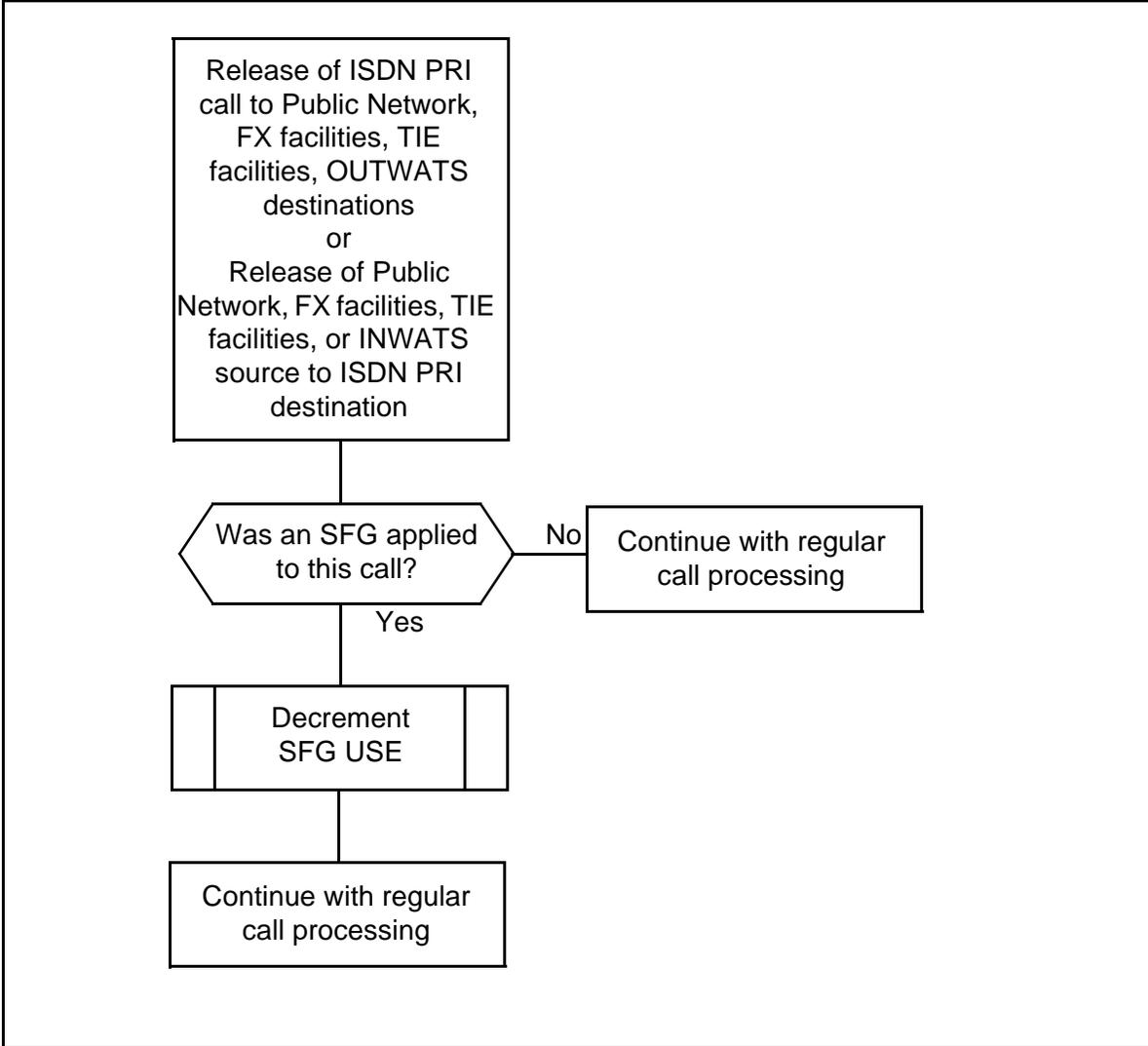


Figure 4-204: SFG measurement block (OPM046) flow chart - Release



## Integrated Billing Storage and Retrieval (IBSR measurement block - OPM048)

The Integrated Billing Storage and Retrieval (IBSR) measurement block (Figure 4-205: and Table 4-BE:) provides information about each Integrated Billing Storage and Retrieval measurement. Flow charts showing the relationship between the registers within the block are shown in Figure 4-206: through Figure 4-209:.

**Figure 4-205: IBSR measurement block (OPM048)**

OPM047	IBSR	CAPZ	MON	10/06/02	14:30:00	QTR
		PEG				
	CPRF	00000				
	XPRF	00000				
	RREC	00000				
	XREC	00000				
	STOR	00000				
	FAUF	00000				
	FTPS	00000				
	XFLT	00000				

<b>Table 4-BE: IBSR measurement block (OPM048) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
CPRF	PEG - a count of all primary AMA files created.
XPRF	PEG - a count of all the primary AMA files transferred.
RREC	PEG - a count of all the records received by the IBSR application.
XREC	PEG - a count of all the primary AMA records transferred to the AMA collector.
STOR	PEG - a count of the number of primary records stored by the DMS-10 Data Server (DS).
FAUF	PEG - a count of the number of FTP authentication failures.
FTPS	PEG - a count of the number of FTP sessions established.
XFLT	PEG - a count of the number of times that a file transfer failed after the FTP session was established.

Figure 4-206: IBSR measurement block (OPM048) flow chart - CPRF register

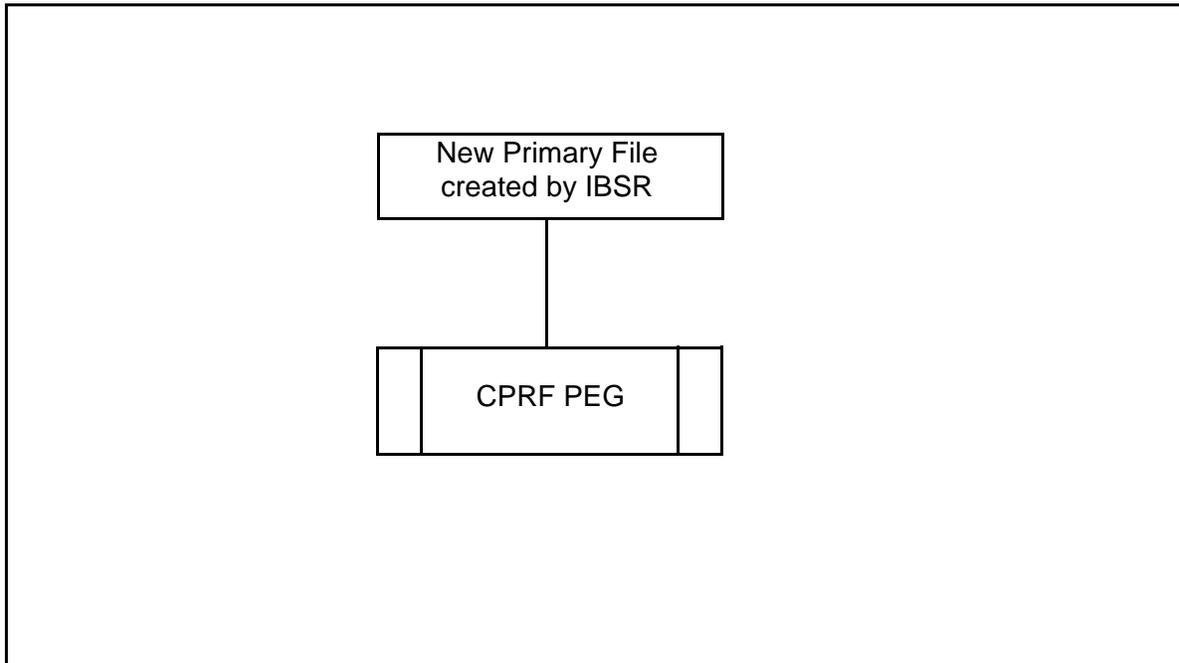


Figure 4-207: IBSR measurement block (OPM048) flow chart - FTPS and FAUF registers

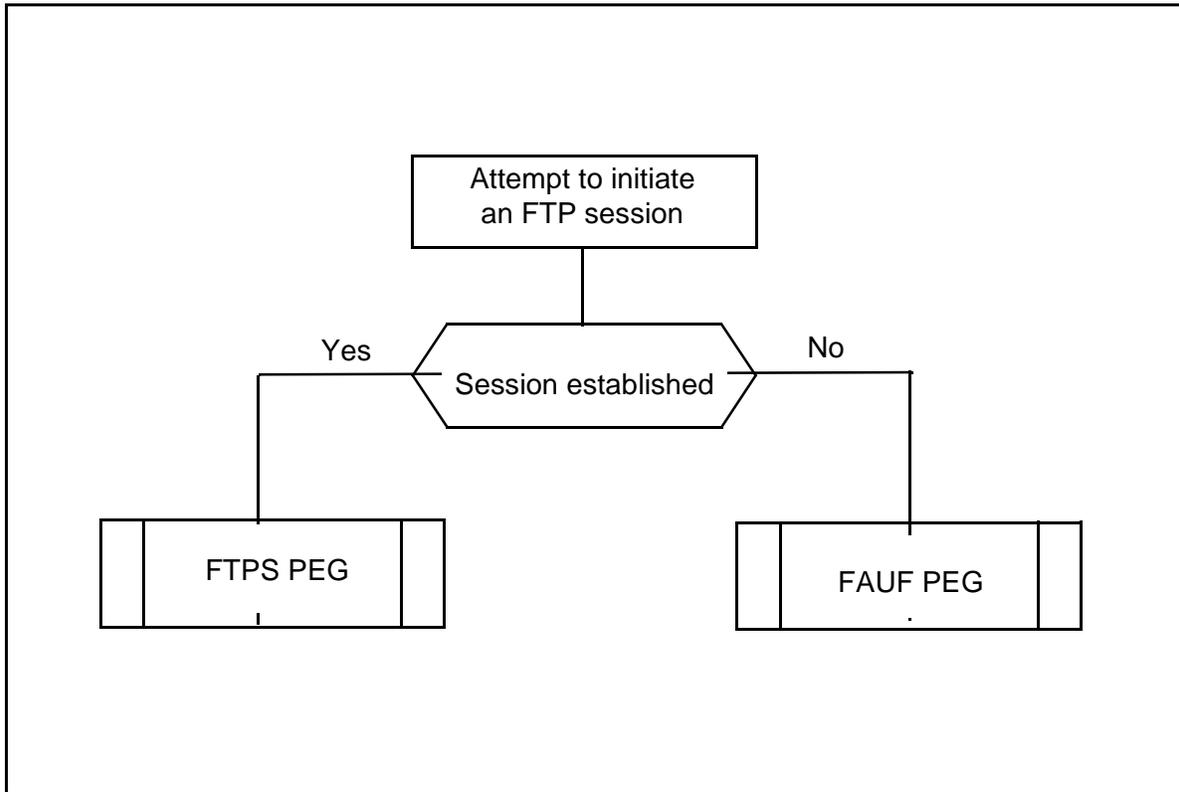


Figure 4-208: IBSR measurement block (OPM048) flow chart - XPRF/XREC/STOR/XFLT registers

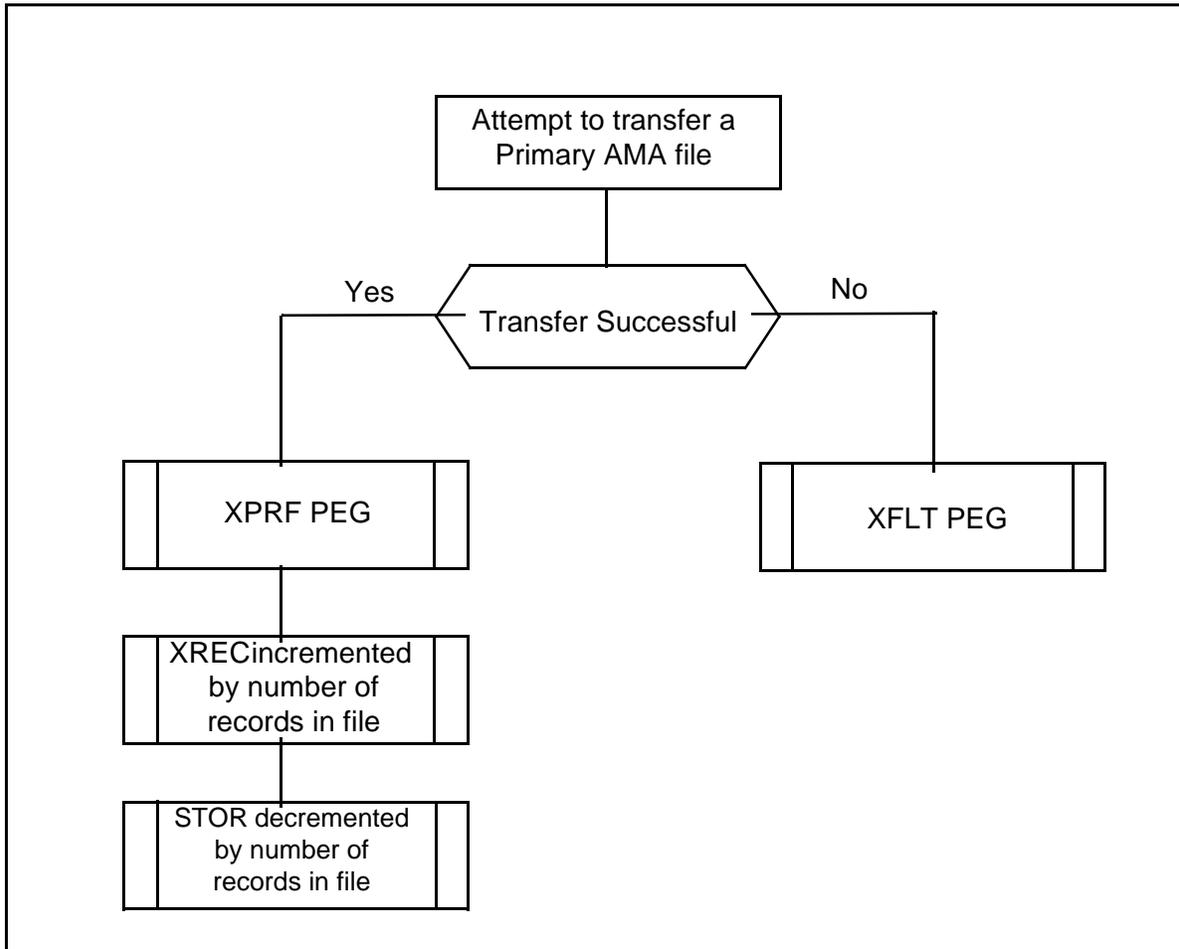
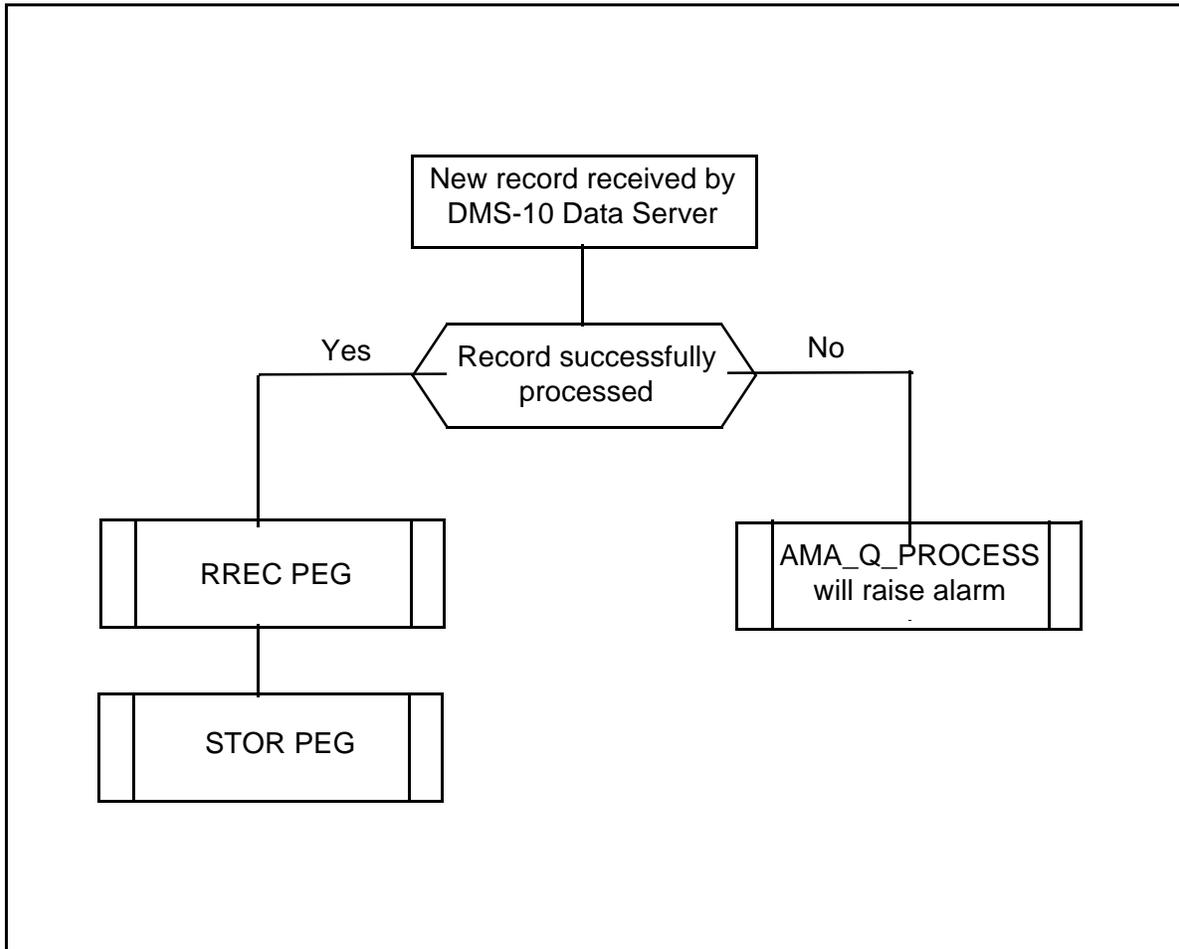


Figure 4-209: IBSR measurement block (OPM048) flow chart - RREC and STOR registers



## Simultaneous Ringing (SRNG measurement block - OPM049)

The Simultaneous Ringing measurement block (Figure 4-195 and Table 4-BF) provides information about each Simultaneous Ringing measurement.

**Figure 4-210: SRNG measurement block (OPM049)**

OPM049	SRNG	NASYS1MON	04/22/03	14:30:00	QTR
	PEG	BLK	USE		
SLE	00000	000000	000000		
ACT	00000				
DACT	00000				
TERM	00000				
WEBR	00000				
WEBU	00000				

**Table 4-BF:  
SRNG measurement block (OPM049) registers**

Mnemonic	Description
SLE	PEG - number of attempts to invoke an SRNG SLE session by a subscriber allowed to access the feature. BLK - number of calls denied access to an SRNG SLE session due to system failure or lack of resources. USE- 10-second usage for calls using an SRNG SLE session.
ACT	PEG - number of SRNG activations.
DACT	PEG - number of SRNG deactivations.
TERM	PEG - number of termination attempts to a Pilot DN with the SRNG feature active.
WEBR	PEG - number of web based requests for SRNG list information.
WEBU	PEG - number of web based updates for SRNG lists.

Figure 4-211: SRNG measurement block (OPM049) SLE PEG/BLK flowchart

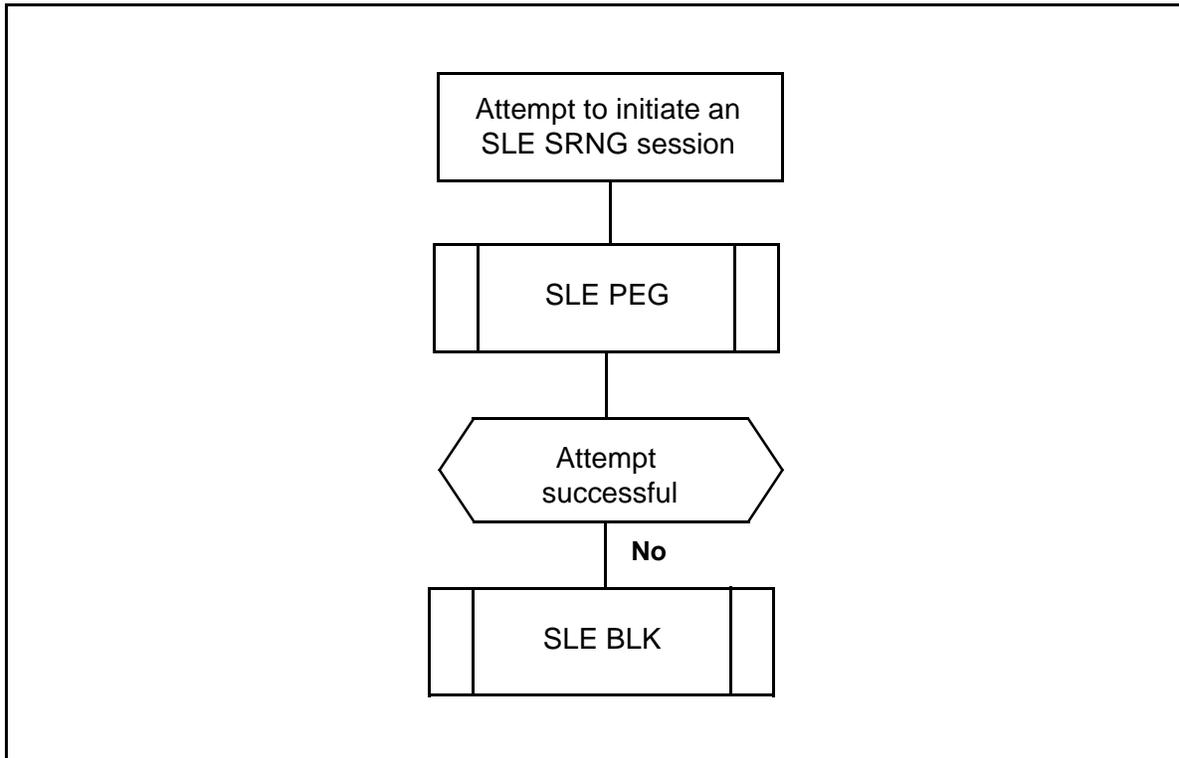
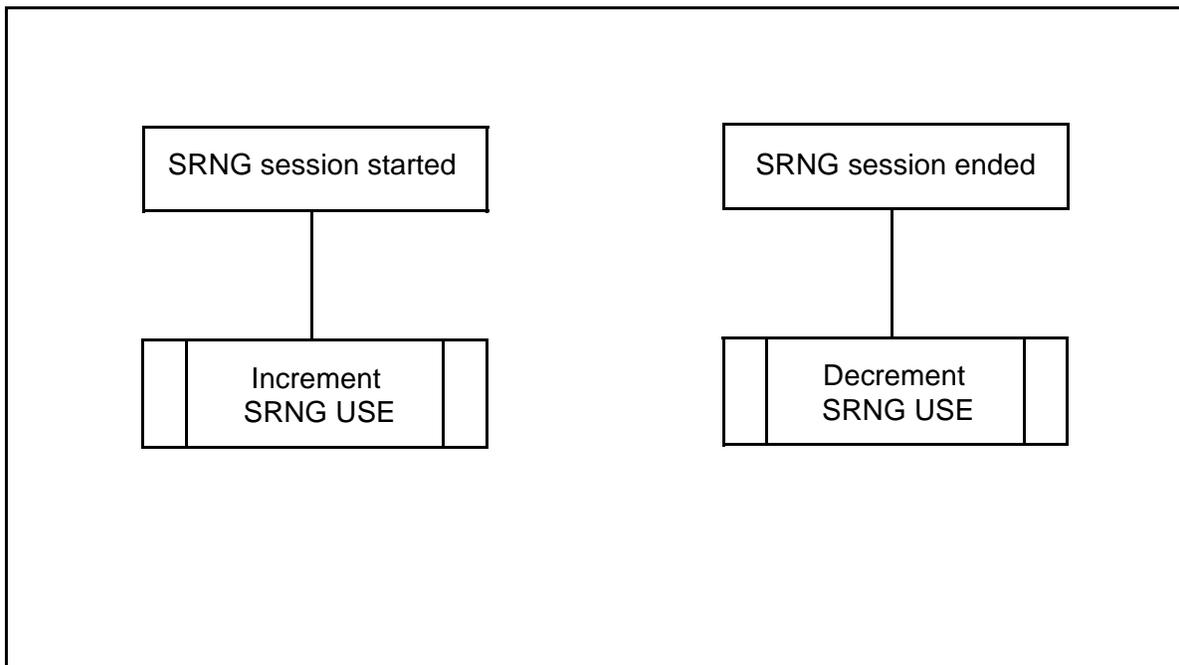
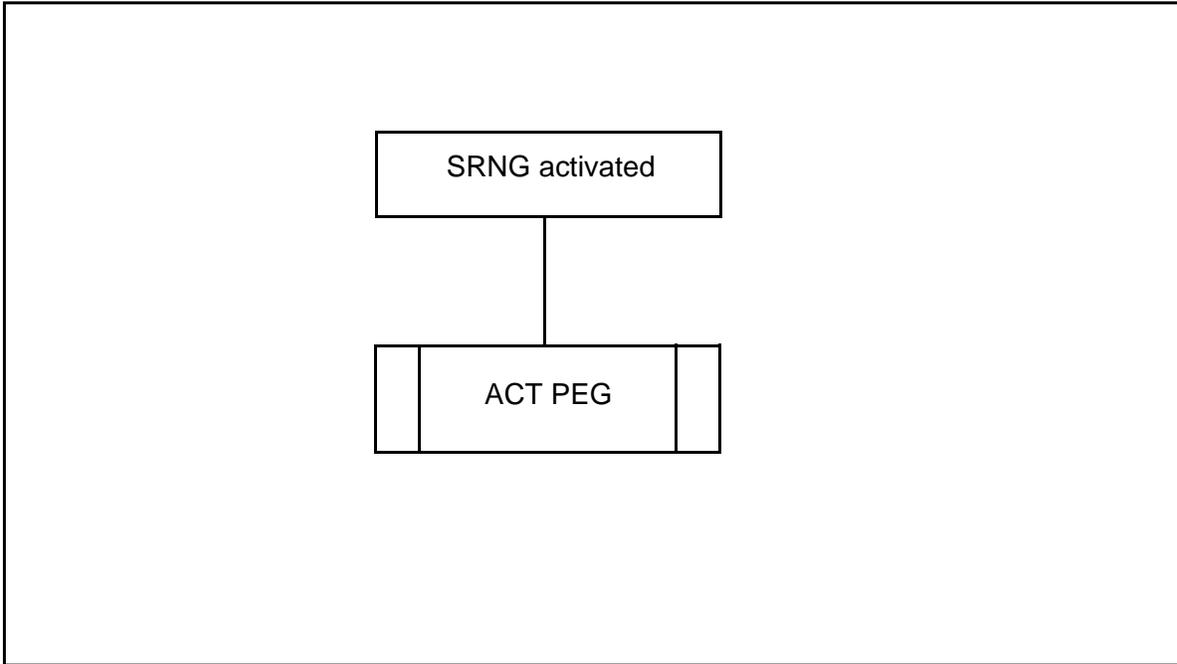


Figure 4-212: SRNG measurement block (OPM049) USE PEG flowchart



**Figure 4-213: SRNG measurement block (OPM049) ACT PEG flowchart**



**Figure 4-214: SRNG measurement block (OPM049) DACT PEG flowchart**

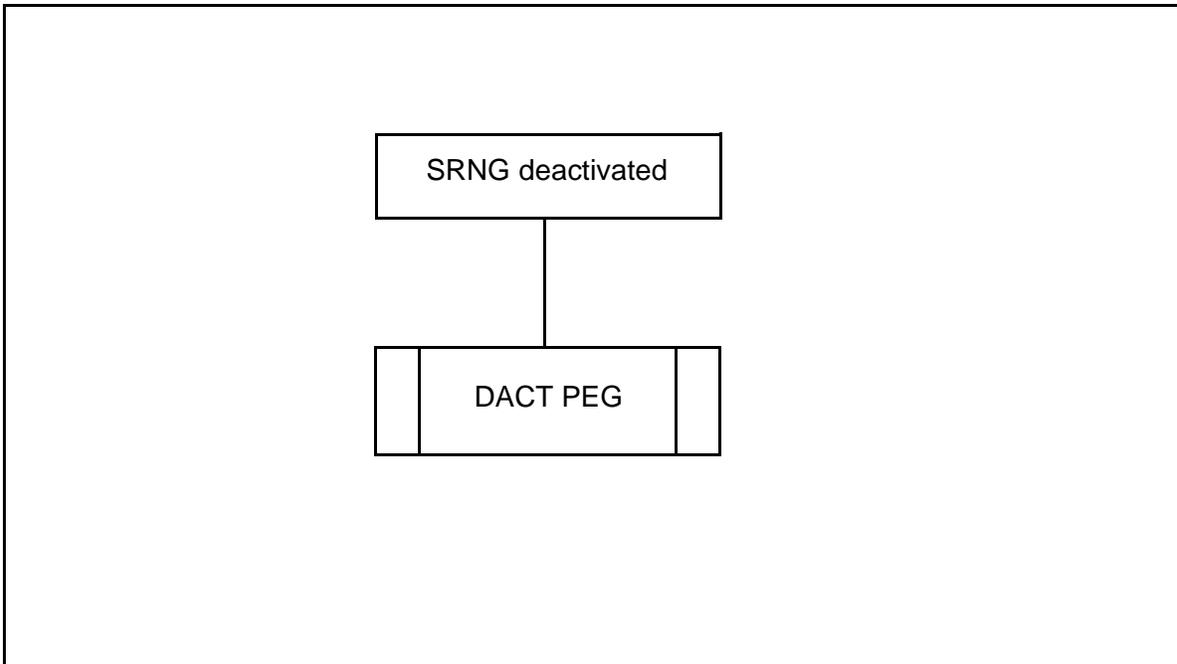
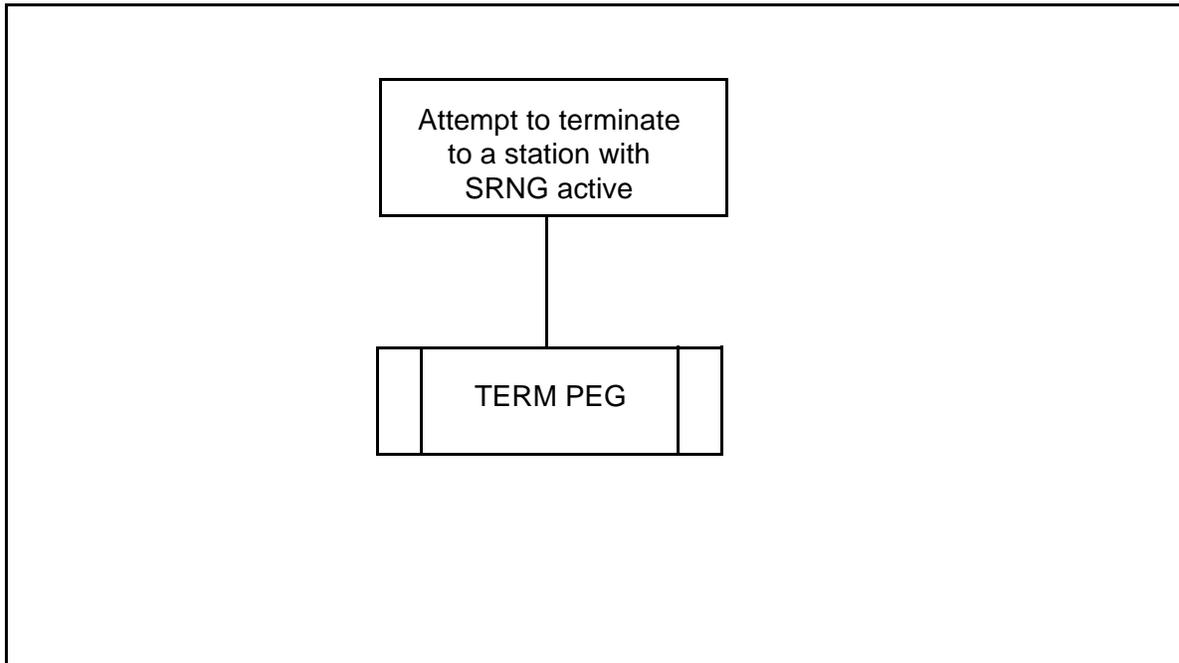


Figure 4-215: SRNG measurement block (OPM049) TERM PEG flowchart



### Service Node Trunk Control (SNTC) (Measurement block - OPM050)

The Service Node Release (SNR) and Service Node Barge-IN (SNB) (Figure 4-201 and Table 4-BG) provide information about each SNR and SNB.

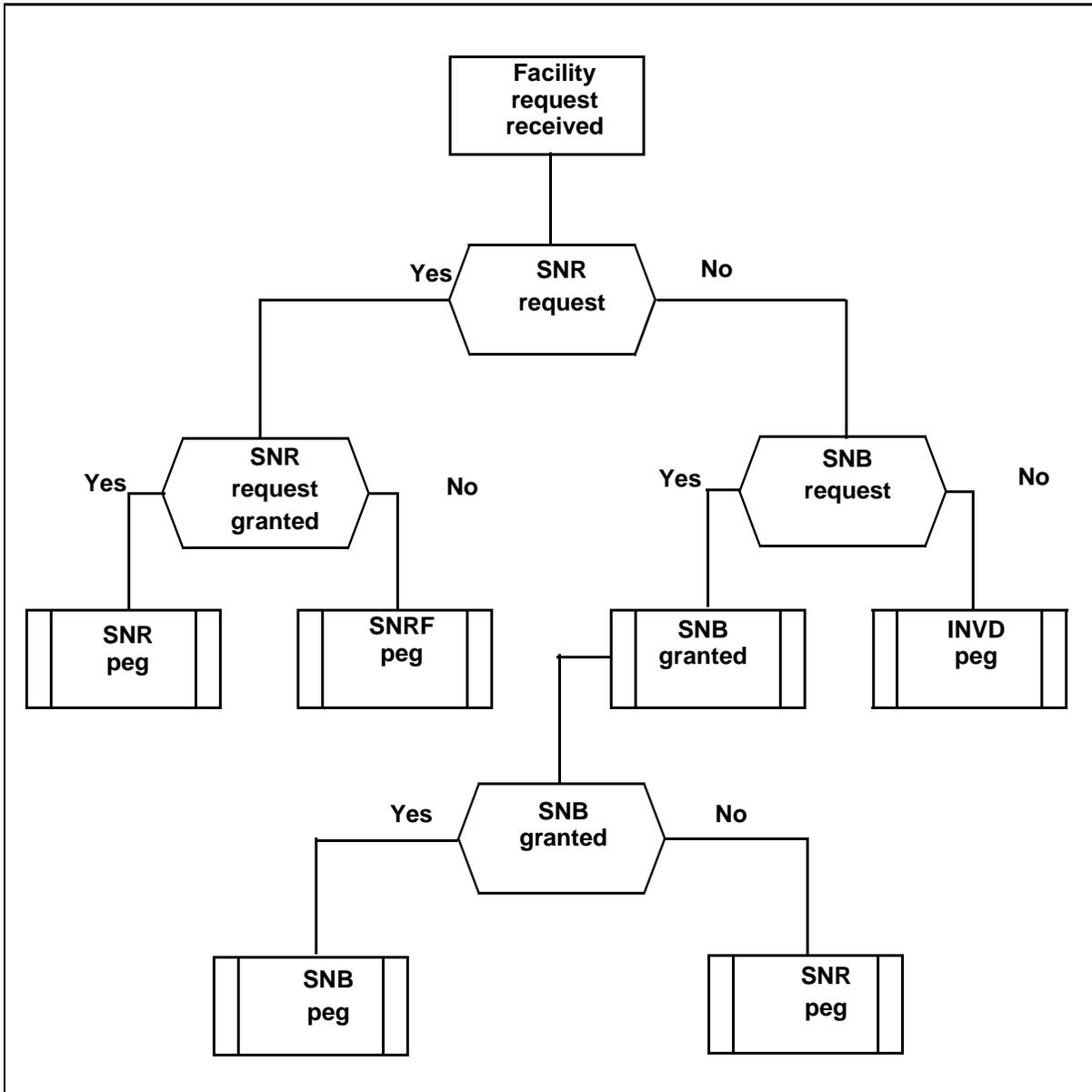
This new OPM block is added to the end of the blocks so as to not skew data to the EADAS center. If added as the last block, this data is ignored by the EADAS center.

**Figure 4-216: SNTC measurement block (OPM050)**

OPM050 SNTC NASYS1MON 04/22/03 14:30:00 QRTR						
TG	TYPE	SNR	SNRF	SNB	SNBF	INVD
0113	2WAY	00000	00000	00000	00000	00000
0114	INC	00000	00000	00000	00000	00000
0114	OUT	00000	00000	00000	00000	00000

<b>Table 4-BG: SNTC measurement block (OPM050) registers</b>	
<b>Mnemonic</b>	<b>Description</b>
SNR	For each received Facility (FAC) message for the SNR function, this peg is incremented by one.
SNRF	For each received Facility Request for the SNR function which was not successful, this peg is incremented by one.
SNB	For each received Facility (FAC) message for the SNR function, this peg is incremented by one.
SNBF	For each received Facility Request for the SNR function which was not successful, this peg is incremented by one.
INVD	For each received Facility Request which does not have a valid feature code in the service activation parameter, this peg is incremented by one.

Figure 4-217: SNTC measurement block (OPM050) flow chart





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# Section 5: Data manipulation

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## Introduction

To manipulate operational measurements data, operating company personnel use the Overlay OMC (Operational Measurements Control) prompting sequences, described in this section.

### Data printout

OPM data are printed out automatically at scheduled intervals or in response to operating company personnel request.

#### Scheduled printout

OPM blocks may be scheduled to print at specified intervals through the overlay OMC (OMC) prompting sequence. OPM blocks may be printed daily, once a week, or every hour, half-hour, or quarter-hour.

#### Manual printout

OPM blocks may be printed manually by using the PRNT resident command. When operating company personnel log into the system, the traffic (TRAF) or universal (ALL) password must be entered. Because a resident command is used, operating company personnel do not have to request an overlay to print OPM data blocks.

All of the current OPM data blocks can be printed out at any time by issuing the following command at the terminal:

```
PRNT OPM ALL <CR>
```

Any one specific OPM block can be printed by issuing the PRNT OPM command in conjunction with the desired block mnemonic. For example, the command

```
PRNT OPM MTCE <CR>
```

prints the current measurements in the Maintenance (MTCE) OPM block.

5-2 OMC (DGTF)

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**DGTF prompting sequence -Seri**

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Prompt	Response	Explanation
REQ		Request. Valid responses are:
	CLR	Clear a Digitone Fraud (DGTF) table. <i>Note: When REQ = CLR, all the information in the Digitone Fraud table will be deleted.</i>
	QUE	Query a DGTF table. <i>Note: When REQ=QUE, the terminal outputs a list of the directory numbers in the Digitone Fraud table or NONE, if no numbers are in the table.</i>
TYP	DGTF	<i>Note 1:</i> For an explanation of Digitone Fraud, refer to the NTP entitled <i>Features and Services Description</i> (297-3401-105). <i>Note 2:</i> Overlay OMC can list up to 64 numbers at one time. If there are more than 64 numbers, the overflow is noted by an overflow (OVFL) message and the buffer must be cleared before other numbers can be listed.

**DTSI prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ADD	Add a Destination Traffic Separation Index (DTSI). <i>Note:</i> To change a DTSI assignment, delete the DTSI, then add the new assignment.
	DEL	Delete a DTSI. <i>Note 1:</i> Before a DTSI can be deleted, any TSMRs with which the DTSI is associated must first be deleted. <i>Note 2:</i> Before deleting a DTSI, obtain a printout of that DTSI to determine that you are deleting the correct DTSI. <i>Note 3:</i> To change a DTSI assignment, delete the DTSI, then add the new assignment.
	QUE	Query a DTSI.
TYP DTSI	DTSI	DTSI number, which is used to specify a single DTSI. Valid responses, which are listed below, depend on the TSMS feature package equipped. If REQ = QUE, ALL is a valid response. 11 through 31 TSMS Package 1 11 through 63 TSMS Package 2 11 through 63 TSMS Package 3 11 through 255 TSMS Package 4 <i>Note:</i> DTSI 1 through 10 are preassigned and cannot be modified.
IDXT		Prompted if REQ = ADD. Asks for the type of DTSI. <i>Note:</i> The DN and THGP responses below are assigned a “termination” classification, responses TG and ROUT are assigned an “outgoing” classification, and response ANNC is assigned a “non-completion” classification. These destination classifications are used when assigning multiple DTSI, STSI, and call type combinations to the same TSMR. For additional information, see <i>Overlay OMC (TSMR)</i> .
	ANNC	announcement-type destination
	DN	directory number destination
	TG	outgoing trunk group destination. Not applicable for TSMS feature package 4.
	THGP	thousands group destination.
	ROUT	route destination. Applicable only for TSMS feature package 4.

**EBSG prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ACT	Activate operational measurements (OPM) for the EBS group. <i>Note: When an EBS group is initially defined, the OPM system defaults to inactive status for that group. Before activating or deactivating OPMs, query the EBS group to determine that you are manipulating the EBS group correctly.</i>
	DACT	Deactivate OPMs for the EBS group. <i>Note: Before activating or deactivating OPMs, query the EBS group to determine that you are manipulating the EBS group correctly.</i>
	QUE	Query OPMs for one or all EBS groups. The printout obtained in the query procedure is described in Table 5-A.
TYP	EBSG	
EBSG	n(nn)	Enter the number, from 0 through 255, of the EBS group for which OPM is being activated or deactivated. If REQ = QUE, ALL is a valid response.
	ALL	<i>Note: This overlay is intended for use by operating company personnel to study operational measurements either for individual EBS groups or for small numbers of EBS groups. Activation of operational measurements for large numbers of EBS groups (for example, more than 70) should be avoided due to excessive time required for printing the measurements.</i>

Printout	Explanation
EBS nnn ACT	OPM is active for EBS group nnn.
EBS nnn DACT	OPM is not active for EBS group nnn.
NONE	OPM is not active for any EBS group.

**HUNT prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ACT	Activate operational measurements (OPM) for the hunt group. <i>Note: When a hunt group is initially defined, the OPM system defaults to inactive status for that hunt group. Before activating or deactivating OPMs, query the hunt group to determine that you are manipulating the hunt group correctly.</i>
	DACT	Deactivate OPMs for the hunt group. <i>Note: Before activating or deactivating OPMs, query the hunt group to determine that you are manipulating the hunt group correctly.</i>
	QUE	Query OPMs for one or all hunt groups. The printout obtained in the query procedure is described in Table 5-B.
TYP	HUNT	
HTGP		Enter the number (from 1 to 2047) of the hunt group for which OPM is being activated or deactivated. If REQ = QUE, ALL is a valid response.

Printout	Explanation
DNH <i>nnnn</i> ACT	OPM is active for DNH group <i>nnnn</i>
DNH <i>nnnn</i> DACT	OPM is not active for DNH group <i>nnnn</i>
NONE	OPM is not active for any DNH group

**IDRW prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ACT	Activate operational measurements (OPM) for an ISDN drawer (IDRW).
	DACT	Deactivate OPMs for an IDRW.
	QUE	Query OPMs for an IDRW.
TYP	IDRW	Integrated Services Digital Network Drawer.
LOC		The physical location of the ISDN drawer, designated by the lowest subgroup number of the drawer. For example: <i>(SITE)</i> LCE 1 1 8 specifies the ISDN drawer containing LSGs 8 and 9.
	<i>(site)</i> HUBE <i>b s</i> <i>lsg</i>	A Star Hub location.
	<i>(site)</i> LCE <i>b s</i> <i>lsg l</i>	An LCE, or an RSC (CLCE), location.
	<i>site</i> LCE <i>b s lsg</i> <i>l</i>	An OPM or RLCM location.
	<i>(site)</i> RSE <i>b s</i> <i>lsg l</i>	An OPSM, RSLE, or RSLM location.
	<i>(site)</i> RSC <i>b s</i> <i>lsg l</i>	An RSC (CRSC) location.
	ALL	All IDRW locations. Valid only if REQ = DACT or QUE.

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**IDT prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ACT	Activate operational measurement collection for IDTs.
	DACT	Deactivate operational measurement collection for IDTs.
	QUE	Query IDT operational measurements.
TYP	IDT	Integrated Digital Terminal
LOC		The physical location of the IDT. Valid responses are listed below.
	<i>(site) IDE n</i>	An Integrated Digital Terminal (IDT) location.
	ALL	All IDT locations. Valid only if REQ = DACT or QUE.

**ISLN prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ADD	Add an ISDN line (ISLN) for operational measurements.
	DEL	Delete an ISLN for operational measurements. <i>Note:</i> Before deleting an ISLN, obtain a printout of that ISLN to determine that you are deleting the correct ISLN.
	QUE	Query an ISLN for operational measurements.
TYP	ISLN	Integrated Services Digital Network Line.
LOC		The physical location of the ISDN line card (NTBX27) to be added, deleted, or queried for operational measurements. Valid responses are listed below.
	<i>(site)</i> HUBE <i>b s</i> <i>lsg l</i>	A Star Hub location.
	<i>(site)</i> IDE <i>b s</i>	An Integrated Digital Terminal line (IDTL) location.
	<i>(site)</i> LCE <i>b s</i> <i>lsg l</i>	An LCE, or an RSC (CLCE), location.
	<i>site</i> LCE <i>b s lsg</i> <i>l</i>	An OPM or RLCM location.
	<i>(site)</i> RLDE <i>b</i> <i>lsg l</i>	Not operational.
	<i>(site)</i> RSE <i>b s</i> <i>lsg l</i>	An OPSM, RSLE, or RSLM location.
	<i>(site)</i> RSC <i>b s</i> <i>lsg l</i>	An RSC (CRSC) location.
	ALL	All ISLN locations. Valid only if REQ = DEL or QUE.

**LCM prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ACT	Activate OPMs for LCMs.
	DACT	Deactivate OPMs for LCMs.
	QUE	Query OPMs for LCMs.
TYP	LCM	
LCM		Specifies the LCM to perform the request on. Valid responses are:
	<i>(site) LCE b s</i>	Location of the LCM.
	or	
	<i>site RSE/RSC</i>	
	<i>b s</i>	
	or	
	<i>site HUBE b 3</i>	
	ALL	All LCMs. Valid only if REQ = DACT or QUE.

**LINK prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	CHG	Reassign level 2 signaling links whose measurements are to be printed.
	QUE	List level 2 signaling links whose measurements are printed.
TYP	LINK	
LNK $n$		Prompted if REQ = CHG. Specifies up to eight signaling links to be measured and displayed in one report. Valid responses to prompt LNK $n$ (that is, LNK1, LNK2 ... LNK8) are:
	set code	The signaling link set number followed by the number (or <i>code</i> ) of the signaling link within the set, where <i>set</i> (signaling link set) is a number from 1 through 38, and <i>code</i> (signaling link code) is a number from 0 through 15. For example, in response to LNK1, a response might be "38 1", indicating that link 1 in link set 38 is to be measured and displayed on the report.  <i>Note: Signaling link sets and the signaling links they contain must be declared in Overlay SNET before they are specified here.</i>
	UNAS	Specifies that no link measurements for LNK $n$ are to be printed.  <i>Note: The remaining signaling links default to UNAS and prompts for remaining signaling links will not be output. For example, if UNAS is entered in response to prompt LNK1, prompts LNK2 through LNK8 will not be output.</i>
	<CR>	Specifies LNK $n$ measurement status to be unchanged.

**LSU prompting sequence**

Prompt	Response	Explanation
<i>Note: This prompting sequence applies only to an STP.</i>		
REQ		Request. Valid responses are:
	CHG	Reassign level 3 signaling link set whose operational measurements are to be printed.
	QUE	List level 3 signaling link set whose operational measurements are to be printed.
TYP	LSU	
LSU#		Prompted only if REQ = CHG. Asks for the signaling link set for which operational measurements on CCS7 networks are to be collected and printed.
	n(n)	Link set number, from 1 through 38. <i>Note: After a link set number is changed (REQ = CHG), data collection begins for the new link set number during the next time period; data collected during the time period in which the change was made is deleted and the OPM 029 report will show no values for that time period.</i>
	UNAS	No link set utilization operational measurements on gateway screening are to be printed.
	<CR>	The link set utilization measurement status is to remain unchanged.

**MADN prompting sequence**

---

<b>Prompt</b>	<b>Response</b>	<b>Explanation</b>
REQ		Request. Valid responses are:
	ACT	Activate OPMs for MADNs.
	DACT	Deactivate OPMs for MADNs.
	QUE	Query OPMs for MADNs.
TYP	MADN	
MADN		Specifies the MADN to perform the request on. Valid responses are:
	(nnn) nxx nnnn	MADN directory number. When the system is configured with Duplicate NXX feature, either a seven- or ten-digit DN can be entered. A ten-digit DN must be entered when the thousands group ( <i>nxx n</i> ) specified has more than one associated HNPA.
	ALL	All MADNs. Valid only if REQ = DACT or QUE.

**OMC prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	CHG	Change Operational Measurements Control (OMC) system parameters. <i>Note 1:</i> In an EADAS office, a fixed schedule is used. Changes can be made through this prompting sequence, but these changes will have no effect unless EDAS (in the SYS prompting sequence of overlay CNFG) is set to NO. <i>Note 2:</i> Before changing the OMC parameters, obtain a printout of the current OMC data measurement block(s). Input new data only for parameters that are being changed; if the parameters are not being changed, respond by inputting a carriage return.
	QUE	Query OMC system parameters.
TYP	OMC	
BLK		Mnemonic for the measurement block. Valid responses are listed below. If REQ = QUE, ALL is a valid response for all generics. <i>Note 1:</i> Only the MTCE and CPU measurement blocks may be collected for a Large Cluster Controller (LCC). All measurement blocks may be collected for a Satellite Switching Office that is connected to an LCC. <i>Note 2:</i> OPM blocks that are associated with specific features, for example, EBS, S7L2, and E800, are valid only if the feature is configured in the office.
	ALL	all blocks
	AIN	Advanced Intelligent Network
	CAMA	Centralized Automatic Message Accounting
	CCF	Custom Calling Features
	CCS7	CCS7
	CFTF	Stuck Coin First Trial Failure
	CLAS	Custom Local Area Signaling Services
	CPM	Common Peripheral Module
	CPU	CPU real time
	D1LP	DS-1 span line <i>Note:</i> When BLK = D1LP, the SRLK portion of the D1LP measurement block will be updated and modified according to the parameters configured for the NTWK measurement block (BLK = NTWK). The D1LK portion of the D1LP measurement block will be updated and modified according to the parameters configured for the D1LP measurement block.
	DNS	Not operational.

## 5-14 OMC (OMC)

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### OMC prompting sequence

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Prompt	Response	Explanation
	E800	Enhanced 800 Services
	EBS	Enhanced Business Services
	EQA	Equal Access
	ESA	Emergency Stand-Alone
	GWS	Gateway Screening
	HUNT	hunt groups
	IBS	Integrated Business Services
	IBSR	Integrated Billing Storage and Retrieval
	IDRW	Integrated Services Digital Network drawer
	IDT	Integrated Digital Terminal
	INTR	Intraswitching
	ISG	Integrated Services Digital Network group
	ISLN	Integrated Services Digital Network line
	ISUP	Integrated Services Digital Network User Part
	ISVC	incoming service
	LCM	line concentrating module
	LDBS	Local Data Base Services
	LNP	Local Number Portability
	MADN	Multiple Access Directory Number
	MTCE	maintenance
	NTWK	network
	OSVC	originating service
	POOL	pool identification
	PRO	processor measurements
	S7L2	CCS7 Level 2
	S7L3	CCS7 Level 3
	SCCP	Signaling Connection Control Part
	SMDI	Simplified Message Desk Interface
	SNRS	CCS7 Signaling Route Set
	SPAN	span line errors
	SREG	study registers
	SRNG	Simultaneous Ringing
	SRP	Signaling Relay Point
	SVCE	service circuits
	TCAP	Transaction Capability Application Part
	TRAF	traffic distribution

**OMC prompting sequence**

Prompt	Response	Explanation
	TRK	trunk groups
	TSMS	Traffic Separation Measurement System
	WBAS	Wireless
UPDT		Mnemonic for the update schedule. Valid entries are:
	DALY	daily
	DOWK	day of the week
	HALF	half-hour
	HRHF	hourly on the half-hour
	HRHR	hourly on the hour
	QRTR	quarter hour
		<i>Note: If BLK = DILP, the SRLK portion of the DILP measurement block will be updated according to the update schedule configured for the NTKW measurement block (BLK=NTWK).</i>
UPDY		If UPDT = DOWK, the mnemonic for the day(s) of the week that updating occurs. Valid entries are SUN, MON, TUES, WED, THUR, FRI, and SAT.
UPHR		If UPDT = DALY or DOWK, a number from 0 through 23 that specifies the hour of the day at which updating occurs.
UMOD		Mnemonic for the update mode. Valid entries are:
	ADD	Value in the accumulating register is added to the value in the holding register. Not valid for BLK = CFTF.
	REP	Value in the accumulating register replaces the value in the holding register.
		<i>Note: If BLK = DILP, the SRLK portion of the DILP measurement block will be updated according to the update mode configured for the NTKW measurement block (BLK = NTKW).</i>
PRNT		The mnemonic for the printout schedule. Valid entries are:
	DALY	daily
	DOWK	day of the week
	HALF	half-hour
	HRHF	hourly on the half hour
	HRHR	hourly on the hour
	NOPR	no print
	ONUP	print on updating

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**OMC prompting sequence**


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Prompt	Response	Explanation
	QRTR	quarter hour  <i>Note: To prevent printing of irrelevant measurement blocks for the Large Cluster Controller (LCC), the NOPR response should be used for all LCC measurement blocks except MTCE and CPU.</i>
PRDY		If PRNT=DOWK, the mnemonic for the day(s) of the week on which printing occurs. Valid entries are SUN, MON, TUES, WED, THUR, FRI, and SAT.
STRT		Prompted if PRNT=DALY or DOWK. The hour of the day at which printing starts. Valid response is a number from 0 (midnight) through 23.
STOP		Prompted if PRNT=DALY or DOWK. The hour of the day at which printing stops. Valid response is a number 0 (midnight) through 23. The number specified for STOP must be greater than or equal to the number specified for STRT, with the following exception: when STRT is greater than 0 (for example, 21, or 9 PM), STOP may be set to 0 (midnight).  <i>Note: STRT and STOP are used together to specify a time interval for printing. Printing occurs hourly on the hour within the interval. The number specified for STRT is the first hour at which printing occurs. The number specified for STOP is the last hour at which printing occurs.</i>
PRCL		Not prompted if the office is configured as a Host Switching Office (HSO) or a Satellite Switching Office (SSO) or as a Large Cluster Controller (LCC) (see Note). Mnemonic that specifies the class of TTY used for outgoing OPM data. Valid entries are:
	DMO	data modification
	LIT	Line Insulation Test
	MTC	maintenance
	RSB	Remote Service Bureau
	TRAF	traffic  <i>Note: All OPMs for HSO/SSO or LCC/SSO are assigned for output as traffic class, as a defining characteristic of the measurement block.</i>
ZRPR		Respond YES, the holding register is set to zero on printing, or NO, the holding register value is left intact on printing.  <i>Note: If BLK=D1LP, the SRLK portion of the D1LP measurement block will be modified according to the holding register treatment configured for the NTWK measurement block (BLK=NTWK).</i>
DIG		Asks for the number of significant digits to display in each measurement peg in an OPM report.
	5	Up to 5 significant digits will display.

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**OMC prompting sequence**

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Prompt	Response	Explanation
	6	Up to 6 significant digits will display.
PRDF		When BLK = TSMS. Asks if a message should print for each default TSMR (TSMR 0) that is pegged.
	YES	Print message for each default TSMR that is pegged.
	NO	Do not print message for each default TSMR that is pegged.

*Note: After PRDF is set to YES, only the first 15 pegs will have messages printed; after each subsequent update, an additional 15 pegs will have messages printed.*

**PRI prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ACT	Activate operational measurements (OPM) for the PRI LTG. <i>Note: When a PRI LTG is initially defined, the OPM system defaults to inactive status for that group. Before activating or deactivating OPMs, query the PRI LTG to determine that you are manipulating the PRI LTG correctly.</i>
	DACT	Deactivate OPMs for the PRI LTG. <i>Note: Before activating or deactivating OPMs, query the PRI LTG to determine that you are manipulating the PRI LTG correctly.</i>
	QUE	Query OPMs for one or all PRI LTGs. The printout obtained in the query procedure is described in Table 5-C.
TYP	PRI	
PRI	<i>n(nn)</i>	Enter the number (from 1 to 127) of the PRI LTG for which OPM is being activated or deactivated. If REQ = QUE, ALL is a valid response.
	ALL	

Printout	Explanation
PRI <i>nnn</i> (pri ltg name) ACT	OPM is active for PRI LTG <i>nnn</i> . <i>Note: (pri ltg name) is present only if the Facility Identificationn by Name feature is enabled in Overlay CNFG (SYS) and a facility name is assigned to the PRI LTG in Overlay PRI (PRI).</i>
PRI <i>nnn</i> (pri ltg name) DACT	OPM is not active for PRI LTG <i>nnn</i> . <i>Note: (pri ltg name) is present only if the Facility Identificationn by Name feature is enabled in Overlay CNFG (SYS) and a facility name is assigned to the PRI LTG in Overlay PRI (PRI).</i>
NONE	OPM is not active for any PRI LTG.

**SREG prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ADD	Add a study register (SREG).  <i>Note 1:</i> Up to 128 software registers can be specified for use as study registers. The number is specified in overlay CNFG (OPMS) prompting sequence, in the NTP entitled <i>Data Modification Manual (297-3401-311)</i>  <i>Note 2:</i> A study register can be added to any declared line or trunk circuit, with the exception of standby line circuits.
	DEL	Delete a SREG.  <i>Note:</i> Before deleting a SREG, obtain a printout of that SREG to determine that you are deleting the correct SREG.
	QUE	Query a SREG.
TYP	SREG	
LOC		The physical location of the line or trunk circuit to be studied (SREG added), no longer studied (SREG deleted), or queried. Valid responses are listed below. If REQ = DEL or QUE, ALL is a valid response.
	PE <i>b s p n</i>	For digital trunks, where <i>b s p</i> is the location of a DCM in the PE and <i>n</i> is the carrier channel number
	PE <i>b s p u</i>	For Peripheral Equipment, where <i>b s p u</i> is the PE bay, shelf, pack, and unit location
	<i>site</i> HUBE <i>b s lsg l</i>	For a Star Hub, where <i>b s lsg l</i> is the bay, shelf, line subgroup, and line card location
	LCE <i>b s lsg l</i>	For Line Concentrating Equipment, where <i>b s lsg l</i> is the LCE bay, shelf, line subgroup, and line card location
	<i>site</i> LCE <i>b s lsg l</i>	For Remote Line Concentrating Modules (RLCMs), Outside Plant Modules (OPM), and Outside Plant Access Cabinets (OPAC), where <i>b s lsg l</i> is the LCE bay, shelf, line subgroup, and line card location and <i>site</i> is the site identification (location) of the RLCM
	<i>site</i> PE <i>b s p u</i>	For Remote Equipment Module (REM) and Remote Concentrator Terminal (RCT) Equipment, where <i>b s p u</i> is the PE bay, shelf, pack, and unit location and <i>site</i> is the site identification (location) of the remotely located equipment
	<i>site</i> RLDE <i>n lsg l</i>	Not operational.
	<i>site</i> RSC <i>b s p u</i>	For Remote Switching Center (RSC-S) equipment, where <i>b s p u</i> is the bay, shelf, pack, and unit location and <i>site</i> is the site identification (location) of the remotely located equipment
	<i>site</i> RSE <i>b s p u</i>	For Remote Subscriber Line Equipment (RSLE) and Remote Subscriber Line Module (RSLM) equipment, where <i>b s p u</i> is the bay, shelf, pack, and unit location and <i>site</i> is the site identification (location) of the remotely located equipment

## 5-20 OMC (SREG)

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### SREG prompting sequence

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Prompt	Response	Explanation
	<i>site</i> SLE <i>b cb cu</i>	For SLC-96 Subscriber Loop Equipment, where <i>b cb cu</i> is the SLE bay, channel bank, and channel unit and <i>site</i> is the <i>site</i> identification (location) of the remotely located equipment
	<i>site</i> UCE <i>b lsg l</i>	For Remote Carrier Urban (RCU) equipment, where <i>b lsg l</i> is the bay, line subgroup, and line location and <i>site</i> is the site identification (location) of the remotely located equipment

**STSI prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ADD	Add a Source Traffic Separation Index (STSI). <i>Note:</i> To change an STSI assignment, delete the STSI, then add the new assignment.
	DEL	Delete an STSI. <i>Note 1:</i> Before an STSI can be deleted, any TSMRs with which the STSI is associated must first be deleted. <i>Note 2:</i> Before deleting an STSI, obtain a printout of that STSI to determine that you are deleting the correct STSI. <i>Note 3:</i> To change an STSI assignment, delete the STSI, then add the new assignment.
	QUE	Query an STSI.
TYP	STSI	STSI number, which is used to specify a single STSI. Valid responses, which are listed below, depend on the TSMS feature package equipped. If REQ = QUE, ALL is a valid response. 1 through 31 TSMS Package 1 1 through 31 TSMS Package 2 1 through 63 TSMS Package 3. 1 through 255 TSMS Package 4 (available in Generic 408.10 and later 400-Series generics).
STSI		
IDXT		Prompted if REQ = ADD. Asks for the type of STSI. <i>Note:</i> The DN and THGP responses below are assigned an “origination” classification, and response TG is assigned an “incoming” classification. These source classifications are used when assigning multiple STSI, DTSI, and call type combinations to the same TSMR. For additional information, see Overlay OMC (TSMR).
	DN	directory number source
	TG	incoming trunk group source
	THGP	thousands group source.

**TSMR prompting sequence**

Prompt	Response	Explanation
REQ		Request. Valid responses are:
	ADD	<p>Add a Traffic Separation Measurement System Register (TSMR).</p> <p><b>Note 1:</b> The number of software registers specified for use as TSMS study registers depend on the feature package with which the DMS-10 switch is equipped.</p> <p><b>Note 2:</b> To assign multiple STSI, DTSI and call type combinations to the same TSMR, the STSI, DTSI, and call type combinations must have the same source and destination classification. In addition, the STSI, DTSI, and call type combinations must be added <u>before</u> the TSMR is assigned. Refer to the STSI and DTSI prompting sequences</p> <p><b>Note 3:</b> To change a TSMR assignment, delete the register, then add the new assignment.</p>
	DEL	<p>Delete a TSMR.</p> <p><b>Note 1:</b> To change a TSMR assignment, delete the register, then add the new assignment.</p> <p><b>Note 2:</b> Before deleting a TSMR, obtain a printout of that TSMR to determine that you are deleting the correct TSMR.</p> <p><b>Note 3:</b> To delete a TSMR assigned to multiple STSI, DTSI and call type combinations, the user must <u>first</u> delete the TSMR that associates the STSI, DTSI, and call type combinations. After the TSMR is deleted, each STSI, DTSI and call type combination formerly associated with the TSMR may be deleted. Refer to the STSI and DTSI prompting sequences.</p>
	QUE	Query a TSMR. The printout obtained in the query procedure is described in Table 5-D.
TYP TSMR	TSMR	<p>TSMS register number. Valid responses, which are listed below, depend on the TSMS feature package. Register number 0 is dedicated to the collection of default traffic (includes measurements for all traffic which does not have an STSI, DSTI, and/or TSMS register assigned). If REQ = QUE, ALL is a valid response.</p> <p>1 through 127 TSMS Package 1            1 through 255 TSMS Package 2            1 through 255 TSMS Package 3.            1 through 1023 TSMS Package 4</p>
PRFX		Mnemonic for the prefix. Valid entries are:
	P0	Prefix 0+, 0-, 01+
	P1	Prefix 1+, 011+
	P9	Prefix 950

**TSMR prompting sequence**

Prompt	Response	Explanation																				
	NP	No prefix.																				
STSI		<p>Source Traffic Separation Index. Valid responses, which are listed below, depend on the TSMS feature package equipped. An error message is generated if the STSI has not been previously assigned an index type (DN, TG, or THGP).</p> <p>1 through 31 TSMS Package 1                      1 through 31 TSMS Package 2                      1 through 63 TSMS Package 3                      1 through 255 TSMS Package 4</p> <p><i>Note: 0 is the default register and is used to collect data for unassigned sources.</i></p>																				
DTSI		<p>Destination Traffic Separation Index. Valid responses, which are listed below, depend on the TSMS feature package equipped. An error message is generated if the DTSI has not been previously assigned an index type (ANNC, DN, TG, or THGP).</p> <p>11 through 31 TSMS Package 1                      11 through 63 TSMS Package 2                      11 through 63 TSMS Package 3                      11 through 255 TSMS Package 4</p> <p><i>Note: The first 10 indices are preassigned as follows:</i></p> <table border="0"> <tr><td>1</td><td>busy tone</td></tr> <tr><td>2</td><td>howler</td></tr> <tr><td>3</td><td>reorder</td></tr> <tr><td>4</td><td>lockout</td></tr> <tr><td>5</td><td>test lines</td></tr> <tr><td>6</td><td>Speed Calling administration</td></tr> <tr><td>7</td><td>Call Forwarding administration</td></tr> <tr><td>8</td><td>revertive</td></tr> <tr><td>9</td><td>partial dial timeout</td></tr> <tr><td>10</td><td>partial dial abandon.</td></tr> </table>	1	busy tone	2	howler	3	reorder	4	lockout	5	test lines	6	Speed Calling administration	7	Call Forwarding administration	8	revertive	9	partial dial timeout	10	partial dial abandon.
1	busy tone																					
2	howler																					
3	reorder																					
4	lockout																					
5	test lines																					
6	Speed Calling administration																					
7	Call Forwarding administration																					
8	revertive																					
9	partial dial timeout																					
10	partial dial abandon.																					

<b>Table 5-D: Query TSMS register printout</b>	
Printout	Explanation
TSMR 1 PRFX NP STSI 4 DTSI 16	TSMS Register 1 has been assigned a prefix type of No Prefix, with all originating traffic that is assigned to Source Index 4 and terminating traffic assigned to Destination Index 16.

<b>Table 5-D: Query TSMS register printout</b>	
<b>Printout</b>	<b>Explanation</b>
TSMR 15 PRFX P0 STSI 5 DTSI 2	TSMS Register 15 has been assigned a prefix type of (0+, 0-, 01+), with all originating traffic that is assigned to Source Index 5 and terminating traffic assigned to Destination Index 2.
TSMR 4 PRFX P1 STSI 12 DTSI 31	TSMS Register 4 has been assigned a prefix type of (1+, 011+), with all originating traffic that is assigned to Source Index 12 and terminating traffic assigned to Destination Index 31.
TSMR 20 PRFX P9 STSI 11 DTSI 12	TSMS Register 20 has been assigned a prefix type of 950, with all originating traffic that is assigned to Source Index 11 and terminating traffic assigned to Destination Index 12.

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DMS-10 Family

## **600-Series Generics**

Operational Measurements

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