



**DIV. 9: COMMON CHANNEL SIGNALING**

## SEC. 1: CNI IMPLEMENTATION ON THE 5ESS SWITCH

## SEC. 1A: CNI IMPLEMENTATION ON THE 5ESS-2000 SWITCH

### 1. INTRODUCTION

The CNI (Common Network Interface) network allows signaling information to be transmitted between switches. The signaling information controls basic interswitch calls (ISUP Routing) and handles CCS7 applications such as LASS and NS800 (Global Title Routing). The following section provides information needed to connect the 5ESS-2000 Switch to the CNI network to provide ISUP routing and Global Title routing for the 5ESS-2000 Switch. Refer to documents: 256-015-200 (CCS7 Network - Database and Routing Document) and 235-190-120 (Common Channel Signaling Service Features) for a detailed description of Common Channel Signaling services.

#### 1.1 CNI Terms

The following terms are used in this section and in the following Division 9 sections:

- A signaling point is a switch, STP (Signal Transfer Point), or SCP (Service Control Point) that sends and receives CCS7 signaling messages to other signaling points in the network.
- A Point Code is a 9-digit number that uniquely identifies a signaling point in the CCS7 network. The Point Code provides the address information (e.g., identification of originating or terminating point) that is needed to route signaling messages throughout the network.
- A CLLI (Common Language Location Identification) is an 11-character code, which is similar to a Point Code, that uniquely identifies a switch, STP or a SCP in the network.
- A signaling link is a data link that connects two signaling points in a CCS7 network.
- A signaling Link Set consists of all CCS7 signaling links between two particular signaling points.
- A Combined Link Set refers to all CCS7 signaling links that connect a switch to an STP pair or to all the CCS7 signaling links that connect an STP to another STP pair.
- A Cluster is a group of signaling points within a network. A cluster may have up to 255 signaling points.
- An SCP is a centralized database that provides call routing information needed for some CCS7-based features.
- The STP is used as a switching point between offices, SCPs and other STPs in the CCS7 network
- GTTs (Global Title Translations) are used to obtain routing information for CCS7 based features.

#### 1.2 Sample CNI Translations

Figure 1 shows a sample CNI configuration used as an illustration for the sample data provided in the following Division 9 Sections. The following RC Views should be entered for this configuration:

- A. The LOCAL POINT CODE and LOCAL CLLI should be defined on RC View 15.1.
- B. The link nodes and their corresponding LINKSETs and COMBINED LINKSET should be defined on RC View 15.2.
- C. All of the Non-local networks must be defined on RC View 15.12.

- D. The cluster information should be entered on RC View 15.9 for each STP, SCP and ISUP trunk.
- E. For 5E8 and earlier, the member information should be entered on RC View 15.13 for small network routing. For 5E9(1) and later, member information should be entered on RC View 15.18 for small network routing, or for the FPCR feature if it is activated.
- F. The subsystem numbers for each CCS7 based applications must be defined on RC view 8.17 and 15.10. Also, SUBSYSTEM 3 must be entered for 5E6 and later Software Releases.
- G. The Global Title Translator must be defined on RC View 15.11 for the STPs where Global Title Translations are performed.

## 2. RECENT CHANGE SEQUENCING

1. Install or grow the CNI as covered in the Installation Engineering Handbook 555 (new start) or 555A (growth).

The temporary CNI-related data files are created based on user input gathered in response to a series of (AT&T or LEC) office environment- and hardware equipage-related prompts. These prompts are generated by a script invoked at the RC/V terminal or STLWS (Supplementary Trunk and Line Work Station). This temporary data is used to facilitate installation of the CNI Ring without the need for office-specific data. Refer to the Installation Handbook for procedures to install temporary data files.

The temporary data must be replaced with actual, complete, site-specific functional data before placing the ring in service.

2. For 5E8 and earlier Software Releases, populate the Network File. The following parameters are populated for the specific releases.
  - STP Indicator: Set to 0. Applies to 5E4(2) and later Software Releases.
  - STD\_PC (Standard Point Code Indicator): Set to 1 for LEC networks and 0 for AT&T networks. Applies to 5E4(2) and later Software Releases.
  - Initialize the CNI with a level 4 initialization to bring the network file data into memory.
3. Populate RC View 15.1 (Office Data). See Division 9, Section 2A.
4. Populate RC View 15.2 (Link Node Data). See Division 9, Section 2B.

Enter a view for each signaling link node connected to the adjacent STP pair.

Note:

The signaling link node must be out-of-service and the MAJOR STATE field must be set to "UNA" before the link information can be updated.

5. Populate RC View 15.3 (Logical to Physical). See Division 9, Section 2C.

Populate a view for each signaling link that transmits CCIS6 trunk signaling messages over high (56 kbs) or low speed links (4.8 kbs).

6. Populate RC View 15.12 (Nonlocal Network IDs for 5E6 - 5E8 Software Releases, or Network Routing Data for 5E9(1) and later Software Releases, in any of the following situations. See Division 9, Section 2L.
  - The 5ESS-2000 Switch is routing CCS7 messages to another network.
  - Global Title Translations are performed in an STP that is located in another network.
  - An SCP used for CCS7-based features is located in another network.
  - A far end office is located in another network (ISUP Trunks RC View 5.1).
  - A switch in another network is being sent TCAP messages for LASS.
7. Populate RC View 8.15 (CCS Office Parameters), if APSDN or NS800 is provided by the switch.
8. Populate the Recent Change View 15.10 (Subsystem Numbers); for 5E6 and later Software Releases, subsystem Number 3 is needed for ISUP flow control when using SS7-based features. See Division 9, Section 2J.

When using CCS7-based features (LASS, LIDB, NS800, APSDN and ASP), the Subsystem Numbers must correspond with the network subsystem values and the values assigned to the particular applications (e.g. LASS) on RC View 8.17.

1. Populate the RC View 15.11 (Global Title Translation) when Global Title Translations are to be done using Capability Codes (Alias Point Codes) or if translations are not to be done at the local STP pair. See Division 9, Section 2K.

If no entry is made in the 15.11 View, the Global Title Translations are performed at the local STP pair. The point codes are stored in the general translator, 256.

Note: The TRANSLATION TYPE must correspond with the value assigned to the applications on RC View 8.17.

2. Populate RC View 8.17 (Direct Signaling Application), if the subsystem numbers are assigned on RC View 15.10.
3. Populate RC View 15.9 (Cluster Routing Data) for each of the following. See Division 9, Section 2I.
  - Each local STP cluster.
  - Each far-end office cluster (ISUP trunks defined on RC View 5.1).
  - Each STP where Global Title Translations are performed.
  - Each SCP (Service Control Point) where routing information is stored CCS7 based features (LIDB, NS800, APSDN and ASP).

- Each switch where LASS TCAP messages are sent.
4. For 5E8 and earlier, populate RC View 15.13 (Small Nonlocal Network Cluster and Member Table for 5E6, and Small Network Cluster and Member Table for 5e7 - 5E8 Software Releases) in the following cases; otherwise, RC View 15.9 should be used to enter cluster information. See Division 9, Section 2M.
    - The local STP pair resides within the switch's small network.
    - The local STP pair resides in another small network.
  5. For 5E9(1) and later, populate RC View 15.18 for the following cases.
  6. RC Views 15.4 through 15.8 are initialized with an extensive set of standard input data. The existing report data should not be manipulated but a customized measurement report may be created by entering the following views:
    - Define a new USER VIEW on RC View 15.5. See Division 9, Section 2E.
    - If restrictions are needed on specific measurements, define an Exception Table on RC View 15.6 (see Division 9, Section 2F) for the USER View defined on RC View 15.5.
    - Schedule the report on RC View 15.8 (see Division 9, Section 2G) using one of the corresponding REPORT TYPEs.

Note:

Only Non-Fixed Format reports can be modified or created. Fixed-Format Reports cannot be modified or created.

### 3. CNI FEATURES - 5E9(1) AND LATER

New and Modified RC Views			
RC View	Record Number	Div.	Sec.
8.22	5713	3	5AR
15.1	5011	9	2A
15.2	5012	9	2B
15.9	5019	9	2I
15.12	5022	9	2L
15.14	5024	9	2N
15.15	5025	9	2O
15.16	5026	9	2P
15.17	5027	9	2Q
15.18	5028	9	2R

#### 3.1 RCPTP Feature Definition

The RCPTP (Recent Change of Protocol Timers and Parameters) feature allows customers to change and verify the CCS7 MTP (Message Transfer Part) and SCCP (Signaling Connection and Control Part) protocol timers and thresholds, two critical event parameters, an ANSI Point Code flag, and for NSD, the values of the CCITT protocol timers used in the ISC (International Switching Center).

Before 5E9(1), these timers and thresholds could be changed only via a network file, a process that required a CNI initialization and system reboot to activate the changes. To eliminate these service-impacting procedures, this feature replaces the network file with a set of new and modified Recent Change views through which the parameters can be maintained in a real-time environment.

### 3.2 RCPTP Translation Requirements

15.1 View (5011 Record) - This Office Identification View identifies the local office and its function in the CCS network. For 5E9(1) and later this view, which is entered only once for each office, has three new fields.

- ANSI STD PC IND: This is a verify-only field that indicates whether or not the local office point code format is represented in ANSI. The ANSI format is used only in LEC networks; non-ANSI format is used only in AT&T networks.
- CRIT EVENT NUMBER: This field limits the number of CNCE (CCS Network Critical Event) messages that will be printed on the ROP during the time interval specified in the CRIT EVENT TIMER field.
- CRIT EVENT TIMER: This field specifies the time interval (in seconds) for the CRIT EVENT NUMBER field defined previously.

15.14 View (5024 Record) - This Protocol Office Timers View is new for 5E9(1) and later. It is used to define a set of CSS7 timers: T1.111.4 MTP (Message Transfer Part) and T1.112.4 SCCP (Signaling Connection and Control Part) protocol timers.

15.15 View (5025 Record) - This Protocol Link Set Timers View is new for 5E9(1) and later. It is used to define T1.111.4 and T1.111.7 timers for individual link sets or for all link sets in the office.

15.16 View (5026 Record) - This Protocol Link Set Thresholds View is new for 5E9(1) and later. It is used to set T1.111.4 thresholds to detect and monitor congestion for a specific link set for specific link set or for all link sets in the office.

15.17 View (5027 Record) - This Protocol Link Parameters View is new for 5E9(1) and later. It is used to set T1.111.3 Link protocol timers and SUERM (Signal Unit Error Rate Monitor) thresholds for a single link, a link set, or all links in the office.

### 3.3 ELINK Feature Definition

The ELINK (Extended Access Links and Alternate A-Link Set Routing) feature is a secured feature, which must be purchased by the switch owner and then be activated by an Lucent Technologies SEE (System Equipment Engineer). The Secured Feature ID for ELINK is 131.

The ELINK feature allows a 5ESS-2000 Switch in a LEC CCS network to connect the signaling links between SEPs (Signaling End Points) and non-home STPs. STPs that are connected to the switch via links designated as type "A" are considered Primary STPs or Home STPs. Those connected to the switch via links designated as type "E" are considered Other STPs.

With this feature E-links provide additional routes to destinations, minimizing SEP isolation. They serve as alternate routes in the event of failed A-link sets. Likewise, A-link sets serve as alternate routes for failed E-link sets.

E-links may be used to route traffic directly to Other STP pairs or quads from SEPs, using fewer intermediate STPs and improving call processing and network performance.

### 3.4 ELINK Translation Requirements

8.22 View (5713 Record) - This Secured Feature System Assignment View is used to enable Secured Features. Secured Features are the optional service features that can be purchased in addition to the features included in the current Software Release. After an Lucent Technologies SEE (System Equipment Engineer) has determined that a switch owner has purchased a secured feature, the SEE can activate the feature on the switch. The ELINK feature is activated by setting the ACT field to "Y" for SFID (Secured Feature ID) 131.

15.1 View (5011 Record) - This Office Identification View identifies the local office and its function in the CCS network. For 5E9(1) and later, the LOW PRI SRST field was added to set the timer (in seconds) for the SRST (Signaling Route Set Test) message transmission interval for alternate or lower priority routes.

15.2 View (5012 Record) - This Link Information View is used to define signaling links. Each link node equipped on the CNI ring must be defined on this view. Since CNI links are equipped in pairs, an even number of signaling links is always entered.

For 5E9(1) and later, a LINK TYPE value of "E" is available when secured features ELINK and FPCR (Full Point Code Routing) have been purchased. A-links are used between the 5ESS-2000 Switch and an adjacent STP; E-links are used between the 5ESS-2000 Switch and a non-adjacent STP.

15.9 View (5019 Record) - This Cluster Routing Data View is used to define data for CCS7 message routing based on the Network ID and cluster. This view supports cluster level routing to local networks and to non-local networks.

For 5E9(1) and later, the fields ALT1 ROUTE and ALT2 ROUTE were added. They specify the link sets to be used for the first and second alternate routes between the 5ESS-2000 Switch and the STP.

15.12 View (5022 Record) - This Network Routing Data View is used to define all the non-local networks that send or receive CCS7 messages to or from the local 5ESS-2000 Switch.

For 5E9(1) and later, the fields ALT1 ROUTE and ALT2 ROUTE were added. They specify the link sets to be used for the first and second alternate routes between the 5ESS-2000 Switch and the STP.

### 3.5 NILATA Feature Definition

The NI (Network Interconnect) LATA Routing feature is only for the Lucent Technologies NSD (Network Services Division) network. It allows more than one point code to be assigned for InterLATA routing to and from the InterExchange Carrier's toll switch office. This feature provides the capability to associate a unique point code with each LATA, allowing circuit- or call-associated CCS7 messages to be routed via the SPOI (Signaling Point of Interface), as required in the MFJ (Modification of Final Judgement). A SPOI is a legal and logical separation point where a LEC's (Local Exchange Carrier's) signaling link meets an Interexchange Carrier's signaling link.

Before 5E9(1), each AT&T toll switch had one office point code. With the NI LATA Routing feature, multiple point codes can be assigned to the toll switch. In addition to the switch's true point code which can serve a single LATA, point codes may be assigned to serve other LATAs. These additional point codes are called "alias point codes". A maximum of 16 point codes (one true point code and up to 15 alias point codes) are allowed to support the LATA routing feature for each LEC STP served by the switch.

Recent Change View 15.1 supports both the true point code and alias point codes.

When an OPC (Origination Point Code) is entered for a CCS7 trunk group on View 5.1, it must be specified on

View 15.1 as either a true or alias point code. Furthermore, an alias point code cannot be deleted from View 15.1 if that point code is specified as the OPC for an existing trunk group.

### 3.6 NILATA Translation Requirements

15.1 View (5011 Record) - This Office Identification View identifies the local office and its function in the CCS network. This view is entered only once for the office.

For 5E9(1) and later, fifteen ALIAS PC fields were added to this view. These alias point codes can be assigned only on an AT&T toll switch and are in addition to the local office point code. The purpose of the alias point codes is to facilitate LATA routing of circuit- or call-associated messages.

### 3.7 FPCR Feature Definition

The FPCR (Full Point Code Routing) feature is a secured feature, which must be purchased by the switch owner and then be activated by an Lucent Technologies SEE (System Equipment Engineer). The Secured Feature ID for FPCR is 132.

The FPCR (Full Point Code Routing) feature provides a 5ESS-2000 Switch in a LEC network with the capability to directly route traffic on specific combined link sets to other STP pairs based upon the DPC (Destination Point Code). This feature increases the efficiency of the network and complies with a legal requirement to directly route certain traffic as designated by law.

### 3.8 FPCR Translation Requirements

8.22 View (5713 Record) - This Secured Feature System Assignment View is used to enable Secured Features. Secured Features are the optional service features that can be purchased in addition to the features included in the current Software Release. After an Lucent Technologies SEE (System Equipment Engineer) has determined that a switch owner has purchased a secured feature, the SEE can activate the feature on the switch. The FPCR feature is activated by setting the ACT field to "Y" for SFID (Secured Feature ID) 132.

15.9 View (5019 Record) - This Cluster Routing Data View is used to define data for CCS7 message routing based on the Network ID and cluster. This view supports cluster level routing to local networks and to non-local networks.

For 5E9(1) and later, the following enumerations were added to the ROUTING FLAG field: "CLU\_O", "POPCLU", and "UPOPCLU".

15.12 View (5022 Record) - This Network Routing Data View is used to define all the non-local networks that send or receive CCS7 messages to or from the local 5ESS-2000 Switch.

For 5E9(1) and later, the following enumerations were added to the ROUTING FLAG field: "NTWK" and "NTWK\_O".

15.18 View (5024 Record) - This Member Routing Data View is new for 5E9(1) and later. It is used to define information for CCS7 message routing based on the Network ID, cluster number, and member number of the point code. The view supports member level routing to local (intra-) and nonlocal (inter-) networks.

### 3.9 Routing to STP in Small Network

Although routing to an STP in a small network is not a new feature, the method of provisioning this routing has changed with the 5E9(1) Software Release.

For 5E8 and earlier, View 15.13, the Small Network Cluster and Member Table View was used to enter the cluster and member information for small network populated cluster/member routing. For 5E9(1) and later, this view is no longer available.

For 5E9(1) and later, to enter routing data to the STP pair located in the small network, either View 15.9 or View 15.18 can be used. If View 15.18 is used, only the routing data to the STP pair can be populated when the office does not purchase the ELINK and FPCR secured features.

## 4. CCS7 CAPACITY IMPROVEMENT

### 4.1 Feature Definition

The CCS7 Capacity Improvement feature is available for 5E9(2) and later and is assigned feature number 99-5E-1136. This feature increases the CCS7 call capacity by upgrading all hardware from SSI (Small Scale Integration) to IRN (Integrated Ring Node) technology. The CNI ring frame is still a single cabinet, but SSI equipment shelves are replaced by either IRN 5-node or 8-node shelves.

The bottom shelf can contain five nodes, namely, a Ring Peripheral Controller Node, three Link Nodes, and a Direct Link Node. In addition, the upper two shelves can be configured with eight Link Nodes each, allowing a total of 19 link pairs on the CNI Ring.

With these changes the maximum number of CCS7 link terminations is increased from 5 to 19 pairs. The number of groups is increased from 2 to 6.

### 4.2 Translation Requirements

New and Modified Views			
RC View	Record Number	Div.	Sec.
15.2	5012	9	2B
15.3	5013	9	2C
15.17	5027	9	2Q

To accommodate additional link nodes, the valid entry ranges have been expanded for the GROUP and MEMBER fields on three views: Link Information (View 15.2), Logical to Physical (View 15.3), and Protocol Link Parameters (View 15.17). See the corresponding TG-5 sections for specific values and restrictions.

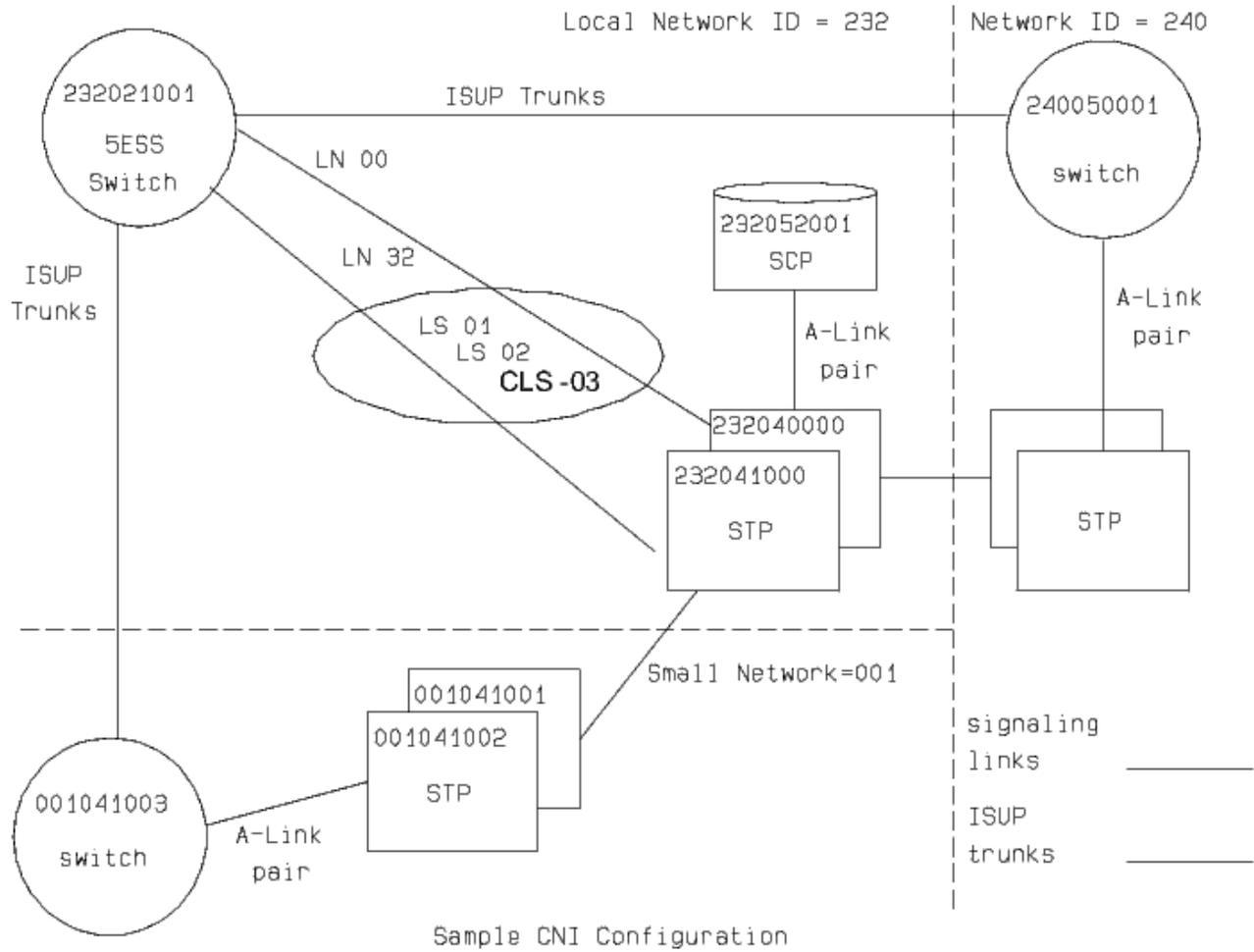


Figure 1 SAMPLE CNI CONFIGURATION

## SEC. 2: CNI DATA BASE RECENT CHANGE VIEWS

## **SEC. 2A: 5011 RECORD OFFICE IDENTIFICATION (VIEW 15.1) - RC\_CNIOFF**

### **1. GENERAL**

This view is used to identify the local office and its function with respect to its place in the CCS network. This view may be entered only once for each office.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and Office Name on each record.

#### **2.2 \*OFFICE IDENTIFICATION**

Description: The 8-character alphanumeric office identification.

Required Field.

Valid Entries: 1 - 8 characters

Data Rules:

For 5E5 and later, this ID must correspond with the OFFICE ID defined on the OFCOPT form (RC view 8.1, 5509 Record).

#### **2.3 LOCAL FUNCTION**

Description: This is a function code identifying the type of office. 0 indicates no function, and is the only value used for LEC networks. A value of 1 is commonly used in the AT&T network.

Valid Entries: 0 - 32767

#### **2.4 REGION NUMBER**

Description: This field defines the codes for routing messages across a network. The digits from this field are the 4th and 5th digits of the LOCAL POINT CODE field. The number 32 indicates no region and is used for a LEC network that does not require a region identification in the LOCAL POINT CODE. The other entries are used for routing messages across the AT&T network regions. AT&T has defined seven regions within their network.

Valid Entries: 00 - 32

#### **2.5 LIS DESTINATION**

Description: This 5-digit number shows the link integrity destination or node number where administration of encryption information is performed.

The value 0 indicates none and is used by LEC telephone companies that do not have encrypted links. AT&T has encrypted links for military applications and must have a value from 1 through 32767 entered.

Software Release: 5E5 and 5E6

Valid Entries: 0 - 32767

## 2.6 LOCAL POINT CODE

Description: This 9-digit number is the point code assigned to this particular office. The number is divided into either three or four subfields depending on whether the office is a LEC or an AT&T switch.

The network identifiers for the network may be provided by the ANSI T1S1 committee.

Valid Entries: 9-digit point code in the following format: AAABBCDDD

LOCAL POINT CODE			
Type	Format	Valid Entries	Description
LEC Large Networks	AAA	005 -253	Network ID
	BBC	000 - 255	Cluster ID
	DDD	000 - 255	Member Number
LEC Small Networks	AAA	001 -004	Network ID
	BBC	000 - 255	Cluster ID
	DDD	000 - 255	Member Number
AT&T Networks	AAA	254	Network ID
	BB	00 - 31	Region Number
	C	0 - 7	Cluster ID
	DDD	000 - 255	Member Number

Data Rules:

The AT&T Region Number, BB, must match the REGION NUMBER entry on this view.

## 2.7 LOCAL CLLI

Description: This 11-character code is the Common Language Location Identifier assigned to the particular office. The CLLI is useful in uniquely identifying switches, STPs and SCPs in the network and is useful in reports and trunk diagnostics.

Valid Entries: An 11-digit code in the following format: AAAABBCCDDD

LOCAL CLLI	
Format	Definition
AAAA	The first four alphabetic characters represent the city or place
BB	The next two alphabetic characters represent the state
CC	The next two alphanumeric characters represent the building identifier
DDD	the last three alphanumeric characters represent the company or building subdivision

Data Rules:

This code should agree with the CLLI codes other switches, STPs and SCPs will use to reference this switch.

## 2.8 ANSI STD PC IND

Description: Is the point code format represented in ANSI format? The ANSI Standard Point Code Indicator is a verify-only field that is used to specify the local office point code format. The point code format is represented in either ANSI or non-ANSI format. The ANSI format is used in LEC networks only, and the non-ANSI format is used in AT&T networks only. The field contains a "Y" for LEC networks and "N" for AT&T networks.

Software Release: 5E9(1) and later

Data Rules:

When ANSI STD PC IND is "Y", ALIAS PCs cannot be entered.

## 2.9 CRIT EVENT NUMBER

Description: The CRIT EVENT NUMBER specifies the maximum number of CNCE (CCS Network Critical Event) messages that will be printed on the ROP during a specified time interval. When the number of messages exceeds this threshold, some messages will be dropped and will not appear on the ROP. The time interval is defined in the CRIT EVENT TIMER field.

Software Release: 5E9(1) and later  
 Required Field.  
 Default: 5  
 Valid Entries: 1 - 32767

## 2.10 CRIT EVENT TIMER

Description: The CRIT EVENT TIMER specifies the time interval used to manage the number of printed CNCE messages. See the description for the CRIT EVENT NUMBER field above.

Software Release: 5E9(1) and later  
 Required Field.  
 Default: 60  
 Valid Entries: 1 - 3600 (seconds)

## 2.11 LOW PRI SRST

Description: The LOW PRI SRST field determines the time interval for transmitting SRST (Signaling Route Set Test) messages for alternate, or lower priority, routes that are unavailable. When a non-current alternate route is unavailable, SRST messages are sent at regular intervals until the route becomes available.

Software Release: 5E9(1) and later  
 Required Field.  
 Default: 600  
 Valid Entries: 0 - 86400, in increments of 30 (seconds)

## ***NI LATA ROUTING FOR AT&T ONLY***

The list of ALIAS PC fields allows up to 15 alias point codes.

## 2.12 ALIAS PC

Description: Alias point codes are point codes assigned to the AT&T toll switch only. These are in addition to its local office point code. The purpose of alias point codes is to facilitate LATA routing of circuit- or call-associated messages. They are used for NI (Network Interconnect) messages only.

The 9-digit code should be in the AT&T format as follows.

<b>ALIAS PC</b>	
<b>Description</b>	<b>Valid Entries</b>
Network ID	254
Region Number	00 - 31
Cluster ID	0 - 7
Member	000-255

Software Release: 5E9(1) and later  
 Valid Entries: 9 digits

## OFFICE IDENTIFICATION DATA

*1. OFFICE ID	officel	4. LIS DESTINATION	00000
2. LOCAL FUNCTION	00000	5. LOCAL POINT CODE	232210089
3. REGION NUMBER	32	6. LOCAL CLLI	CHGOIL5ETLL

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**Figure 1 SAMPLE OFFICE IDENTIFICATION VIEW 5E5 - 5E6 SOFTWARE RELEASES**


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## OFFICE IDENTIFICATION DATA

*1. OFFICE ID	officel
2. LOCAL FUNCTION	00000
3. REGION NUMBER	32
5. LOCAL POINT CODE	232210089
6. LOCAL CLLI	CHGOIL5ETLL

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**Figure 2 SAMPLE OFFICE IDENTIFICATION VIEW 5E7 SOFTWARE RELEASE**


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## OFFICE IDENTIFICATION DATA

*1. OFFICE ID	officel
2. LOCAL FUNCTION	00000
3. REGION NUMBER	32
4. LOCAL POINT CODE	232210089
5. LOCAL CLLI	CHGOIL5ETLL

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**Figure 3 SAMPLE OFFICE IDENTIFICATION VIEW 5E8 SOFTWARE RELEASE**


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## OFFICE IDENTIFICATION DATA

*1. OFFICE ID	OFFICE1	NI LATA ROUTING FOR AT&T ONLY
2. LOCAL FUNCTION	00000	10. ALIAS POINT CODE (APCLIST)
3. REGION NUMBER	32	ROW ALIAS PC      ROW ALIAS PC

4. LOCAL POINT CODE	232210089	1	_____	9	_____
5. LOCAL CLLI	CHGOIL5ETLL	2	_____	10	_____
ANSI STD PC IND	Y	3	_____	11	_____
7. CRIT EVENT NUMBER	005	4	_____	12	_____
8. CRIT EVENT TIMER	060	5	_____	13	_____
		6	_____	14	_____
TIMER FOR LOW PRI RTE		7	_____	15	_____
9. LOW PRI SRST	600	8	_____		

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**Figure 4 SAMPLE OFFICE IDENTIFICATION VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

## SEC. 2B: 5012-1/2 RECORD LINK INFORMATION (VIEW 15.2) - RC\_LCDT

### 1. GENERAL

This view is used to define the signaling links. Each link node that is equipped on the CNI ring must be defined on this view. Since the CNI links are equipped in pairs, there is always an even number of signaling links entered with this view.

- **NOTE:** The signaling link must be out of service and the MAJOR STATE field must be set to "UNA" to update the link information.

### 2. FORM ENTRIES - 5012-1 RECORD

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*GROUP

Description: This field indicates which group the link node is attached to. For 5E9(1) and earlier, the CNI cabinet has two groups (00 and 32); for 5E9(2) and later, it has six groups (00, 01, 02, 32, 33, 34). A link pair must have a link on two of these groups.

Required Field.

Valid Entries:

For 5E9(1) and earlier: 00 and 32

For 5E9(2) and later: 00, 01, 02, 32, 33, 34

#### 2.3 \*MEMBER

Description: This indicates the particular link node that is being used in the group.

Normally values 1 and 3 through 8 are used for link nodes. Node position 0 is always the RPCN (Ring Peripheral Controller Node) and 2 is reserved for a DLN (Direct Link Node). If an office is not planning for a DLN, the 2 position may be used for a link node.

Required Field.

Valid Entries:

For 5E9(1) and earlier: 1 - 6

For 5E9(2) and later: 1 - 8

Data Rules:

For 5E9(2) and later, when GROUP is 0 or 32, MEMBER must be in the range 1 - 6, inclusive.

#### 2.4 LINK SPEED

Description: This field indicates the actual link speed in kbps multiplied by 100. The only values supported by the 5ESS Switch are 48 and 560.

All CCS7 links are high speed and must have a value of 560 entered.  
Valid Entries: 24, 48, and 560

## 2.5 ENCRYPTED

Description: This field indicates whether or not the links are encrypted. Local Exchange Carrier links are currently not encrypted and should have "NOTENC" entered. Typically, AT&T links are encrypted and must have "ENC" entered.

Valid ENCRYPTED Entries	
Entry	Definition
NOTENC	Not encrypted
ENC	Encrypted

## 2.6 #LINK TYPE

Description: This field indicates the type of link used for signaling between the 5ESS Switch and a signaling end point. For 5E8 and earlier, the A-links are the only links used between a 5ESS Switch and the STP; therefore, the value of "A" should be entered. For 5E9(1) and later, either the A-links or E-links may be specified. A-links are used between the 5ESS Switch and an adjacent STP; E-links are used between the 5ESS Switch and a non-adjacent STP; F-links are used between two signaling end points.

Valid LINK TYPE Entries	
Entry	Definition
A	A-links, Links used between a 5ESS Switch and an adjacent STP.
E	E-links, Links used between a 5ESS Switch and a non-adjacent STP.
F	F-links, Links used between two signaling end points.

## 2.7 FAR - END FUNCTION

Description: This 5-digit number identifies the function of the far node (usually an STP). For CCS7 links in an LEC environment, this field should be set to 0.  
Valid Entries: 0 - 32767

## 2.8 FAR - END STP

Description: This field is used for load balancing. The 5ESS Switch supports only the "EVEN" and "ODD" values. All links between the 5ESS Switch and one of the STP pair, called a link set, must have the same value (for example, "EVEN"). The links from the 5ESS Switch to the other local STP in the pair, another link set, must have the other value "ODD".

Valid FAR - END STP Entries	
Entry	Definition
EVEN	Value designating link between 5ESS Switch and one of the STP pair
ODD	Value designating link between the 5ESS Switch and the other (not the "EVEN") of the STP pair
NOSTP	No STP link

## 2.9 FAR - END REGION

Description: This 2-digit code designates the far-end region. If the far-end office is in a LEC network, the code 32 is used. Several codes are used to designate the various AT&T regions.  
Valid Entries: 00 - 32

## 2.10 FAR - END PNT CODE

Description: This 9-digit code designates the point code of the STP at the far-end of the link.

The point code is divided three subfields for LEC networks and four subfields for AT&T networks.

Valid Entries: 9 digits

## 2.11 MATE GROUP

Description: This field specifies the link node group that is mated or paired with the group entered in the GROUP field. Since link node groups are not mated for LEC offices, the value 00 must be entered for them. For AT&T offices, the alternate group in the pair (pairs 00 and 32, 01 and 33, 02 and 34) must be entered here.

Valid Entries:

For 5E9(1) and earlier: 00 and 32

For 5E9(2) and later: 00, 01, 02, 32, 33, 34

## 2.12 MATE MEMBER

Description: This field identifies the link node position within the paired link. For LEC offices, this field should be left blank. For AT&T offices, the MATE MEMBER should have the same number as the MEMBER field.

Valid Entries:

For 5E9(1) and earlier: 1 - 6

For 5E9(2) and later: 1 - 8

## 2.13 FAR - END CLLI

Description: This 11-character code is the Common Language Location Identifier assigned to the far-end STP. The CLLI is useful in uniquely identifying switches, STPs and SCPs in the network and is useful in reports and trunk diagnostics.

- The first four alphabetic characters represent the city or place,
- the next two alphabetic characters represent the state,
- the next two alphanumeric characters represent the building identifier and
- the last three alphanumeric characters represent the company or building subdivision.

Valid Entries: 11 characters

## 2.14 MAJOR STATE

Description: This is the code used to indicate the status of the link. This field must be set to "UNA" before any CNI links can be added, deleted or changed.

Valid MAJOR STATE Entries	
Entry	Definition
UNE	Software Release: 5E9(1) and earlier. Unequipped.
UNA	Unavailable and cannot be used to carry traffic.
AVL	Available for normal traffic.

Data Rules:

The signaling link must be Manual Out of Service (MOOS) to update this field. (This is done with an 5ESS Switch Input Message.)

### 3. FORM ENTRIES - 5012-2 RECORD

#### **CCIS6 SIGNALING**

The following fields (Section 3.1 - Section 3.6 ) apply to CCIS6 signaling across low speed links (LINK SPEED = 48) and must be left blank for CCS7 or CCIS6 signaling across high speed links (LINK SPEED = 560).

#### **3.1 DUAL VFL**

Description: This field indicates how the messages are transmitted over the DUAL VFLs.

Valid Entries: SIMPLEX or DUPLEX

#### **3.2 LAYER NUMBER**

Description: When a CCIS6 link is assigned to a pool, it must be assigned a unique layer number for the specified pool. A pool may be assigned as many as 19 layers.

Valid Entries: 1 - 19

#### **3.3 VOICE ACCESS TEST**

Description: This field is used to load balance the link nodes across four voice access test circuits.

Valid Entries: 1 - 4

#### **3.4 SELF LOOPED**

Description: This field indicates what type of synchronization a link has. For a link to operate successfully, the end office is set to "SYUEVEN" and the STP is set to "SYUODD". This prevents the CCIS6 links from being accidentally cross connected (self-looped) and appearing to be in service.

Valid SELF LOOPED Entries	
Entry	Definition
SELFL	Self Looped
SYUEVEN	Synchronization even
SYUODD	Synchronization odd

#### **3.5 POOL NUMBER**

Description: This value is the link set between the 5ESS Switch and the local STP at the far-end. All signaling links to the same STP must have the same link set. The link pair to the other STP must have a different value.

Valid Entries: 1 - 255

#### **3.6 COMBINED POOL**

Description: All links in a link set must be in the same combined link set. Only one combined link set is allowed. This value must be different from the two-link set values. A value of 0 indicates that no COMBINED LINK SET is assigned.

Valid Entries: 0 - 255

## CCS7 SIGNALING

The following fields (Section 3.7 - Section 3.9 ) apply to CCS7 or CCIS6 signaling across high speed links (LINK SPEED = 560) and must be left blank for a CCIS6 signaling across low speed links (LINK SPEED = 48).

### 3.7 LINK SET

Description: This value is the link set between the 5ESS Switch and the local STP at the far-end.

All signaling links to the same STP must have the same link set. The link pair to the other STP must have a different value.

Valid Entries:

5E5 and 5E6: 0 - 255

5E7 and later: 0 - 511

### 3.8 COMBINED LINK SET

Description: All links in a link set must be in the same combined link set. Only one combined link set is allowed for each STP pair. This value must be different from the two-link set values.

Valid Entries:

5E5 and 5E6: 0 - 255

5E7 and later: 0 - 511

### 3.9 SIGNAL LINK CODE

Description: This 2-digit number is similar to a circuit identification code of trunks. The value agrees with the corresponding value at the node on the other end of the signaling link. This is a member number within a link set at the adjacent STP.

Valid Entries: 0 - 15

---

SCREEN 1 OF 2

LINK INFORMATION

*1. GROUP	00	13. MAJOR STATE	AVL
*2. MEMBER	01		CCIS 6 SIGNALING
3. LINK SPEED	560	14. DUAL VFL	_____
4. ENCRYPTED	NOTENC	15. LAYER NUMBER	___
5. LINK TYPE	A	16. VOICE ACCESS TST	_
6. FAR END FUNCTION	00000	17. SELF LOOPED	_____
7. FAR END STP	EVEN	18. POOL NUMBER	___
8. FAR END REGION	32	19. COMBINED POOL	___
9. FAR END PNT CODE	232040000		CCS 7 SIGNALING
10. MATE GROUP	00	20. LINK SET	1
11. MATE MEMBER	00	21. COMBINED LNK SET	3
12. FAR END CLLI	STPAIL5ETLL	22. SIGNAL LINK CODE	01

---

SCREEN 2 OF 2

LINK INFORMATION

CCS 7 SIGNALING

```

#23. RECEIVE QUEUE      2006          LINK INTERFACE TYPE LI
#24. CONG ONSET THRSH   300
#25. CONG ABTMNT THRSH  20
#26. TRANSMIT QUEUE    16000
#27. NORMAL AERM SU     4
#28. EMERGENCY AERM SU  1
#29. RETRANSMIT QUEUE  910
      FACILITY           MODEM
      MEDIUM             TERRESTRIAL
      ERR CORR TN MODE   BASIC

```

Figure 1 SAMPLE LINK INFORMATION VIEW 5E5 THROUGH 5E11 SOFTWARE RELEASES

SCREEN 1 OF 2

LINK INFORMATION

```

*1. GROUP              00          13. MAJOR STATE      AVL
*2. MEMBER             01                CCIS 6 SIGNALING
  3. LINK SPEED        560          14. DUAL VFL         _____
  4. ENCRYPTED          NOTENC       15. LAYER NUMBER     ___
#5. LINK TYPE          A           16. VOICE ACCESS TST _
  6. FAR END FUNCTION  00000       17. SELF LOOPED     _____
  7. FAR END STP       EVEN        18. POOL NUMBER     ___
  8. FAR END REGION    32          19. COMBINED POOL   ___
  9. FAR END PNT CODE  232040000    CCS 7 SIGNALING
10. MATE GROUP         00          20. LINK SET         1
11. MATE MEMBER        00          21. COMBINED LNK SET 3
12. FAR END CLLI       STPAIL5ETLL  22. SIGNAL LINK CODE 01

```

SCREEN 2 OF 2

LINK INFORMATION

CCS 7 SIGNALING

```

#23. RECEIVE QUEUE      2006          LINK INTERFACE TYPE LI
#24. CONG ONSET THRSH   300
#25. CONG ABTMNT THRSH  20
#26. TRANSMIT QUEUE    16000
#27. NORMAL AERM SU     4
#28. EMERGENCY AERM SU  1
#29. RETRANSMIT QUEUE  910
      FACILITY           MODEM
      MEDIUM             TERRESTRIAL
      ERR CORR TN MODE   BASIC

```

---

**Figure 2 SAMPLE LINK INFORMATION VIEW 5E12 AND LATER SOFTWARE RELEASES**

## SEC. 2C: 5013 RECORD LOGICAL TO PHYSICAL (VIEW 15.3) - RC\_PHYS

### 1. GENERAL

This view is used to assign logical links to CCIS6 links or to CCS7 links that are used to transport CCIS6 messages (ECIS6 or DCIS6).

A single CCS7 link can have up to 8 logical CCIS6 links assigned. This view must also be populated for CCIS6 links and only LOGICAL LINK VL0 should be assigned.

- **NOTE:** Before this form can be entered, the associated link node must be made manually out-of-service and the corresponding RC/V view 15.2 must have MAJOR STATE set to "UNA".

#### 1.1 Updating Or Deleting Logical Links

Logical links cannot be manipulated while active trunks are assigned. If the trunk counter (trk\_cntr attribute in the lab6\_pci relation) of the number of CCIS6 trunks currently using a link contains a value of 1 or greater, then trunks are assigned for this logical link. Any attempt to delete this view while a trunk is assigned to a logical link will fail. Also, any attempt to update a logical link to a value of 0 if a trunk is assigned to that logical link will fail.

### 2. FORM ENTRIES - 5013 RECORD

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*GROUP

Description: This field indicates which group the link node is attached to. For 5E9(1) and earlier, the CNI cabinet has two groups (00 and 32); for 5E9(2) and later it has six groups (00, 01, 02, 32, 33, 34). A link pair must have a link on two of these groups.

Required Field.

Valid Entries:

For 5E9(1) and earlier: 00 and 32

For 5E9(2) and later: 00, 01, 02, 32, 33, 34

#### 2.3 \*MEMBER

Description: This field indicates the particular link node being used on the CNI frame. Normally values 1 and 3 through 8 are used for link nodes. Node position 0 is always the RPCN and 2 is reserved for a DLN.

Required Field.

Valid Entries:

For 5E9(1) and earlier: 1 - 6

For 5E9(2) and later: 1 - 8

Data Rules:

For 5E9(2) and later, when GROUP is 0 or 32, MEMBER must be in the range 1 - 6, inclusive.

## 2.4 LOGICAL LINK

Description: This field indicates the logical link identification number.

A maximum of 8 unique logical links may be assigned to a CCS7 signaling link. A maximum of 1 logical link may be assigned to a CCIS6 signaling link.

Valid Entries: 1 - 2047

---

### LOGICAL TO PHYSICAL

\*1. GROUP 00

\*2. MEMBER 05

#### 3. LOGICAL LINK (SERVICELIST)

ROW VIRTUAL LINK

1 VL0 0001

2 VL1 \_\_\_\_\_

3 VL2 \_\_\_\_\_

4 VL3 \_\_\_\_\_

5 VL4 \_\_\_\_\_

6 VL5 \_\_\_\_\_

7 VL6 \_\_\_\_\_

8 VL7 \_\_\_\_\_

---

**Figure 1 SAMPLE LOGICAL TO PHYSICAL VIEW 5E5 AND LATER SOFTWARE RELEASES**

## SEC. 2D: 5014 RECORD CRITICAL EVENTS VIEW 15.4 - RC\_CET

### 1. GENERAL

This view is used to report CNCE (CCS (Common Channel Signal) Network Critical Events). A CCS critical event is an event occurring in the network as a result of an abnormality in the networks operation. The event is immediately outputted to the user, recorded to log files and forwarded to an appropriate center to be analyzed.

This view is already populated with an extensive set of standard input data which is considered to be appropriate for the 5ESS Switch and should not be manipulated.

### 2. FORM ENTRIES - 5014

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*EVENT NAME

Description: This field indicates what critical event will be printed in the report. A 12-character name or a 2-digit code that translates into one of the prestored events may be entered (refer to FIGURE 1 of this section for the valid entries).

#### 2.3 DESTINATION

Description: This field indicates where the report will be sent.

Valid Entries: 000 - 255

Data Rules:

If the DESTINATION is specified, the MESSAGE TYPE and THRESHOLD must also be specified.

If more than one output list is specified, the numbers utilized for DESTINATION must be in ascending order (e.g., 1, 2, 3, 4, 5, ...).

#### 2.4 MESSAGE TYPE

Description: This field indicates what type of critical event report will be printed.

Valid Entries:

Valid Report Entries	
Entry	Definition
CMCESPRT	A short report will be printed with EVENT NAME, local or network time, identification of the associated hardware (point code, link set or group and member).
CMCELPRT	A long report will be printed with the same information as the short report with the addition of CLLI, link speed, link type, link protocol. If applicable, the report may also include the VFL identification, function number or subsystem number.

#### 2.5 THRESHOLD

Description: This field indicates whether or not the report will be printed. With a THRESHOLD equal to 1, the report will always be printed and if 0 is entered, the report will be printed only on demand.

CET NAME	VALUE
C6EMR	0
C6EMRPO	1
C6EMRE	2
C6POR	3
C6PORE	4
C6BOLR	5
C6BOLRE	6
C6BOFR	7
C6BOLX	8
C6BOLXE	9
C6BOFX	10
C6ACOER	11
C6ACOCOV	12
C6FLDER	13
C6FLDCOL	14
C6FLDSNT	15
C6FLDCOV	16
C6FLDPCR	17
C6MCON	18
C6MCOF	19
C6ACB	20
C6ACBFLD	21
C6MCB	22
C6PCR	23
C6PCRE	24
C7SPI	40
C7SPIPO	41
C7SPIE	42
C7LSF	43
C7LSFE	44
C7POR	45
C7PORE	46
C7BOLR	47
C7BOLRE	48
C7LCON1X	49
C7LCDIS1X	50
C7LCABM1X	51
C7LCON2X	52
C7LCDIS2X	53
C7LCABM2X	54
C7LCON3X	55
C7LCDIS3X	56
C7LCABM3X	57
C7ACOER	58
C7ACOCOV	59
C7FLDER	60
C7FLDCOL	61
C7FLDSNT	62
C7FLDCOV	63
C7MCON	64
C7MCOF	65
C7ACB	66
C7ACBFLD	67
C7MCB	68

Figure 1 SAMPLE CRITICAL EVENT NAMES AND VALUES

5ESS SWITCH  
 RECENT CHANGE 15.4  
 CRITICAL EVENTS

\*1. EVENT NAME \_\_\_\_\_

2. OUTPUT LIST  
MESSAGE

ROW	DESTINATION	TYPE	THRESHOLD
1	_____	_____	—
2	_____	_____	—
3	_____	_____	—
4	_____	_____	—
5	_____	_____	—

---

**Figure 2 SAMPLE CRITICAL EVENTS VIEW**

## SEC. 2E: 5015 RECORD USERS VIEW DESCRIPTORS (VIEW 15.5) - RC\_UVDT

### 1. GENERAL

This view is used to develop a table which contains a list of measurements that will be used in the measurement report. RC views 15.5 through 15.8 are used in conjunction to produce the measurement reports.

This view is already populated with an extensive set of standard input data considered to be appropriate for the 5ESS-2000 Switch. The standard data should not be manipulated but it may be necessary to create a customized report with this view.

- **NOTE:** Only Non-Fixed Format Reports can be updated or created. Non-Fixed Format Reports are indicated by a REPORT TYPE of "CMNFLPMEX", "CMNFDISKEX", "CMNFDISK" or "CMNFLPM" on the associated RC/V View 15.8 (see Division 9, Section 2h).

### 2. FORM ENTRIES - 5015 RECORD

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*VIEW NAME

Description: This field is used to uniquely identify a measurement view in the UVDT (Users View Descriptor Table).

Required Field.

Valid Entries: 1 - 10 characters

#### 2.3 MEASUREMENT ID

Description: This field is used to enter which measurements will be reported with this measurement view. A maximum of 30 entries can be selected and assigned to a view. The entries may be entered by using the MEASUREMENT ID name or value (refer to FIGURE 1 in this section). The descriptions for the entries in FIGURE 1 may be found in Lucent 5D5-190-120, CCS7 MEASUREMENTS AND REPORTS section.

MEASUREMENT ID	VALUE
ABOFL	0
ABOFS	1
ACUR	2
ACUS	3
ARRATT	4
ARREXR	5
ARRFLR	6
AURS	7
AURSTE	8
BLK0	9
BLK1	10
BLKG0	11
BLKG1	12
BUFSW	13
BYMSUR	14
BYMSUX	15
BYR	16

BYRX	17
BYRXTE	18
BYSR	19
BYSX	20
BYX	21
CINIT0	22
CINIT0T	23
CINIT1	24
CINIT1T	25
CINIT2	26
CINIT2T	27
CINIT3	28
CINIT3T	29
CINIT4	30
CINIT4T	31
GTTUNBC	32
CLFA	33
CLFAT	34
CLFSP	35
CLFSPT	36
GTTUNNT	37
COFFDIF	38
CONFG	39
CONFGT	40
CRCER	41
CRCERTE	42
CUTOCUMSG	43
CUTOCUWDS	44
CUTORMSG	45
CUTORWDS	46
DMAFLT	47
DMAMISS	48
DRP6MSG1	49
DRP6MSG2	50
DRP6MSG3	51
DRP7MSG1	52
DRP7MSG2	53
DRP7MSG3	54
DRPEMSG1	55
DRPEMSG2	56
DRPEMSG3	57
EMR	58
EMRA	59
EMRAPO	60
EMRAPOT	61
EMRAT	62
EMRPO	63
EMRPOT	64
GTPERFD	65
MRBADRTG	66
EMRSP	67
EMRSPPO	68
EMRSPPOT	69
EMRSPT	70
EMRT	71
CLF	72
CLFT	73
LSMSUTRAN	74
LSMSURECD	75
LSOCTTRAN	76
LSOCTRECD	77
LSOCTRETRN	78
RTESETUN	79
RTESETUNT	80
L7EMRPOT	81
L7EMRPO	82
L7EMRT	83
L7EMR	84
ERSEC	85

ERSECTE	86
IDLE	87
IFBPTER0	88
IFBPTER1	89
ILLEGAL	90
IMNPDIF	91
IMOFFDIF	92
INBOF	93
INCMUM	94
INIT0	95
INIT0T	96
INIT1A	97
INIT1AT	98
INIT1B	99
INIT1BT	100
INIT2	101
INIT2T	102
INIT3	103
INIT3T	104
INIT4	105
INIT4T	106
INITBT	107
INITBTT	108
IPFMTER0	109
IPFMTER1	110
IPSM0	111
IPSM1	112
IUNOVL0	113
IUNOVL1	114
IUNOVL2	115
L6ACOA	116
L6ACOATE	117
L6ACOB	118
L6ACOBTE	119
L6ACOFEA	120
L6ACOFEB	121
L6ACONEA	122
L6ACONEB	123
L6ACTAT	124
L6ACTBT	125
L6AFLT	126
L6BOFR	127
L6BOFX	128
L6BOLR	129
L6BOLRT	130
L6BOLX	131
L6BOLXT	132
L6BYTO3B	133
L6CBSMA	134
L6CBSMB	135
L6DIF	136
L6FLD	137
L6FLDT	138
L6MCOFEA	139
L6MCOFEB	140
L6MCONEA	141
L6MCONEB	142
L6MFLT	143
L6MGR	144
L6MGRV0	145
L6MGRV1	146
L6MGRV2	147
L6MGRV3	148
L6MGRV4	149
L6MGRV5	150
L6MGRV6	151
L6MGRV7	152
L6MGSR	153
L6MG SX	154

L6MGX	155
L6MGXV0	156
L6MGXV1	157
L6MGXV2	158
L6MGXV3	159
L6MGXV4	160
L6MGXV5	161
L6MGXV6	162
L6MGXV7	163
L6MRPBC	164
L6MRPNT	165
L6MRSEC	166
L6PCR	167
L6PCRT	168
L6POR	169
L6PORT	170
L6POX	171
L6POXT	172
L6SUPR	173
L6SUPRV0	174
L6SUPRV1	175
L6SUPRV2	176
L6SUPRV3	177
L6SUPRV4	178
L6SUPRV5	179
L6SUPRV6	180
L6SUPRV7	181
L6SUPX	182
L6SUPXV0	183
L6SUPXV1	184
L6SUPXV2	185
L6SUPXV3	186
L6SUPXV4	187
L6SUPXV5	188
L6SUPXV6	189
L6SUPXV7	190
L6XBFLOOK	191
L6XBFOC	192
L7ACO	193
L7ACOFE	194
L7ACONE	195
L7ACOTE	196
L7AFLT	197
L7BOFR	198
L7BOFRT	199
L7BOLR	200
L7BOLRT	201
L7BYTO3B	202
L7DIF	203
L7FLALIGN	204
L7FLD	205
L7FLDT	206
L7LCDIS1X	207
L7LCDIS1XT	208
L7LCDIS2X	209
L7LCDIS2XT	210
L7LCDIS3X	211
L7LCDIS3XT	212
L7LCON1X	213
L7LCON1XT	214
L7LCON2X	215
L7LCON2XT	216
L7LCON3X	217
L7LCON3XT	218
L7LNKACTT	219
DCFLABN	220
DCFLABNT	221
DCFLXDA	222
DCFLXDAT	223

DCFLXER	224
DCFLXERT	225
DCFLXDC	226
DCFLXDCT	227
DCFLHWP	228
DCFLHWPT	229
DCFLSWP	230
DCFLSWPT	231
NACRTE	232
L7ORMSUOCT	233
L7TRMSUOCT	234
L7TSMSUOCT	235
L7ORIGMSUS	236
L7TRMDMSUS	237
L7THRSWMSU	238
L7MSINVSIO	239
MSUDISC0	240
MSUDISC1	241
MSUDISC2	242
FORRX	243
FORRXBY	244
RABT	245
RABTER	246
SEVERSEC	247
L7MCOFE	248
L7MCONE	249
L7MFLT	250
L7MGSR	251
L7MGSX	252
L7MRPBC	253
L7MRPNT	254
MSG7LOOP	255
L7BADRTG	256
L7POR	257
L7PORT	258
L7POX	259
L7POXT	260
L7RBF0C	261
L7XBFLOOK	262
L7XBF0C	263
MGANSR	264
MGANSRV0	265
MGANSRV1	266
MGANSRV2	267
MGANSRV3	268
MGANSRV4	269
MGANSRV5	270
MGANSRV6	271
MGANSRV7	272
MGANSX	273
MGANSXV0	274
MGANSXV1	275
MGANSXV2	276
MGANSXV3	277
MGANSXV4	278
MGANSXV5	279
MGANSXV6	280
MGANSXV7	281
MGIAMR	282
MGIAMRV0	283
MGIAMRV1	284
MGIAMRV2	285
MGIAMRV3	286
MGIAMRV4	287
MGIAMRV5	288
MGIAMRV6	289
MGIAMRV7	290
MGIAMX	291
MGIAMXV0	292

MGIAMXV1	293
MGIAMXV2	294
MGIAMXV3	295
MGIAMXV4	296
MGIAMXV5	297
MGIAMXV6	298
MGIAMXV7	299
MGMSUR	300
MGMSUX	301
MGSLOOP	302
MINTRA	303
MRINTCH	304
MRNIAU	305
MRNIAUT	306
MRNRING	307
MRRGQ0	308
MRRGQ1	309
MRRING	310
MRSBCO6	311
MRSBCO7	312
MRSNTO6	313
MRSNTO7	314
MRUNVL	315
ORMSUOCT	316
TRMSUOCT	317
TSMSUOCT	318
ORIGMSUS	319
TRMDMSUS	320
THRSWMSU	321
MSINVSIO	322
GTTUNBT	323
MXRG0	324
MXRG1	325
NACR	326
SPI	327
SPIA	328
SPIAPO	329
SPIAPOT	330
SPIAT	331
SPIPO	332
SPIPOT	333
SPISP	334
SPISPPO	335
SPISPPOT	336
SPISPT	337
SPIT	338
NOCMG	339
NOCMGT	340
NPPTER	341
OOSAU	342
OOSAUT	343
OOSCFG	344
OOSCFGT	345
OOSMN	346
OOSMNT	347
PANICS	348
PIOFLT	349
PTERTE	350
RACER0	351
RACER1	352
RBOF	353
RBOFBLK	354
RCOPTER0	355
RCOPTER1	356
RDFMTER0	357
RDFMTER1	358
RDINHER0	359
RDINHER1	360
RDWN	361

RDWNT	362
RGCNFG	363
RGCNFGT	364
RINTCH	365
RIPTER0	366
RIPTER1	367
RNIMN	368
RNIMNT	369
RPCBOF	370
RRBOVFLW0	371
RRBOVFLW1	372
RRBOVFLW1T	373
RRBOVFLW2	374
RRBOVFLW2T	375
RRBOVFLW3	376
RRBOVFLW3T	377
RSTTRMT	378
RTMSGSRC	379
RTOCUMSG	380
RTOCUWDS	381
SFPTER0	382
SFPTER1	383
SQL	384
SRNIAU	385
SRNIAUT	386
SUERA	387
SUERATE	388
SUERB	389
SUERBTE	390
SUR	391
SURORPH	392
SURXA	393
SURXATE	394
SURXB	395
SURXBTE	396
SUSR	397
SUSX	398
SUX	399
SUXORPH	400
UNVL	401
WBOFN	402
WBOFNL	403
WBOFO	404
WRRGQ0	405
WRRGQ1	406
WSMER0	407
WSMER1	408
WTFMTER0	409
WTFMTER1	410
WXRG0	411
WXRG1	412
SC7R	413
L7RTGAUD	414
SC7RERPRO	415
SC7RERUA	416
SC7RERUATY	417
SC7RERUNE	418
SC7RGTR	419
SC7RLNN	420
SC7RLSS	421
SC7RNATL	422
SC7UDSX	423
SCR	424
RTGAUDFL	425
SCRERPRO	426
SCRERUA	427
SCRERUATY	428
SCRERUNE	429
SCRGTR	430

SCRLNN	431
SCRLSS	432
SCRNATL	433
SCSRTR	434
SCSRTX	435
SCSSTR	436
SCSSTX	437
ALSR	456
ALSRT	457
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ALSROT	459

**Figure 1 MEASUREMENT IDS AND VALUES**

SCREEN 1 OF 2

5ESS Switch  
USERS VIEW DESCRIPTORS

\*1. VIEW NAME LABTEST

	3. MEASUREMENT ID	5. MEASUREMENT ID	7. MEASUREMENT ID
ROW 1	15	240	0
ROW 2	197	337	0
ROW 3	219	0	0
ROW 4	241	0	0
ROW 5	242	0	0
ROW 6	250	0	0

SCREEN 2 OF 2

USERS VIEW DESCRIPTORS

	9. MEASUREMENT ID	11. MEASUREMENT ID
ROW 1	0	0
ROW 2	0	0
ROW 3	0	0
ROW 4	0	0
ROW 5	0	0
ROW 6	0	0

**Figure 2 SAMPLE USER VIEW DESCRIPTIONS VIEW 5E8 AND LATER SOFTWARE RELEASES**

## SEC. 2F: 5016 RECORD EXCEPTION (VIEW 15.6) RC\_EXCP

### 1. GENERAL

This view is used to build the Exception Table. This view allows a threshold to be assigned to the measurements on the Users View (defined on RC View 15.5). Also, a particular VIEW may be assigned to more than one group which enables a view to be printed at different thresholds. If a measurements threshold is exceeded, all measurements on the view will be placed into the report. Otherwise, a report will not be generated for this view.

This view is already populated with an extensive set of standard input data considered to be appropriate for the 5ESS Switch. The standard data should not be manipulated, but it may be necessary to create a customized report with an Exception Table.

- **NOTE:** Only Non-Fixed Format Reports can be updated or created. Non-Fixed Format Reports are indicated by a REPORT TYPE of "CMNFLPMEX", "CMNFDISKEX", "CMNFDISK" or "CMNFLPM" on the associated RC/V view 15.8 (see Division 9, Section 2H). Customized reports with exceptions must use a REPORT TYPE of "CMNFLPMEX" or "CMNFDISKEX".

### 2. FORM ENTRIES - 5016 RECORD

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*GROUP NAME

Description: This field uniquely identifies a list of exceptions that are stored in the Exception Table.

Valid Entries: 1 - 16 characters

#### 2.3 VIEW NAME

Description: This field indicates which form will have an Exception Table.

Valid Entries: 1 - 10 characters

#### 2.4 MEASUREMENT ID

Description: This field is used to enter the measurements into the Exception Table.

Valid Entries:

The values of the MEASUREMENT IDs which have been assigned to the corresponding VIEW NAME (refer to FIGURE 1 in Division 9, Section 2E for the valid entries).

#### 2.5 THRESHOLD

Description: This field is used to assign a threshold to a measurement type.

Valid Entries: 0 - 32767

- **NOTE:** If one of the thresholds is reached, a report will be generated.

SCREEN 1 OF 2

5ESS SWITCH  
RECENT CHANGE 15.6  
EXCEPTION

\*1. GROUP NAME \_\_\_\_\_  
2. VIEW NAME \_\_\_\_\_

4. SERVICE LIST

ROW	MEASUREMENT ID	THRESHOLD
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____
9	_____	_____
10	_____	_____

SCREEN 2 OF 2

5ESS SWITCH  
RECENT CHANGE 15.6  
EXCEPTION

ROW	MEASUREMENT ID	THRESHOLD	ROW	MEASUREMENT ID	THRESHOLD
11	_____	_____	21	_____	_____
12	_____	_____	22	_____	_____
13	_____	_____	23	_____	_____
14	_____	_____	24	_____	_____
15	_____	_____	25	_____	_____
16	_____	_____	26	_____	_____
17	_____	_____	27	_____	_____
18	_____	_____	28	_____	_____
19	_____	_____	29	_____	_____
20	_____	_____	30	_____	_____

**Figure 1 SAMPLE EXCEPTION VIEW 5E10 AND LATER SOFTWARE RELEASES**

## SEC. 2G: 5017 RECORD HISTORY FILE DESCRIPTOR (VIEW 15.7) RC\_HFDT

### 1. GENERAL

This view is used to set up the history file descriptor table. The HFDT contains information which is used to construct history files that are added or copied to other history files to create new history files at certain intervals during the day. The history files contain the measurements which have been collected during the specific interval.

This view is already populated with an extensive set of standard input data which is considered to be appropriate for the 5ESS Switch. The standard input data should not be manipulated or customized because it may affect the reports that are using the same history file.

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*RECORD NUMBER

Description: Enter the CNI history file descriptor table 5-digit record number.

Required Field.

Valid Entries: 0 - 29999

#### 2.3 HISTORY FILE

Description: The name the CNI history file record.

Valid Entries: 1 - 14 characters

#### 2.4 # ACTION

Description: The action for the CNI history file descriptor.

Required Field for 5E7 and later.

Valid ACTION Entries	
Entry	Definition
ADD	Overwrite the history file and accumulate data from the source file into the history file to increase the time covered.
COPY	Does not increase the time period covered.
NULL	No action.

#### 2.5 # DISPOSITION

Description: Enter the CNI history table descriptor table disposition. This is determined by the ACTION field. The DISPOSITION attribute value allows the system to determine what to do with the field value assigned to the attribute ACTION. This condition is necessary when the scheduler table does not use the updated HISTORY FILE. The process, therefore, does not need to proceed to the scheduler table. The DISPOSITION attribute value must be known.

Required Field for 5E7 and later.

Valid DISPOSITION Entries	
Entry	Definition
CONT	Continue (the process proceeds according to the scheduler table)
VOID	No effect on the process
STOP	The process terminates

Data Rules:

If ACTION is "ADD" or "NULL", this field must be "VOID".

IF ACTION is "COPY", this field must not be equal to "VOID".

## 2.6 SOURCE NAME

Description: Enter the name of the CNI history table descriptor source file. The source file is an intermediate file used to build the history files.

Valid Entries: 1 - 14 characters

## 2.7 WHEN

Description: A 3-digit number 001 to 288 to identify the 5 minute interval when the SOURCE file should be added or copied into a HISTORY file. The values indicate 5 minute intervals beginning at midnight, e.g., an entry of 13 is 5 minutes after 1:00 A.M.

Valid Entries: 1 - 288 (5 minute intervals)

## 2.8 COVERAGE

Description: Enter a 3-digit number to identify the 5 minute interval for the CNI history file descriptor table coverage. This entry indicates when a history file has accumulated its full interval.

Valid Entries: 001 - 288

Data Rules:

If ACTION is "COPY", a value of 0 should be entered.

## 2.9 # REPEAT

Description: This field indicates whether or not the history files will be updated at specific intervals.

Required Field for 5E7 and later.

Valid REPEAT Entries	
Entry	Definition
REPEAT	The specified ACTION will be repeated by a 5-minute multiple of the value entered in the WHEN field e.g., if WHEN is 12; the ACTION will be repeated every hour beginning at midnight.
NOREPEAT	The specified ACTION takes place at the time specified by the 5-minute multiple of the value entered in the WHEN field beginning at midnight e.g., if WHEN is 10; the ACTION will occur at 00:50.

---

5ESS SWITCH

## HISTORY FILE DESCRIPTOR

*1. RECORD NUMBER	00010	5. SOURCE NAME	L15M
2. HISTORY FILE	C30M	6. WHEN	003
3. ACTION	ADD	7. COVERAGE	006
4. DISPOSITION	VOID	8. REPEAT	REPEAT

---

**Figure 1 SAMPLE HISTORY FILE DESCRIPTOR VIEW 5E5 AND 5E6 SOFTWARE RELEASES**

---

## HISTORY FILE DESCRIPTOR

*1. RECORD NUMBER	00010	5. SOURCE NAME	L15M
2. HISTORY FILE	C30M	6. WHEN	003
#3. ACTION	ADD	7. COVERAGE	006
#4. DISPOSITION	VOID	#8. REPEAT	REPEAT

---

**Figure 2 SAMPLE HISTORY FILE DESCRIPTOR VIEW 5E7 AND LATER SOFTWARE RELEASES**

---

## SEC. 2H: 5018 RECORD SCHEDULE REPORTING (VIEW 15.8) RC\_SCHD

### 1. GENERAL

This view is used to schedule the reports for generation and for printing. This view is already populated with a set of default values considered to be appropriate for the 5ESS Switch. The existing data should not be manipulated, however, it may be necessary to create a new report and it must be scheduled with this view.

When creating a customized report:

1. For a view with an Exception Table, use a REPORT TYPE of "CMNFLPMEX" or "CMNFDISKEX".
2. For a view with no Exception Table, use a REPORT TYPE of "CMNFDISK" or "CMNFLPM".

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*REPORT NAME

Description: Enter the CNI schedule table name.

Required Field.

Valid Entries: 1 - 16 characters

#### 2.3 DESTINATION

Description: This field indicates where the report will be sent for printing or for analyzing. Enter the 3-digit number to show CNI schedule table destination.

Valid Entries: 000 - 255

#### 2.4 REPORT TYPE

Description: This field represents the type of report generator that will be used to generate the report. Either the report generator or its translation may be entered.

Valid Entries:

For 5E5 only: 0 - 40

For 5E6 and later: 0 - 4, 6 - 10

For 5E9(1) and later: 0 - 4, 6 - 10, 13

Valid REPORT TYPE Entries

REPORT GENERATOR	TRANSLA-TION	MEANING
AM30MPR	0	Signaling link 30-minute marginal performance report
AMMPR	1	Machine performance report
AMSEPR	2	Signaling equipment performance report
AMSNPR1	3	Signaling network performance report part 1
AMSNPR2	4	Signaling network performance report part 2 (available links only)

CMNFDISK	6	Regular nonfixed format disk report
CMNFDISKEX	7	Exception nonfixed format disk report
CMNFLPM	8	Regular nonfixed format 5-minute report
CMNFLPMEX	9	Exception nonfixed format 5-minute report
CMRINGEX	10	Ring exception report
DMMPR	13	Software Release: 5E9(1) and later. Signaling link 15 minute machine resource performance report

## 2.5 GROUP NAME

Description: Enter the name of the CNI MOCT (Measurement Output Control Table) group from View 15.6. Leave blank if the exception report does not exist.

Valid Entries: 1 - 16 characters

## 2.6 VIEW NAME

Description: Enter the CNI MOCT view name (from View 15.5).

Valid Entries: 1 - 10 characters

## 2.7 HISTORY FILE

Description: Enter CNI history file name (defined on RC View 15.7 or "LPM", "L15M") which is to be used for the measurement report.

Valid Entries: 1 - 14 characters

## 2.8 ACTIVATION TIME

Description: This field indicates when the report will be run. Enter the schedule table activation time. The values are minutes, with 0 beginning at midnight.

Valid Entries: 0 - 1440 (minutes)

## 2.9 REPEAT

Description: Enter the number of times the report will be generated in a day (i.e., an hourly report can be generated 24 times). If this field has a value of 0, the report will be generated by demand only.

Valid Entries: 1 - 288

## 2.10 EMPTY

Description: This field indicates whether or not an empty report will be printed.

Valid EMPTY Entries	
Entry	Definition
1	An empty report will be printed.
0	An empty report will not be printed.

## 2.11 POLLAUTO

Description: Enter the output method for polling.

Valid POLLAUTO Entries	
Entry	Definition
0	Polled
1	Automatic
2	Both

## 2.12 PRT DELAY

Description: Enter the number of seconds to delay the printing of the report (the maximum is 300 seconds).  
Valid Entries: 0 - 300 (seconds)

---

```
                    5ESS SWITCH

                    SCHEDULE REPORTING

*1. REPORT NAME A30MPR30          5. VIEW NAME          A30MPR
 2. DESTINATION 102              6. HISTORY FILE      L30M
 3. REPORT TYPE 00              7. ACTIVATION TIME  0000
 4. GROUP NAME  A30MPR30        8. REPEAT           048
                                9. EMPTY                1
                                10. POLLAUTO             1
                                11. PRT DELAY            60
```

---

**Figure 1 SAMPLE REPORT ENTRIES VIEW 5E5 AND LATER SOFTWARE RELEASES**

## SEC. 2I: 5019 RECORD CLUSTER ROUTING DATA (VIEW 15.9) RC\_CLUST

### 1. GENERAL

This view defines the data necessary for CCS7 message routing based on the Network ID and cluster (middle 3 digits of the Point Code for LEC networks and the 6th digit for AT&T networks). This view supports cluster level routing to local and nonlocal networks.

The FLAG/ROUTING FLAG value on this view defines how signaling route status (i.e. TFP TransFer Prohibit, TFA TransFer Allow) is recorded for this network ID and cluster. Based on FLAG/ROUTING FLAG values the recording of route status is done at the cluster or member level and affects the routing of CCS7 messages.

A Nonlocal Network ID is an ID other than the local Network ID that is assigned on RC View 15.1 in the LOCAL POINT CODE field.

To send a CCS7 message to any point code, the cluster routing data for that destination must be assigned as follows:

- for each local adjacent STP cluster.
- for each large nonlocal adjacent STP.
- for each local network and cluster combination that contains members which are far-end offices terminating CCS trunks from the 5ESS office.
- for each STP where Global Title Translations are performed.
- for each SCP (Service Control Point) where routing information is stored for CCS7 based features (LIDB, NS800, APSDN and ASP).
- for each switch in the local network where LASS TCAP messages are sent.

**NOTE:** A cluster member table need only be populated once for any one cluster. For example, NS800 data base queries are routed to a particular cluster member and ISUP trunk signaling is routed to another member of the same cluster; the cluster member table is populated only once.

**NOTE:** The maximum number of nonlocal populated clusters (clusters in nonlocal network IDs) allowable is 384. The maximum number of local populated clusters is 128.

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Description: Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*NID

Description: This field represents the Network ID of the switch, STP or SCP that will be receiving the CCS7 messages. This is the first 3 digits of the DPC (Destination Point Code).

Valid Entries: 1 - 254

## 2.3 \*CLUSTER

Description: This field provides the specific CLUSTER in the Local or Nonlocal Network where the CCS messages are to be sent. This is the second 3 digits of the DPC.

- **NOTE:** All Destination Point Codes that are entered on View 15.2 should have a cluster entry here.

For the LEC Network, enter 000 - 255. For the AT&T Network, this field contains both the Region and Cluster ID values. The first two digits represent the region with values from 00 through 31. The third digit is the Cluster ID number. Its range is from 0 through 7.

Required Field.

Valid CLUSTER Entries		
Network	Format	Valid Entries
LEC	XXX	000 - 255
AT&T	XXY	000 - 317
	Region ID XX	00 - 31
	Cluster ID Y	0 - 7

## 2.4 # FLAG

Description: This field indicates the type of routing that will take place. The name of this field was changed to ROUTING FLAG in 5E9(1). The FLAG field name applies to 5E8 and earlier.

Software Release: 5E8 and earlier

Required Field for 5E7 - 5E8.

Valid Entries:

Valid FLAG Entries	
Entry	Definition
CLS	Software Release: 5E7 - 5E8. Combined Linkset is used when routing to a local/nonlocal nonadjacent STP in a large network. When that cluster only has 1 member.
CPOPC	Software Release: 5E7 - 5E8. Cluster Level Only Populated Cluster is used when infrequently routing to a nonlocal populated cluster (small number of members). This conserves on memory because network management is only provided at the cluster level.
LS	Software Release: 5E7 - 5E8 Link Set is used for a single link to a local/nonlocal adjacent STP in a large network.
RPOPC_C	Software Release: 5E7 - 5E8. Remote Populated Cluster Level Routing is used for all other routing. Network management is provided at the member level.

CAUTION: A FLAG value of CLS may only be used for describing a route to a cluster when that cluster contains a SINGLE member. If the cluster contains (or ever would contain) MORE THAN ONE member the flag value CLS is NOT correct and would have a negative impact on the network. (Typically used to describe routes to non-adjacent STPs)

CAUTION: A FLAG value of CPOPC has very limited application. This FLAG value causes network management to be done on a cluster level for a populated cluster (i.e. if a transfer prohibit, restrict, or allow is received for any member in the cluster it is ignored. Only Transfer Cluster messages TCP/TCR/TCA are processed). Incorrect use of this routing flag would have a negative impact on the network. One application of this FLAG may be for describing routes to clusters on which you do not wish to keep Network Management status at the member level such as for LASS connectivity outside the local network.

## 2.5 # ROUTING FLAG

Description: This field indicates the type of routing that will take place. This field was called FLAG for 5E8 and earlier.

Software Release: 5E9(1) and later

Required Field.

Valid Entries:

Valid ROUTING FLAG Entries	
Entry	Definition
CLU_O	Software Release: 5E9(1) and later. Routing is based on only the network cluster fields of the point code. It is used to identify cluster-only routing clusters.
POPCLU	Software Release: 5E9(1) and later. Routing is based on the network, cluster, and member (if the member is exceptional) fields of the point code. It is used to identify populated clusters. A populated cluster is a group of signaling points, all of which have the same network and cluster in their point codes.
UPOPCLU	Software Release: 5E9(1) and later. Routing is based on the network and cluster fields of the point code. It is used to identify unpopulated clusters. An unpopulated cluster is a signaling point in a network that has a unique cluster number.

CAUTION: A ROUTING FLAG value of UPOPCLU may only be used for describing a route to a cluster when that cluster contains a SINGLE member. If the cluster contains (or ever would contain) MORE THAN ONE member the ROUTING FLAG value UPOPCLU is NOT correct and would have a negative impact on the network. (Typically used to describe routes to adjacent and non-adjacent STPs)

CAUTION: A ROUTING FLAG value of CLU\_O has very limited application. This ROUTING FLAG value causes network management to be done on a cluster level for a populated cluster (i.e. if a transfer prohibit, restrict, or allow is received for any member in the cluster it is ignored. Only Transfer Cluster messages TCP/TCR/TCA are processed). Incorrect use of this routing flag would have a negative impact on the network. One application of this ROUTING FLAG may be for describing routes to a cluster on which you do not wish to keep Network Management status at the member level such as for LASS connectivity outside the local network.

5E8 AND EARLIER , TO 5E9 AND LATER, FLAG VALUE EQUIVALENCIES		
GENERIC	FLAG VALUE	DESCRIPTION
5E8	CLS	Software Release: 5E7 - 5E8. Combined Linkset is used when routing to a local/nonlocal nonadjacent STP in a large network. When that cluster only has 1 member.
5E9	UPOPCLU	Software Release: 5E9(1) and later. Routing is based on the network and cluster fields of the point code. It is used to identify unpopulated clusters. An unpopulated cluster is a signaling point in a network that has a unique cluster number.
5E8	CPOPC	Software Release: 5E7 - 5E8. Cluster Level Only Populated Cluster is used when infrequently routing to a nonlocal populated cluster (small number of members). This conserves on memory because network management is only provided at the cluster level.
5E9	CLU_O	Software Release: 5E9(1) and later. Routing is based on only the network cluster fields of the point code. It is used to identify cluster-only routing clusters.
5E8	LS	Software Release: 5E7 - 5E8 Link Set is used for a single link to a local/nonlocal adjacent STP in a large network.
5E9	UPOPCLU	Software Release: 5E9(1) and later. Routing is based on the network and cluster fields of the point code. It is

		used to identify unpopulated clusters. An unpopulated cluster is a signaling point in a network that has a unique cluster number.
5E8	RPOPC_C	Software Release: 5E7 - 5E8. Remote Populated Cluster Level Routing is used for all other routing. Network management is provided at the member level.
5E9	POPCLU	Software Release: 5E9(1) and later. Routing is based on the network, cluster, and member (if the member is exceptional) fields of the point code. It is used to identify populated clusters. A populated cluster is a group of signaling points, all of which have the same network and cluster in their point codes.

## 2.6 # LS

Description: The name of this field was changed to PRI ROUTE in 5E9(1). The LS field name applies to 5E7 - 5E8. See PRI ROUTE for usage information.

## 2.7 # PRI ROUTE

Description: This field tells what specific link (or linkset) will be used for the routing of the messages. For 5E9(1) and later, if this field is 0, CCS7 message routing is done on the member level only.

This field was called LS in 5E7 - 5E8.

Required Field for 5E7 and later.

Valid Entries:

For 5E7 - 5E8: 1 - 511

For 5E9(1) and later: 0 - 511

Data Rules:

If "LS" is entered in the FLAG field, use the LINK SET value on the 15.2 View corresponding to the particular local STP. Otherwise, for 5E7 and later, use the same COMBINED LINK SET value that is used on the 15.2 View that corresponds to the local STP.

For 5E9(1) and later, if PRI ROUTE is the same as the LINK SET value on the corresponding 15.2 View, then the following must be true.

- The NID on this view must match the first three digits (network identifier) of the FAR END PNT CODE on the 15.2 View, and the CLUSTER must match the middle three digits (cluster number) of the FAR END PNT CODE.
- If the link set is part of a combined link set (i.e., a value is entered in the COMBINED LINK SET field of the 15.2 View), and the combined link set contains another direct linkset (i.e., another LINK SET is associated with the same COMBINED LINK SET on a 15.2 View), then the other LINK SET must be the ALT1 ROUTE on this view. The ALT2 ROUTE may be entered only if the ELINK secured feature has been activated through Secured Feature ID 131 on the 8.22 View.
- If the link set is not part of a combined link set (i.e., a value is not entered in the COMBINED LINK SET field on the 15.2 View), then ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

If the PRI ROUTE matches the COMBINED LINK SET value on the 15.2 View, and the NID value is greater

than 4, then the NID and CLUSTER values may not match the network identifier and cluster number of the corresponding FAR END PNT CODE on the 15.2 View. ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

When PRI ROUTE is 0, ALT1 ROUTE must be blank. When PRI ROUTE is greater than 0, it may not be the same as ALT1 ROUTE or ALT2 ROUTE.

CAUTION: If the PRI ROUTE field is set to 0, message routing is done on the member level ONLY and ONLY to those members with data populated on the 15.18 recent change view. When the PRI ROUTE field is set to 0, messages will not be routed to members of the cluster that do not have 15.18 data populated.

## **A/E-LINK**

The following two fields (Section 2.8 - Section 2.9 ) support the Extended Access Links and Alternate A-Link Set Routing feature.

### **2.8 ALT1 ROUTE**

Description: The ALT1 ROUTE field specifies the link set to be used as the first alternate route between the 5ESS Switch and the STP.

Software Release: 5E9(1) and later

Valid Entries: 1 - 511

Data Rules:

When a value is entered in ALT1 ROUTE, it may not be the same as PRI ROUTE or ALT 2 ROUTE.

If ALT1 ROUTE is blank, ALT2 ROUTE must also be blank.

### **2.9 ALT2 ROUTE**

Description: The ALT2 ROUTE field specifies the linkset to be used as the second alternate route between the 5ESS Switch and the STP.

Software Release: 5E9(1) and later

Valid Entries: 1 - 511

---

#### CLUSTER ROUTING DATA

```
*1. NID          232
*2. CLUSTER     232
#3. ROUTING FLAG POPCLU
#4. PRI ROUTE   3
```

A/E-LINK

5. ALT1 ROUTE \_\_\_\_

6. ALT2 ROUTE \_\_\_\_

---

**Figure 1 SAMPLE CLUSTER ROUTING DATA VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

## SEC. 2J: 5020 RECORD SUBSYSTEM INFORMATION (VIEW 15.10) RC\_SST

### 1. GENERAL

This view is available with the 5E5 Software Release and defines the requirements for internal routing of incoming CCS7 messages used for CCS7 based features (SSP800, LASS, LIDB, ASP, and APSDN). One screen display is entered for each subsystem number used for the CCS7 based features.

The Signaling Application View 8.17 (5537 Record) must be entered for each CCS7 based feature. The 15.10 view and the 15.11 view must be inserted prior to the 8.17 Recent Change View (DSAPP form (5537 Record)). The CNI database is not a relational database, therefore it does not directly interface with the 5ESS Switch relational database. Due to the differences between the two databases, if the 8.17 view is populated prior to the 15.10 and 15.11 views, the application is marked as prohibited and no call processing will occur for those application type calls. If 8.17 is entered before 15.10 and 15.11, the views must be deleted and then reinserted in the proper sequence.

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Description: Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*SUBSYSTEM

Description: This is a subsystem number used internally for routing CCS7 SCCP signaling messages or for internal CNI message routing.

Valid Entries:

- For 5E5 and 5E6: 0, 2 - 7, or 232 - 255
- For 5E7 and later: 2 - 3, 5 - 7, 232 - 255

Data Rules:

For 5E6 and later, SUBSYSTEM 3 must be defined to notify the network when the CMP is out of service for ISUP Routing.

#### **SIGNAL ADDRESS**

The following fields (Section 2.3 - Section 2.4 ) define the signaling addresses.

#### 2.3 SIG GRP ADR

Description: This field tells CNI where to distribute incoming SCCP signaling messages for this SSN. The address is always set to 64 (the logical address of the 3B processor).

- **NOTE:** Even if a subsystem wants to receive messages in the DLN, the Signaling Address is still set to 64, and the LOCAL INDEX field is used to direct the messages to the DLN.

Valid Entries: 0 - 64

#### 2.4 SIG MEM ADR

Description: This field tells CNI where to distribute incoming SCCP signaling messages for this SSN. The member is always set to 0 to access the 3B processor.

Valid Entries: 0 - 15

## 2.5 SIG CHAN

Description: This field tells CNI where to distribute incoming SCCP signaling messages for this SSN. The channel is the IMS channel number. For 5E5 and earlier a value of 128 should be entered. For 5E6 and later a value of 160 should be entered.

Valid Entries: 42 - 255

## 2.6 LOCAL INDEX

Description: This field is an index into a table of functions which the subsystem wants to have executed when an incoming message is received at a CCS7 node. There are 16 possible functions to choose from.

If the DLN is equipped, enter 14; otherwise enter 15.

Valid Entries: 0 - 15

Data Rules:

If "N" is entered in the DLN field on the OFCOPT form (5509 Record), then LOCAL INDEX must be 15. If "Y" is entered in the DLN field on the OFCOPT form, then DLNs (Direct Link Nodes) are equipped and LOCAL INDEX must be 14.

## 2.7 WANT PAUSE

Description: Does this subsystem want to receive pause and resume primitives from SCCP management? If "Y" is entered pause is received. If "N" is entered no pause is received. This field should have "N" entered, indicating to CNI that pause and resume primitives should not be received.

Valid Entries: Y, N

## 2.8 SIMP DUPL

Description: This field indicates whether a subsystem is a duplex system, i.e., it has a mate, or simplex system, i.e., it does not have a mate.

This field should always be set to "S".

Valid SIMP DUPL Entries	
Entry	Definition
D	Duplex
S	Simplex

## 2.9 MGMT CHAN

Description: This field tells CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.). The channel is the IMS channel number.

**NOTE:** This channel must not be the same as the Signaling Channel.

For 5E5 and earlier, a value of 127 should be entered. For 5E6 and later, a value of 159 should be entered.

Valid Entries: 42 - 255

## 2.10 MATE SSN

Description: This field indicates the subsystem mate.

This field should always have a value of 0 entered.

Valid Entries: 0, 232 - 252, or 254

## 2.11 MATE PTCODE

Description: This is the mate point code.

This field should always have a value of "000000000" entered.

Valid Entries: a 9-digit point code

## MANAGEMENT ADDRESS

The following fields (Section 2.12 - Section 2.13 ) tell CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.).

### 2.12 MGMT GRP ADR

Description: This field tells CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.).

The address should be set to 64 (logical address of the 3B processor).

Valid Entries: 0 - 64

### 2.13 MGMT MEM ADR

Description: This field tells CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.).

The member should have a value of 0 entered to access the 3B processor and for SCCP signaling applications.

Valid Entries: 0 - 15

#### 5ESS SWITCH SUBSYSTEM INFORMATION

*1. SUBSYSTEM	251	7. SIMP DUPL	SIMPLEX
SIGNAL ADDRESS		8. MGMT CHAN	127
2. SIG GRP ADR	64	9. MATE SSN	0
3. SIG MEM ADR	0	10. MATE PTCODE	000000000
		MANAGEMENT ADDRESS	
4. SIG CHAN	128	11. MGMT GRP ADR	64
5. LOCAL INDEX	14	12. MGMT MEM ADR	0
6. WANT PAUSE	NO PAUSE		

---

**Figure 1 SAMPLE SUBSYSTEM INFORMATION VIEW 5E5 SOFTWARE RELEASE**

---

SUBSYSTEM INFORMATION

*1. SUBSYSTEM	251	7. SIMP DUPL	SIMPLEX
SIGNAL ADDRESS		8. MGMT CHAN	159
2. SIG GRP ADR	64	9. MATE SSN	0
3. SIG MEM ADR	0	10. MATE PTCODE	000000000
		MANAGEMENT ADDRESS	
4. SIG CHAN	128	11. MGMT GRP ADR	64
5. LOCAL INDEX	14	12. MGMT MEM ADR	0
6. WANT PAUSE	NO PAUSE		

---

**Figure 2 SAMPLE SUBSYSTEM INFORMATION VIEW 5E6 AND LATER SOFTWARE RELEASES**

---

## SEC. 2K: 5021 RECORD GLOBAL TITLE TRANSLATION (VIEW 15.11) RC\_CNIGTT

### 1. GENERAL

This view is used to set up the relationship between the CCS service desired and the STPs that are dedicated to provide the Global Title translation for that feature. A separate display of this view is populated for the NS800, LASS, ASP and LIDB features if Global Title Translations use a capability code (alias point code) or the Global Title Translations are not done at the adjacent STP pair.

In the 5E4(2) Software Release, the point codes or the capability code of the STP pair (where Global Title Translations are performed) can be defined in the Network File parameters, GTXPCA and GTXPCB. If the GTXPCA and GTXPCB are not entered, the Global Title Translations will be performed at the adjacent STPs point codes.

In 5E5 and later Software Releases, this view will be used rather than the Network File parameters. For new start offices, the adjacent STP point codes will be defaulted in the general translator, 256.

- **NOTE:** Following a retrofit from the 5E4(2) Software Release, the general translator, 256, will be populated with the Network File parameters, GTXPCA and GTXPCB. The Translation Type used for NS800 (defined on RC view 8.17) should be assigned here with the Point Codes of the STPs where GTTs are performed. The general translator, 256, should then be updated with the Point Codes of the adjacent STP pair. Further retrofits will restore the values entered on this view.

The 15.10 view and the 15.11 view must be inserted prior to the 8.17 Recent Change View (DSAPP form (5537 Record)). The CNI database is not a relational database, therefore it does not directly interface with the 5ESS Switch relational database. Due to the differences between the two databases, if the 8.17 view is populated prior to the 15.10 and 15.11 views, the application is marked as prohibited and no call processing will occur for those application type calls. If 8.17 is entered before 15.10 and 15.11, the views must be deleted and then reinserted in the proper sequence.

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*TRANSLATION TYPE

Description: This is the global title translator index used by the STP along with other data (800NXX for SSP800) to look up a Destination Point Code and Subsystem number for TCAP functions for SSP800, LASS and LIDB.

This value must be consistent with RC View 8.17 and the Global Title STP's database. Routing data (View 15.9) is required for those point codes that are not located in the adjacent STP pair.

Valid Entries: 0 - 256

#### 2.3 # PC1

Description: This is a 9-digit point code that represents one of the STPs where Global Title translations are done for TCAP functions.

Required Field.

Valid Entries: 9-digit point code

## 2.4 # PC2

Description: This 9-digit point code represents the other STP where Global Title translations are done for TCAP functions.

The values for PC1 and PC2 may be the same or different depending on whether other translation types are provided. If no other translation types are provided, the default translation type is 256 with PC1 and PC2 being the values of the adjacent STP pair.

- **NOTE:** Where Capability Codes (Alias Point Codes) are used, PC1 must be equal to PC2.

Required Field.

Valid Entries: 9-digit point code

---

### GLOBAL TITLE TRANSLATION

```
*1. TRANSLATION TYPE 256
#2. PC 1             232200000
#3. PC 2             232211000
```

---

**Figure 1 SAMPLE GLOBAL TITLE TRANSLATION VIEW 5E5 AND LATER SOFTWARE RELEASES**

## SEC. 2L: 5022 RECORD NETWORK ROUTING DATA (VIEW 15.12) RC\_NLNIDS

### 1. GENERAL

This view is introduced with the 5E5 Software Release. This view is used to define all of the nonlocal networks that are sending or receiving CCS7 messages from the local 5ESS Switch.

A Nonlocal Network ID is an ID other than the Local Network ID that is assigned on RC View 15.1 in the LOCAL POINT CODE field.

Nonlocal network identifications are required under the following conditions:

- When the 5ESS Switch is routing to another network.
- When Global Title Translations are performed in an STP that is located in another network.
- When an SCP that is used for CCS7 based features is located in another network.
- When a far-end office is located in another network (ISUP Trunks RC View 5.1).
- When a switch in another network is being sent TCAP messages for LASS.

▪ **NOTE:** The maximum number of defined nonlocal network IDs is 24 for 5e15 and earlier and 64 for 5e16(1) and later

▪ **NOTE:** This form must be entered before routing information is defined on View 15.9 and for 5E6 - 5E8 on View 15.13, or for 5E9(1) and later on View 15.18.

### 2. FORM AND RECORD ENTRIES - 5E5 SOFTWARE RELEASE ONLY

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \*OFFICE

Description: Enter the office identification. This should be consistent with Recent Change View 15.1.

Software Release: 5E5 only

Required Field.

Valid Entries: 1 - 8 characters

#### 2.3 NLNID1

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only

Valid Entries: 0 - 254

## 2.4 NLNID2

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only

Valid Entries: 0 - 254

## 2.5 NLNID3

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only

Valid Entries: 0 - 254

## 2.6 NLNID4

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only

Valid Entries: 0 - 254

## 2.7 NLNID5

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only

Valid Entries: 0 - 254

## 3. FORM AND RECORD ENTRIES - 5E6 - 5E8 SOFTWARE RELEASES

### 3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

### 3.2 \*NLNID

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed.

The small network IDs are defined as Nonlocal Network IDs (1 - 4) and their routing is handled by View 15.13.

Software Release: 5E6 - 5E8

Required Field.

Valid Entries: 1 - 254

### 3.3 FLAG

Description: This field provides data concerning the type of routing that will be used.

Software Release: 5E6 and later

Valid FLAG Entries	
Entry	Definition
NCLUSTER	Indicates the routing data is maintained at the cluster level and the cluster information should be entered on RC View 15.9 or 15.13. This value is recommended to allow network management at the nonlocal member level.
CLS	Indicates routing data is maintained at the network level only and cluster information cannot be entered on the RC View 15.9 and 15.13.

### 3.4 PREFLS

Description: This field indicates which link set will be used for routing.

Software Release: 5E6 - 5E8

Valid Entries:

For 5E6 only: 0 - 255

For 5E7 - 5E8: 0 - 511

Data Rules:

When the FLAG field has "NCLUSTER" entered, the value for PREFLS should be 0.

When the FLAG field has "CLS" entered, this field should have a value from the COMBINED LINK SET field which is assigned on the 15.2 View.

## 4. FORM AND RECORD ENTRIES - 5E9(1) AND LATER SOFTWARE RELEASES

### 4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

### 4.2 \* NID

Description: The NID field specifies the network identifier of a point code to which CCS messages are routed.

Software Release: 5E9(1) and later

Required Field.

Valid Entries: 1 - 254

### 4.3 # ROUTING FLAG

Description: The ROUTING FLAG field specifies the CNI (Common Network Interface) routing flag, which is used to determine the level of routing to be performed.

Software Release: 5E9(1) and later

Required Field.

Valid Entries:

Valid ROUTING FLAG Entries	
Entry	Definition
NTWK	Routing data is based on the network, cluster, and possibly member fields of the point code.

NTWK_O	Routing is based on the network field of the point code only.
--------	---

#### Data Rules:

When the ROUTING FLAG is "NTWK", PRI ROUTE must be 0; when ROUTING FLAG is "NTWK\_O", PRI ROUTE must not be 0.

### 4.4 # PRI ROUTE

Description: The PRI ROUTE field specifies the CNI linkset number used for the primary route between the 5ESS Switch and the STP. The value 0 indicates the routing is done at the cluster or member level.

Software Release: 5E9(1) and later

Required Field.

Valid Entries: 0 - 511

#### Data Rules:

When PRI ROUTE is 0, ALT1 ROUTE must be blank.

When PRI ROUTE is greater than 0, it may not be the same as ALT1 ROUTE or ALT2 ROUTE.

### ***A/E-LINK***

The following two fields (Section 4.5 - Section 4.6 ) support the Extended Access Links and Alternate A-Link Set Routing feature.

### 4.5 ALT1 ROUTE

Description: The ALT1 ROUTE field specifies the CNI linkset number for the first alternate route between the 5ESS Switch and the STP.

Valid Entries: 1 - 511

#### Data Rules:

When a value is entered in ALT1 ROUTE, it may not be the same as PRI ROUTE or ALT2 ROUTE.

If ALT1 ROUTE is blank, ALT2 ROUTE must be blank.

### 4.6 ALT2 ROUTE

Description: The ALT2 ROUTE field specifies the CNI linkset number for the second alternate route between the 5ESS Switch and the STP.

Valid Entries: 1 - 511

---

5ESS SWITCH

NON-LOCAL NETWORK IDS

\*1. OFFICE

OFFICE1

```
2. NLNID1          1
3. NLNID2          240
4. NLNID3          _____
5. NLNID4          _____
6. NLNID5          _____
```

---

**Figure 1 SAMPLE NONLOCAL NETWORK IDS VIEW 5E5 SOFTWARE RELEASE**

---

NON-LOCAL NETWORK IDS

```
*1. NLNID      1
2. FLAG      NCLUSTER
3. PREFLS     0
```

---

**Figure 2 SAMPLE NONLOCAL NETWORK IDS VIEW 5E6 - 5E8 SOFTWARE RELEASES**

---

NETWORK ROUTING DATA

```
*1. NID          001
#2. ROUTING FLAG NTWK
#3. PRI ROUTE    0

      A/E-LINK
4. ALT1 ROUTE   ____
5. ALT2 ROUTE   ____
```

---

**Figure 3 SAMPLE NETWORK ROUTING DATA VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

---

## **SEC. 2M: 5023 RECORD SMALL NETWORK CLUSTER AND MEMBER TABLE (VIEW 15.13) RC\_SMNID**

### **1. GENERAL**

This view is available with 5E6 - 5E8 Software Releases. For 5E9(1) and later, it is replaced by the Member Routing View, 15.18.

This view is used to enter the cluster/member information needed for small network populated cluster/member routing.

For 5E6 - 5E8 this view should be entered when the 5ESS Switch is connected to an adjacent STP pair in a small network. Otherwise, RC View 15.9 should be used for small and large network routing.

The small non-local network ids (SMNIDS 1 through 4) must be previously defined using View 15.12 before subsequent cluster/member routing information can be manipulated.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and Office Name on each record.

#### **2.2 \*NLNID**

Description: The name of this field was changed to SMNIDS in 5E7. This field name applies to 5E6. See SMNIDS for usage information.

#### **2.3 \*SMNIDS**

Description: The Small Network ID entered here indicates to which non-local small network the CCS messages will be routed. (This field was called NLNIDS for 5E6).

Valid Entries: 1 - 4

#### **2.4 \*CLUSTER**

Description: Enter the cluster value that indicates to which cluster within the small network the CCS messages will be routed.

Valid Entries: 0 - 255

#### **2.5 FLAG**

Description: This field indicates what type of routing will be performed. The only valid entry is "SMPOP\_M", which indicates Small Populated cluster/member level routing.

Valid Entries: SMPOP\_M

#### **2.6 LS**

Description: This field represents the Linkset number between the local switch and the STPs. This field is normally the COMBINED LINK SET defined on RC View 15.2 which is linked to the small network STP pairs.

Valid Entries:

For 5E6 only: 1 - 255

For 5E7 and later: 1 - 511

## 2.7 MEMBER1

Description: This field represents the member number for one of the adjacent STP pairs.

Valid Entries: 1 - 255

## 2.8 FLAG1

Description: This field indicates what type of routing will be performed. This field should be "LS" if routing is to be done.

Valid FLAG1 Entries	
Entry	Definition
LS	Routing is maintained for a single link to an adjacent STP
NO RTE	No routing data is maintained

## 2.9 LS1

Description: This field represents the Linkset number from the local switch to the adjacent STP.

Valid Entries:

For 5E6 only: 0 - 255

For 5E7 and later: 0 - 511

Data Rules:

If the value of the FLAG1 field is "NO RTE", this field must have the value 0 entered. Otherwise, a value from 1 - 511 should be entered.

## 2.10 MEMBER2

Description: This field represents the member number for the other adjacent STP.

Valid Entries: 1 - 255

## 2.11 FLAG2

Description: This field indicates what type of routing will be performed. This field should be "LS" if routing is to be done.

Valid FLAG2 Entries	
Entry	Definition
LS	Routing is maintained for a single link to an adjacent STP
NO RTE	No routing data is maintained

## 2.12 LS2

Description: This field represents the Linkset number from the local switch to the other adjacent non-local STP.

Valid Entries:

For 5E6 only: 0 - 255

For 5E7 and later: 0 - 511

## Data Rules:

If the value of the FLAG1 field is "NO\_RTE", this field must have the value 0 entered. Otherwise, a value from 1 - 511 should be entered.

---

 SMALL NON-LOCAL NETWORK ID CLUSTER AND MEMBER TABLE

*1.	NLNID	001	8.	MEMBER2	002
*2.	CLUSTER	020	9.	FLAG2	LS
3.	FLAG	SMPOP_M	10.	LS2	005
4.	LS	006			
5.	MEMBER1	001			
6.	FLAG1	LS			
7.	LS1	004			

---

**Figure 1 SAMPLE SMALL NON-LOCAL NETWORK CLUSTER AND MEMBER TABLE VIEW 15.13 5E6 SOFTWARE RELEASE**

---

 SMALL NON-LOCAL NETWORK ID CLUSTER AND MEMBER TABLE

*1.	SMNID	001	8.	MEMBER2	002
*2.	CLUSTER	020	9.	FLAG2	LS
3.	FLAG	SMPOP_M	10.	LS2	005
4.	LS	006			
5.	MEMBER1	001			
6.	FLAG1	LS			
7.	LS1	004			

---

**Figure 2 SAMPLE SMALL NETWORK CLUSTER AND MEMBER TABLE VIEW 15.13 5E7 - 5E8 SOFTWARE RELEASES**

## **SEC. 2N: 5024 RECORD PROTOCOL OFFICE TIMERS (VIEW 15.14) - RCNIOFTIM**

### **1. GENERAL**

This view is available for 5E9(1) and later Software Releases and is used to specify T1.111.4 MTP (Message Transfer Part) Signaling Network functions and messages, as well as provide SCCP (Signaling Connection Control Part) information.

- **WARNING:** Timer changes can be service-affecting. Before modifying timer values on this view, review the CCS7 protocol specifications.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and Office Name on each record.

#### **2.2 \* OFFICE ID**

Description: The OFFICE ID uniquely identifies this office.

Required Field.

Valid Entries: 1 - 8 alphanumeric characters

#### ***T1.111.4 TIMERS***

The following fields (Section 2.3 - Section 2.9 ) specify the T1.111.4 MTP (Message Transfer Part) Signaling Network functions and messages.

#### **2.3 T8**

Description: The T8 field represents the period of time, in milliseconds, that signaling traffic will be prohibited to a particular signaling point.

Default:

For LEC Offices: 1000

For AT&T Offices: 800

Valid Entries: 800 - 1200 (milliseconds)

#### **2.4 T10**

Description: The T10 field represents the time interval in seconds that will elapse before repeating a signal route-set test message. This test message is repeated to determine if a previously inhibited or restricted signaling end point is still inhibited or restricted.

Default: 30

Valid Entries: 30 - 60 (seconds)

#### **2.5 T11**

Description: The T11 field represents the period of time in seconds that signaling traffic will, if possible, be restricted to a particular signaling point.

Default: 30

Valid Entries: 30 - 90 (seconds)

## 2.6 T16

Description: The T16 field represents the period of time in milliseconds to wait to receive a route-set congestion status update. For each signaling route-set, a congestion status indicating the degree of congestion is assigned. This timer represents the period of time to wait to receive this status information.

Default: 1400

Valid Entries: 1400 - 2000 (milliseconds)

## 2.7 T18

Description: The T18 field represents the period of time in seconds that signaling traffic will, if possible, be restricted to a particular cluster of signaling points.

Default: 30

Valid Entries: 30 - 90 (seconds)

## 2.8 T20

Description: The T20 field represents the period of time in milliseconds to wait before repeating a local inhibit test. Local inhibiting is a management function that for maintenance or testing purposes makes a local signaling link unavailable for user-generated signaling traffic.

Default: 120000

Valid Entries: 90000 - 120000 (milliseconds)

## 2.9 T21

Description: The T21 field represents the period of time in milliseconds to wait before repeating a remote inhibit test. Remote inhibiting is a management function that for maintenance or testing purposes makes a remote signaling link unavailable for user-generated signaling traffic.

Default: 120000

Valid Entries: 90000 - 120000 (milliseconds)

### ***T1.112.4 SCCP TIMERS***

The following fields (Section 2.10 - Section 2.13 ) provide SCCP (Signaling Connection Control Part) information.

## 2.10 SST

Description: The Signaling Connection Control Part SST field represents the delay in seconds between requests for subsystem information.

Default: 30

Valid Entries: 30 - 90 (seconds)

## 2.11 SOG

Description: The Signaling Connection Control Part SOG field represents the period of time in seconds to wait before an out of service grant is received from network management.

Default: 30

Valid Entries: 30 - 90 (seconds)

## 2.12 IGSST

Description: The Signaling Connection Control Part IGSST field represents the delay in seconds between receiving grant to go out of service and actually going out of service.

Default: 30

Valid Entries: 30 - 90 (seconds)

## 2.13 SRT

Description: The Signaling Connection Control Part SRT field represents the delay in seconds between requests for subsystem routing status information.

Default: 30

Valid Entries: 30 - 90 (seconds)

---

```

                                PROTOCOL OFFICE TIMERS

*1. OFFICE ID OFFICE1_          T1.112.4 SIGNALING CONNECTION
                                CONTROL PART (SCCP) TIMERS
    T1.111.4 TIMERS              9. SST      ___
  2. T8      800                 10. SOG     ___
  3. T10     30                  11. IGSST  ___
  4. T11     ___                 12. SRT     ___
  5. T16     _____
  6. T18     ___
  7. T20     _____
  8. T21     _____

```

---

**Figure 1 SAMPLE PROTOCOL OFFICE TIMERS VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

## SEC. 20: 5025 RECORD PROTOCOL LINK SET TIMERS (VIEW 15.15) - RCNILSTIM

### 1. GENERAL

This view is available with 5E9(1) and later Software Releases and is used to specify Link Set Timer information on a per-office basis.

- **WARNING:** Timer changes can be service-affecting. Before modifying timer values on this view, review the CCS7 protocol specifications.

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \* SCOPE

Description: The SCOPE field determines the parameters used in selecting the number of timers to update.

When the view is updated for one linkset (SCOPE is "LS"), the current data values will appear in the fields. When the view is updated for "ALL" link sets, the fields will appear blank since the values may differ among the link sets.

Required Field.

Valid SCOPE Entries	
Entry	Definition
LS	One linkset.
ALL	All links.

Data Rules:

If SCOPE is "LS", a value must be entered in the LS field; if SCOPE is "ALL", LS must be blank, and the database operation must be "U".

#### 2.3 (\*) LS

Description: The Link Set field defines a set of CCS7 links going to the same destination.

Valid Entries: 1 - 511

#### ***T1.111.4 TIMERS***

These fields (Section 2.4 - Section 2.15 ) establish the values for T1.111.4 timers.

#### 2.4 T1

Description: The T1 field defines the interval of time used to avoid messages getting out of sequence during a changeover to the alternative link.

Default:

For LEC Offices: 1000

For AT&T Offices: 500

Valid Entries: 500 - 1200, in increments of 100 (milliseconds)

## 2.5 T2

Description: The T2 field defines the interval of time in milliseconds to wait for changeover acknowledgement.

Default:

For LEC Offices: 1000

For AT&T Offices: 700

Valid Entries: 700 - 2000, (milliseconds)

## 2.6 T3

Description: The T3 field defines the interval of time in milliseconds for CNI to avoid messages getting out of sequence during a changeback.

Default:

For LEC Offices: 1000

For AT&T Offices: 500

Valid Entries: 500 - 1200, (milliseconds)

## 2.7 T4

Description: The T4 field defines the interval of time in milliseconds for CNI to wait for changeback acknowledgement.

Default:

For LEC Offices: 1000

For AT&T Offices: 500

Valid Entries: 500 - 1200, (milliseconds)

## 2.8 T5

Description: The T5 field defines the interval of time in milliseconds for CNI to wait for changeback acknowledgement (second attempt).

Default:

For LEC Offices: 1000

For AT&T Offices: 500

Valid Entries: 500 - 1200, (milliseconds)

## 2.9 T6

Description: The T6 field defines the interval of time in seconds for CNI to avoid messages getting out of sequence during controlled rerouting.

Default:

For LEC Offices: 10

For AT&T Offices: 5

Valid Entries: 5 - 12 (tenths of a second)

## 2.10 T12

Description: The T12 field defines the interval of time in milliseconds for CNI to wait for an uninhibited acknowledgement.

Default:

For LEC Offices: 1000

For AT&T Offices: 1500

Valid Entries: 800 - 1500 (milliseconds)

## 2.11 T13

Description: The T13 field defines the interval of time in milliseconds for CNI to wait for a force uninhibit.

Default:

For LEC Offices: 1000

For AT&T Offices: 800

Valid Entries: 800 - 1500 (milliseconds)

## 2.12 T14

Description: The T14 field defines the interval of time in milliseconds for CNI to wait for an inhibit acknowledgement.

Default:

For LEC Offices: 3000

For AT&T Offices: 2000

Valid Entries: 2000 - 3000 (milliseconds)

## 2.13 T15

Description: The T15 field defines the interval of time in seconds for CNI to wait for repeat signaling route set congestion test.

Default: 3

Valid Entries: 2 - 3 (seconds)

## 2.14 T17

Description: The T17 field defines the interval of time in milliseconds for CNI to avoid oscillation of initial alignment failure and link restart.

Default:

For LEC Offices: 1000

For AT&T Offices: 800

Valid Entries: 800 - 1500 (milliseconds)

## 2.15 T19

Description: The T19 field defines the interval of time in milliseconds for CNI to fail the link craft referral timer.

Default:

For LEC Offices: 480000

For AT&T Offices: 180000

Valid Entries: 180000 - 600000 (milliseconds)

**T1.111.7 TIMERS**

These fields (Section 2.16 - Section 2.17 ) establish the values for T1.111.7 timers.

**2.16 TIMER 1**

Description: The TIMER 1 field defines the interval of time in seconds used by the supervision timer for signaling link test acknowledgement message.

Default: 10

Valid Entries: 4 - 12 (seconds)

**2.17 TIMER 2**

Description: The TIMER 2 field defines the interval of time in seconds to determine how often a signaling link test message should be sent.

Default: 30

Valid Entries: 30 - 90 (seconds)

---

PROTOCOL LINK SET TIMERS

- \*1. SCOPE LS
- (\* )2. LS 1

T1.111.4 TIMERS		T1.111.7 TIMERS	
3. T1 500	9. T12 _____	15. TIMER 1 ____	
4. T2 _____	10. T13 _____	16. TIMER 2 ____	
5. T3 _____	11. T14 _____		
6. T4 _____	12. T15 _		
7. T5 _____	13. T17 _____		
8. T6 ____	14. T19 _____		

---

**Figure 1 SAMPLE PROTOCOL LINK SET TIMERS VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

## SEC. 2P: 5026 RECORD PROTOCOL LINK SET THRESHOLDS (VIEW 15.16) - RCNILSTHR

### 1. GENERAL

This view is available with 5E9(1) and later Software Releases and is used to maintain congestion indicator data. This data is used to detect the onset or abatement of link congestion.

- **WARNING:** Threshold changes can be service-affecting. Before modifying values on this view, review the CCS7 protocol specifications.

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \* SCOPE

Description: The SCOPE field determines the parameters used in selecting the number of timers to update.

When the view is updated for one linkset (SCOPE is "LS"), the current data values will appear in the fields. When the view is updated for "ALL" link sets, the fields will appear blank since the values may differ among the link sets.

Required Field.

Valid SCOPE Entries	
Entry	Definition
LS	One link set.
ALL	All links.

Data Rules:

If SCOPE is "LS", a value must be entered in the LS field; if SCOPE is "ALL", LS must be blank, and the database operation must be "U".

#### 2.3 (\*) LS

Description: The LS (Link Set) field defines a set of CCS7 links going to the same destination.

Valid Entries: 1 - 511.

### ***T1.111.4 LINK CONGESTION CONTROL THRESHOLDS***

The following fields (Section 2.4 - Section 2.12 ) establish threshold values for the onset and abatement of congestion in transmit and retransmit buffers. They also determine when selected messages will be discarded.

CNI follows a 3-level discard strategy. Before transmitting a message, a node checks the message's priority (contained in the service information field) and the congestion state of the transmit buffer. If the priority is less than the congestion level, the message is removed, and a return message may be sent. If the priority of the message is greater than or equal to the congestion level, it is transmitted.

#### **LEVEL 1**

The following fields (Section 2.4 - Section 2.6 ) determine the Level 1 Link Congestion Control Thresholds.

## **2.4 ABATE 1**

Description: The ABATE 1 field defines a transmit or retransmit buffer capacity that indicates abatement of level 1 congestion. Congestion abatement occurs when the buffer content reaches a level less than the predetermined threshold value.

Default: 820

Valid Entries: 200 - 32767

Data Rules:

ABATE 1 must be less than or equal to ONSET 1, and ONSET 1 must be less than or equal to DISCARD 1.

## **2.5 ONSET 1**

Description: The ONSET 1 field defines a transmit or retransmit buffer capacity that indicates the onset for level 1 congestion. Congestion onset occurs when the buffer content increases beyond a predetermined value.

When a buffer reaches this threshold, the node reports the congestion state to the central processor. Network management messages are broadcast to adjacent signaling points to limit messages to the affected node. To avoid further congestion of the buffer, the far-end initiates the discard strategy used by nodes at the discard level.

Default: 3072

Valid Entries: 200 - 32767

Data Rules:

ONSET 1 must be less than or equal to DISCARD 1.

## **2.6 DISCARD 1**

Description: The DISCARD 1 field defines a transmit or retransmit buffer capacity that determines whether, under level 1 congestion conditions, a message should be discarded or transmitted.

Default: 6042

Valid Entries: 200 - 32767

Data Rules:

DISCARD 1 must be less than or equal to ABATE 2.

## **LEVEL 2**

The following fields (Section 2.7 - Section 2.9 ) determine the Level 2 Link Congestion Control Thresholds.

## **2.7 ABATE 2**

Description: The ABATE 2 field defines a transmit or retransmit buffer capacity that indicates abatement of level 2 congestion. Congestion abatement occurs when the buffer content reaches a level less than the predetermined threshold value.

Default: 7680

Valid Entries: 200 - 32767

Data Rules:

ABATE 2 must be less than or equal to ONSET 2, and ONSET 2 must be less than or equal to DISCARD 2.

## 2.8 ONSET 2

Description: The ONSET 2 field defines a transmit or retransmit buffer capacity that indicates the onset for level 2 congestion. Congestion onset occurs when the buffer content increases beyond a predetermined value.

When a buffer reaches this threshold, the node reports the congestion state to the central processor. Network management messages are broadcast to adjacent signaling points to limit messages to the affected node. To avoid further congestion of the buffer, the far-end initiates the discard strategy used by nodes at the discard level.

Default: 8295

Valid Entries: 200 - 32767

Data Rules:

ONSET 2 must be less than or equal to DISCARD 2.

## 2.9 DISCARD 2

Description: The DISCARD 2 field defines a transmit or retransmit buffer capacity that determines whether, under level 2 congestion conditions, a message should be discarded or transmitted.

Default: 10855

Valid Entries: 200 - 32767

Data Rules:

DISCARD 2 must be less than or equal to ABATE 3.

## LEVEL 3

The following fields (Section 2.10 - Section 2.12 ) determine the Level 3 Link Congestion Control Thresholds.

### 2.10 ABATE 3

Description: The ABATE 3 field defines a transmit or retransmit buffer capacity that indicates abatement of level 3 congestion. Congestion abatement occurs when the buffer content reaches a level less than the predetermined threshold value.

Default: 10855

Valid Entries: 200 - 32767

Data Rules:

ABATE 3 must be less than or equal to ONSET 3, and ONSET 3 must be less than or equal to DISCARD 3.

### 2.11 ONSET 3

Description: The ONSET 3 field defines a transmit or retransmit buffer capacity that indicates the onset for level 3 congestion. Congestion onset occurs when the buffer content increases beyond a predetermined

value.

When a buffer reaches this threshold, the node reports the congestion state to the central processor. Network management messages are broadcast to adjacent signaling points to limit messages to the affected node. To avoid further congestion of the buffer, the far-end initiates the discard strategy used by nodes at the discard level.

Default: 10956

Valid Entries: 200 - 32767

### 2.12 DISCARD 3

Description: The DISCARD 3 field defines a transmit or retransmit buffer capacity that determines whether, under level 3 congestion conditions, a message should be discarded or transmitted.

Default: 11571

Valid Entries: 200 - 32767

---

#### PROTOCOL LINK SET THRESHOLDS

- \*1. SCOPE LS
- (\*) 2. LS 1

#### T1.111.4 LINK CONGESTION CONTROL THRESHOLDS

LEVEL 1		LEVEL 2		LEVEL 3	
3. ABATE 1	500	6. ABATE 2	_____	9. ABATE 3	_____
4. ONSET 1	700	7. ONSET 2	_____	10. ONSET 3	_____
5. DISCARD 1	1000	8. DISCARD 2	_____	11. DISCARD 3	_____

---

**Figure 1 SAMPLE PROTOCOL LINK SET THRESHOLDS VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

## SEC. 2Q: 5027 RECORD PROTOCOL LINK PARAMETERS (VIEW 15.17) - RCNILKPRM

### 1. GENERAL

This view is available with 5E9(1) and later Software Releases and is used to modify link protocol timers and SUERM (Signal Unit Error Rate Monitor) threshold values on a per link basis.

- **WARNING:** Timer changes can be service-affecting. Before modifying timer values on this view, review the CCS7 protocol specifications.

### 2. FORM AND RECORD ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \* SCOPE

Description: The SCOPE field determines the parameters used in selecting the number of timers to update.

When the view is updated for one link (SCOPE is "ONE"), the current data values will appear in the fields. When the view is updated for one or more link sets (SCOPE is "LS" or "ALL"), the fields will appear blank since the values may differ among the link sets.

Required Field.

Valid SCOPE Entries	
Entry	Definition
LS	One Link Set.
ONE	One link.
ALL	All links.

Data Rules:

If SCOPE is "LS", a value must be entered in the LS field, and GROUP and MEMBER must be blank.

If SCOPE is "ONE", a value must be entered in the GROUP and MEMBER fields; and LS must be blank.

If SCOPE is "ALL", LS, GROUP, and MEMBER must be blank; the database operation must be "U".

#### 2.3 (\*) LS

Description: The LS (Link Set) field defines a set of CCS7 links going to the same destination.

Valid Entries: 1 - 511.

#### 2.4 (\*) GROUP

Description: The GROUP field specifies the group to which the link node is attached. For 5E9(1) and earlier, the CNI cabinet has two groups (00 and 32); for 5E9(2) and later, it has six groups (00, 01, 02, 32, 33, 34). A link pair must have a link on two of these groups.

Valid Entries:

For 5E9(1) and earlier: 0 - 63

For 5E9(2) and later: 00, 01, 02, 32, 33, 34

## 2.5 (\*) MEMBER

Description: The MEMBER field defines a specific link node being used by a particular group.

Valid Entries:

For 5E9(1) and earlier: 1 - 15

For 5E9(2) and later: 1 - 8

## T1.111.3 TIMERS

The following fields (Section 2.6 - Section 2.13) establish the values of T1.111.3 timers.

### 2.6 T1

Description: The T1 field defines the interval of time CNI will wait for the link to be in service after the link is aligned and ready on the near end.

Default: 650

Valid Entries: 650 - 1500 (fiftieths of a second)

### 2.7 T2

Description: The T2 field defines the interval of time CNI will wait before restarting the alignment procedure.

Default:

For LEC Offices: 575

For AT&T Offices: 590

Valid Entries: 250 - 700 (fiftieths of a second)

### 2.8 T3

Description: The T3 field defines the interval of time CNI will wait for the link to be aligned on the far end after the link is aligned on the near end.

Default:

For LEC Offices: 575

For AT&T Offices: 590

Valid Entries: 250 - 700 (fiftieths of a second)

### 2.9 T4N

Description: The T4N field is the Normal Prove-In Period Timer. It defines the interval of time CNI will wait to prove error free transmission under normal conditions.

Default: 115

Valid Entries: 104 - 126 (fiftieths of a second)

### 2.10 T4E

Description: The T4E field is the Emergency Prove-In Period Timer. It defines the interval of time CNI will wait to prove error free transmission under emergency prove-in procedures.

Default: 30

Valid Entries: 27 - 33 (fiftieths of a second)

### 2.11 T5

Description: The T5 field defines the interval of time CNI sends SIB (Status Indication Busy) during level 2 congestion.

Default: 4

Valid Entries: 4 - 6 (fiftieths of a second)

### 2.12 T6

Description: The T6 field is the Remote Congestion Timer. It defines the maximum time CNI will wait for an acknowledgement message when CNI is receiving SIB (Status Indication Busy). If the message is not received within the allotted time, CNI will fail the link.

Default: 150

Valid Entries: 150 - 300 (fiftieths of a second)

### 2.13 T7

Description: The T7 field is the Excessive Delay of Acknowledgement Timer. It defines the maximum time CNI will wait for a message to be acknowledged. If the message is not acknowledged within the allotted time, CNI will fail the link.

Default: 50

Valid Entries: 25 - 100 (fiftieths of a second)

## **SIGNAL UNIT ERROR RATE MONITOR**

The following field (Section 2.14 ) defines the Signal Unit Error Monitor value.

### 2.14 SU ERR MON

Description: The SU ERR MON field defines the number of signal unit errors allowed for CNI.

Default:

For LEC Offices: 64

For AT&T Offices: 192

Valid Entries: 64 - 192

## PROTOCOL LINK PARAMETERS

\*1. SCOPE LS  
 (\*) 2. LS 1  
 (\*) 3. GROUP \_\_\_  
 (\*) 4. MEMBER \_\_\_

T1.111.3 TIMERS  
 5. T1 650  
 6. T2 \_\_\_  
 7. T3 \_\_\_  
 8. T4N \_\_\_  
 9. T4E \_\_\_  
 10. T5 \_\_\_  
 11. T6 \_\_\_  
 12. T7 \_\_\_

SIGNAL UNIT ERROR RATE MONITOR  
 13. SU ERR MON \_\_\_

---

**Figure 1 SAMPLE PROTOCOL LINK PARAMETERS VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

## **SEC. 2R: 5028 RECORD MEMBER ROUTING DATA (VIEW 15.18) - RCNIMEM**

### **1. GENERAL**

This view is available with the 5E9(1) and later Software Releases and contains the information necessary for CCS7 message routing based on the Network ID, cluster number, and member number of the point code. This view supports member level routing to local (intra-) and nonlocal (inter-) networks.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and Office Name on each record.

#### **2.2 \* NID**

Description: The NID field specifies the network identifier of a point code to which CCS messages are routed.  
Valid Entries: 1 - 254

Data Rules:

For 5E9(1) and later, if NID is between 5 and 254 inclusive, routing data cannot be entered unless the FPCR (Full Point Code Routing) secured feature is activated through Secured Feature ID 132 on the 8.22 View.

If NID is between 1 to 4 inclusive, routing data can be entered without FPCR being activated, if PRI ROUTE matches the LINK SET on the corresponding 15.2 view.

#### **2.3 \* CLUSTER**

Description: The CLUSTER field specifies the cluster number of a point code to which CCS messages are routed. For AT&T the first two digits are the region number (00 - 31), and the third digit is the Cluster identification (0 - 7). For a LEC (Local Exchange Carrier) the cluster number is 000 - 255.  
Valid Entries: 3 digits

#### **2.4 \* MEMBER**

Description: The MEMBER field specifies the member number of a point code to which CCS messages are routed.  
Valid Entries: 0 - 255

#### **2.5 ROUTING FLAG**

Description: The ROUTING FLAG field specifies the CNI (Common Network Interface) routing flag which is used to determine the level of routing to be performed. This is a verify-only field. It contains member routing based on the network, cluster, and member fields of the point code. It is used to identify full point code routing members of a populated cluster.

#### **2.6 PRI ROUTE**

Description: The PRI ROUTE field specifies the CNI link set used for the primary route between the 5ESS Switch and the STP.

Valid Entries: 1 - 511

Data Rules:

If PRI ROUTE is the same as the LINK SET value on the corresponding 15.2 View, then the following must be true.

- The NID on this view must match the first three digits (network identifier) of the FAR END PNT CODE on the 15.2 View, the CLUSTER must match the middle three digits (cluster number) of the FAR END PNT CODE, and the MEMBER must match the last three digits (member number) of the FAR END PNT CODE.
- If the link set is part of a combined link set (i.e., a value is entered in the COMBINED LINK SET field of the 15.2 View), and the combined link set contains another direct link set (i.e., another LINK SET is associated with the same COMBINED LINK SET on a 15.2 View), then the other LINK SET must be the ALT1 ROUTE on this view. The ALT2 ROUTE may be entered only if the ELINK secured feature has been activated through Secured Feature ID 131 on the 8.22 View.
- If the link set is not part of a combined link set (i.e., a value is not entered in the COMBINED LINK SET field on the 15.2 View), then ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

If PRI ROUTE matches the COMBINED LINK SET value on the 15.2 View, the NID, CLUSTER, and MEMBER values must not match the network identifier, cluster, and member of the corresponding FAR END PNT CODE on the 15.2 View. ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

### ***A/E-LINK***

The following fields (Section 2.7 - Section 2.8) support the Extended Access Links and Alternate A-Link Set Routing feature and the Full Point Code Routing feature.

#### **2.7 ALT1 ROUTE**

Description: The ALT1 ROUTE field specifies the link set to be used as the first alternate route between the 5ESS Switch and the STP.

Valid Entries: 1 - 511

Data Rules:

If no value is entered in ALT1 ROUTE, ALT2 ROUTE must also be blank.

If ALT1 ROUTE is entered, it must be different than PRI ROUTE. If ALT2 ROUTE is entered, it must be different than PRI ROUTE and ALT1 ROUTE.

#### **2.8 ALT2 ROUTE**

Description: The ALT2 ROUTE field specifies the link set to be used as the second alternate route between the 5ESS Switch and the STP.

Valid Entries: 1 - 511

### ***INSERT ONLY***

The following field (Section 2.9 ) is used to facilitate conversion to FPCR (Full Point Code Routing).

## 2.9 LAST MEMBER

Description: The LAST MEMBER field specifies the upper limit member number to be inserted when the conversion from cluster routing to member (full point code) routing is done on multiple sequential members in the same cluster. In the INSERT operation, the MEMBER field defines the lower limit member number.

Valid Entries: 1 - 255

Data Rules:

If LAST MEMBER is entered, the database operation must be "I", and LAST MEMBER must be greater than MEMBER.

---

```

                                MEMBER ROUTING DATA

*1. NID                001                INSERT ONLY
*2. CLUSTER            000                8. LAST MEMBER ____
*3. MEMBER              023
    ROUTING FLAG SMEMBER
#5. PRI ROUTE          15

    A/E-LINK
6. ALT1 ROUTE         ____
7. ALT2 ROUTE         ____

```

---

**Figure 1 SAMPLE MEMBER ROUTING DATA VIEW 5E9(1) AND LATER SOFTWARE RELEASES**

**SEC. 3: MISCELLANEOUS RECENT CHANGE VIEWS**

## SEC. 3A: CCS OFFICE PARAMETERS (VIEW 8.15) - RC\_CPARM

### 1. GENERAL

This view is used to set several SS7 (Signaling System 7) signaling and signaling platform related parameters to determine whether or not certain SS7 signaling platform functions are available in the office.

### 2. FORM ENTRIES

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

#### 2.2 \* OFFICE ID

Description: Enter the office identifier.

Required Field.

Valid Entries: 1 - 8 alphanumeric characters

#### 2.3 CNI EQUIP

Description: Is CNI equipped on the switch?

Default: N

Valid Entries: Y, N

Data Rules:

A "Y" must be entered in this field when any of the following fields have a value of "Y" entered: ACTION POINT, ACT PT SDN, DLN EQUIP and/or SSP.

#### 2.4 DLN EQUIP

Description: Is Direct Link Node equipped on the CNI Ring?

• **WARNING:** The office must have a DLN installed and properly grown before a "Y" can be entered in this field.

Default: N

Valid Entries: Y, N

Data Rules:

If "Y" is entered in this field, the CNI EQUIP field must have a value of "Y" entered.

#### 2.5 DS SPEED

Description: This field indicates the Direct Signaling Link Speed. For LEC offices, a value of 48 is normally used.

• **NOTE:** 560 should be assigned for high speed link nodes used in switch owner networks and for high speed link nodes used solely for credit card checking in LEC offices. Otherwise, the value 48 should be used.

Default: 48

Valid Entries: 48 or 560

## 2.6 ACT PT SDN

Description: Does this office serve as an ACP (Action Point) for the SDN (Software Defined Network)?

- **NOTE:** All SDN ACP offices must be equipped with a CNI (Common Network Interface) to provide CCS (Common Channel Signaling) transport.

Default: N

Valid Entries: Y, N

Data Rules:

Neither ACT PT SDN nor SSP can be set to "Y".

A value of "Y" must be entered in the CNI EQUIP field when ACT PT SDN has a value of "Y".

## 2.7 SSP

Description: Does the switch provide the NS800 feature?

Default: N

Valid Entries: Y, N

Data Rules:

Neither ACT PT SDN nor SSP can be set to "Y".

A value of "Y" must be entered in the CNI EQUIP field when SSP has a value of "Y".

If this field is "Y", the LATA field must be entered.

## 2.8 LATA

Description: This field indicates the switch's LATA.

Valid Entries: 100 - 999

Data Rules:

If the SSP field has a value of "Y", this field must be entered.

## PVN

The name of this field group was changed to ADV SVC PLATFORM in 5E8. This name applies to 5E7 and earlier. See ADV SVC PLATFORM for usage information.

### **ADV SVC PLATFORM**

The following field is used to define the ASP (Advance Service Platform) parameters. (This field group was called PVN for 5E7 and earlier.)

## 2.9 PVN RESP

Description: The name of this field was changed to ASP RESP in 5E8. This field name applies to 5E7 and earlier. See ASP RESP for usage information.

## 2.10 ASP RESP

Description: This is the timer that the Advanced Services Platform uses to wait for a response from the SCP (Switching Control Point) database. This timer is specified in seconds. (This field was called PVN RESP for 5E7 and earlier.)

Software Release: 5E6 and later

Default: 3

Valid Entries: 1 - 5 (seconds)

## *CCIS6, ISUP, TUP*

The following fields (Section 2.11 - Section 2.19 ) are used to define CCIS6, ISUP and TUP parameters.

## 2.11 ADDR COMP

Description: This field indicates how long to wait for the CCS Address Complete Message.

Default: 25

Valid Entries: 20 - 30 (seconds)

## 2.12 ANSWER

Description: This field indicates how long to wait for the CCS Answer Message.

Default: 0

Valid Entries: 0, 2, 3 or 4 (minutes)

## 2.13 COT

Description: This field indicates how long to wait for the CCS Continuity message.

Default: 12

Valid Entries: 10 - 15 (seconds)

## 2.14 RLS GRD

Description: This field indicates how long to wait for the CCS Release Guard Message (CCIS6/TUP7 protocols) or for the CCS Release Complete after sending the CCS Released Message (ISUP only).

Default: 10

Valid Entries: 4 - 15 (seconds)

## 2.15 TRD

Description: This field indicates how long to wait for for possible CCS reanswer (timed release disconnect) after a CCS clearback is received.

Default: 12

Valid Entries: 4 - 15 (seconds)

## 2.16 TRK QRY AU

Description: This field indicates the value used for the cyclic timer which determines the time between cycles of the CCS Trunk Query interoffice audit.

Default: 60

Valid Entries: 20 - 20000 (seconds)

### 2.17 COT RETST

Description: This field indicates how long to wait for the Repeated CCS Continuity Test.

Default: 120

Valid Entries: 60 - 180 (seconds)

### 2.18 RSC SHORT

Description: This field indicates the time interval to wait before resending a CCS Reset Circuit Signal when failing to receive the acknowledgement in response to the initial CCS Reset Circuit Signal sent.

Default: 10

Valid Entries: 4 - 15 (seconds)

### 2.19 RSC LONG

Description: This field indicates the time interval to wait before resending a CCS Reset Circuit Signal when failing to receive an acknowledgement in response to the initial CCS Reset Circuit Signals sent at intervals defined by this parameter. If an acknowledgement for the signal is not received within the RSC LONG timer interval, the sending of the Reset Circuit Signal will continue at the RSC LONG time interval until maintenance intervention occurs.

Default: 180

Valid Entries: 120 - 1800 (seconds)

### ***CCIS6 ONLY***

The following field applies to CCIS6 transmission only.

### 2.20 BAND AU

Description: This field indicates the value used for the Cyclic Timer which determines the time between cycles of the audit that checks this office's band status data against the network's band status data.

Default: 5

Valid Entries: 1 - 1440 (minutes)

### ***ISUP, TUP ONLY***

The following fields (Section 2.21 - Section 2.26 ) apply to ISUP and TUP only.

### 2.21 DIGIT

Description: This field indicates how long to wait for a CCS Subsequent Address Message.

Default: 4

Valid Entries: 3 - 5 (seconds)

### 2.22 BLO RSND

Description: This field indicates the time interval to wait before resending a CCS Blocking Signal (TUP/ISUP protocols) when failing to receive the acknowledgement in response to the initial CCS Blocking Signal sent.

Default: 10

Valid Entries: 4 - 15 (seconds)

### 2.23 UBL RSND

Description: This field indicates the time interval to wait before resending a CCS Unblocking Signal (TUP/ISUP protocols) when failing to receive the acknowledgement in response to the initial CCS Unblocking Signal sent.

Default: 10

Valid Entries: 4 - 15 (seconds)

### 2.24 COT WAIT

Description: This field indicates the time between the initial CCS Continuity Test failure and the first retry.

Default: 5

Valid Entries: 4 - 15 (seconds)

### 2.25 GBLO RSND

Description: This field indicates the time interval to wait before resending a CCS Maintenance/Hardware Group Blocking Message (TUP/ISUP protocols) when failing to receive the appropriate acknowledgement in response to the initial CCS Maintenance/Hardware Group Blocking Message sent.

Default: 10

Valid Entries: 4 - 15 (seconds)

### 2.26 GUBL RSND

Description: This field indicates the time interval to wait before resending a CCS Maintenance/Hardware Group Unblocking Message (TUP/ISUP protocols) when failing to receive the appropriate acknowledgement in response to the initial CCS Maintenance/ Hardware Group Unblocking Message sent.

Default: 10

Valid Entries: 4 - 15 (seconds)

### *ISUP ONLY*

The following fields (Section 2.27 - Section 2.34 ) apply to ISUP only

### 2.27 RLS COMP

Description: This field indicates how long to wait for the CCS Release Complete Message after sending the Release Message. This is a timer for the overall release sequence for ISUP7.

Default: 60

Valid Entries: 45 - 75 (seconds)

### 2.28 CRA TIMER

Description: When the OTO (Originating Toll Office) receives CRM (Circuit Reservation Message) from the OAT (Originating Access Tandem), it sends a CRA (Circuit Reservation Acknowledgement) message back to the OAT at which point this timer is set at the OTO. This timer will indicate the elapsed time to wait before an IAM (Initial Address Message) is received from the OTO.

Default: 25

Valid Entries: 20 - 25 (seconds)

### 2.29 EXM D TIMER

Description: This timer is set by the OAT (Originating Access Tandem) after it sends the IAM (Initial Address Message) to the OTO (Originating Toll Office). The OAT uses this value to provide a delay to ensure that glare, blocking, etc., is not encountered on the outgoing circuit to an OTO. When the timer expires, the OAT sends an EXM (Exit Message) to the EO (End Office).

Default: 300

Valid Entries: 100 - 1200, in intervals of 100 (ms)

### 2.30 GRS RSND

Description: The circuit group reset acknowledge timer specifies the ISUP group reset message response timer value. This timer is initiated when an ISUP GRS message is sent, and it is canceled when a circuit GRA (group reset acknowledgement) is received from all members specified in the GRS message.

Software Release: 5E9(1) and later

Required Field.

Default: 10

Valid Entries: 4 - 15 (seconds)

### 2.31 BUSY ANNC

Description: Will a busy tone be sent to the originating exchange when the called party is busy and the call route consists of ISUP trunks interworked to other signal protocol trunks? If BUSY ANNC is "Y", a busy tone will be provided; if "N", a Release Message will be sent.

Software Release: 5E7 and later

Default: N

Valid Entries: Y, N

### 2.32 LEC ANNC

Description: Will a tone/announcement be provided to the previous exchange when a failure occurs on an ISUP trunk in the LEC network? This only applies to non-ISDN access calls that have used ISUP trunks all the way. "Y" indicates a tone/announcement will be provided; "N" indicates that a Release Message will be sent to the preceding exchange.

Software Release: 5E7 and later

Default: N

Valid Entries: Y, N

### 2.33 LEC IW REL

Description: Will an ISUP Local Exchange Carrier Interworking Release message be provided to the previous exchange when a failure occurs on an ISUP trunk in the LEC network? This only applies to non-ISDN access calls that have not used ISUP trunks exclusively over the full call completion path.

Software Release: 5E7 and later

Default: N

Valid Entries: Y, N

### 2.34 RCD 3PT1 ITC

Description: This Recode 3.1 kHz Information Transfer Capability field is used to override the information transfer capability of an outgoing ISUP call only if all the following conditions are met:

- The call has an Information Transfer capability of 3.1 kHz audio;
- The call will be routed over an ISUP trunk;
- The office is a local tandem that received the call on an inband signaling speech trunk, or the office is an originating end office and the originator is non-ISDN; and
- The RCD 3PT1 ITC field on the trunk group view (5.1) has been left blank.

Software Release: 5E8 and later

Required Field.

Default: SPEECH

Valid Entries:

Valid RCD 3PT1 ITC Entries	
Entry	Definition
SPEECH	Recode to speech.
3PT1KHZ	Use 3.1 kHz audio without modification.

### ***CCIS6 AND TUP ONLY***

The following field applies to CCIS6 and TUP only.

#### **2.35 CLF**

Description: This field indicates how long to wait for the CCS Clear Forward message after sending a Backward Fail Message.

Default: 10

Valid Entries: 4 - 15 (seconds)

### ***LEASED NETWORK***

The following fields (Section 2.36 - Section 2.39) are available with 5E6 and later Software Releases. They pertain to leased network parameters.

#### **2.36 TIME OUT**

Description: This field indicates how long to wait for the TCAP (Transaction Capability Application Part) responded messages from the LN (Leased Network) NCP (Network Control Point). TCAP response message time out.

Default: 4

Valid Entries: 2 - 6 (seconds)

#### **2.37 GLOB TITLE**

Description: This field contains the 6-digit global title, which is inserted into the CCS7 (Common Channel Signaling System Number 7) SCCP (Signaling Connection Control Part) header and translated by the STP (Signaling Transfer Point) into a DPC (Destination Point Code) in order to route the TCAP (Transaction Capability Application Part) message to the LN (Leased Network) NCP (Network Control Point).

Default: 0

Valid Entries: 0 - 999999

### 2.38 DAS

Description: This field will be defined as the DAS to specify the digit tree to use for the vacant code screening for the LN (Leased Network) ACP (Action Point) calls.

Default: 0

Valid Entries:

For 5E14 and earlier: 0 - 99

For 5E15 and later: 0 - 254

### 2.39 ACTION POINT

Description: This field is used to indicate this office serves as an ACP (Action Point) for LN (Leased Networks).

Default: N

Valid Entries: Y, N

Data Rules:

If this field has a value of "Y", the CNI EQUIP field must have a value of "Y".

### *ISVM OTPION*

The following sets an ISVM (Inter-Switch Voice Messaging) option.

### 2.40 ISVM TCAP TIMER

Description: The ISVM (Inter-Switch Voice Messaging) TCAP (Transaction Capabilities Application Part) Timer is a global Common Channel Signaling office parameter that specifies the timeout value (in seconds) for TCAP MWI (Message Waiting Indicator) activate/deactivate requests. If the timeout value is set to 3 seconds, the activation or deactivation of an MWI will be done in that specified time.

Software Release: 5E7 and later

Default: 3

Valid Entries: 1 - 10 (seconds)

### *CCS FEATURES*

The following fields are used by the CCS(Common Channel Signaling) feature. They are available for both the CNI-based SS7 signaling platform and for the PSU-based SS7 signaling platform.

### 2.41 EXPANDED SLS

Description: Is the Expanded Signaling Link Selection feature activated? For more information on this secured feature, see Division 2, Section 4A175. This field on this form defines the feature only for the CNI signaling platform. For the PSU-based SS7 signaling platform, see Division 9, Section 10H.

Software Release: 5E11 and later

Default: N

Valid Entries: Y, N

Data Rules:

If EXPANDED SLS is "Y", SFID 175 must be activated on the SFSYS form (5713 Record).

## 2.42 IMPROVED SLT

Description: Is the Improved Signaling Test feature activated? For more information on this secured feature, see Division 2, Section 4A176. This field defines the feature for both CNI and PSU-based SS7 signaling platforms.

Software Release: 5E11 and later

Default: N

Valid Entries: Y, N

Data Rules:

If IMPROVED SLT is "Y", SFID 176 must be activated on the SFSYS form (5713 Record).

## 2.43 MTP NODE RESTART

Description: Is the MTP Node Restart feature activated? For more information on this secured feature, see Division 2, Section 4A177. This field defines the feature for both CNI and PSU-based SS7 signaling platforms.

Software Release: 5E11 and later

Default: N

Valid Entries: Y, N

Data Rules:

If MTP NODE RESTART is "Y", SFID 177 must be activated on the SFSYS form (5713 Record).

SCREEN 1 OF 2

### CCS OFFICE PARAMETERS

		CCIS6, ISUP, TUP	ISUP, TUP ONLY
*1. OFFICE ID	OFFICE1	9. ADDR COMP 25	19. DIGIT 4
2. CNI EQUIP	Y	10. ANSWER 0	20. BLO RSND 10
3. DLN EQUIP	N	11. COT 12	21. UBL RSND 10
4. DS SPEED	048	12. RLS GRD 10	22. COT WAIT 05
5. ACT PT SDN	N	13. TRD 12	23. GBLO RSND 10
6. SSP	N	14. TRK QRY AU 00060	24. GUBL RSND 10
7. LATA	000	15. COT RETST 120	
		16. RSC SHORT 10	
ADV SVC PLATFORM		17. RSC LONG 0180	
8. ASP RESP	3	CCIS6 ONLY	
		18. BAND AU 0005	

SCREEN 2 OF 2

### CCS OFFICE PARAMETERS

ISUP ONLY		LEASED NETWORK	
25. RLS COMP	60	34. TIME OUT	4
26. CRA TIMER	25	35. GLBL TITLE	000000
27. EXM D TIMER	0300	36. DAS	00
28. GRS RSND	10	37. ACTION POINT	N
29. BUSY ANNC	N		
30. LEC ANNC	N	ISVM OPTION	
31. LEC IW REL	N	38. ISVM TCAP TIMER	3
32. RCD 3PT1 ITC SPEECH			
CCIS6 AND TUP ONLY			
33. CLF	10		

---

**Figure 1 SAMPLE CCS OFFICE PARAMETERS VIEW 5E9(1)-5E10 SOFTWARE RELEASES**


---

SCREEN 1 OF 2

## CCS OFFICE PARAMETERS

		CCIS6, ISUP, TUP	ISUP, TUP ONLY		
*1. OFFICE ID	OFFICE1	9. ADDR COMP	25	19. DIGIT	4
2. CNI EQUIP	Y	10. ANSWER	0	20. BLO RSND	10
3. DLN EQUIP	N	11. COT	12	21. UBL RSND	10
4. DS SPEED	048	12. RLS GRD	10	22. COT WAIT	05
5. ACT PT SDN	N	13. TRD	12	23. GBLO RSND	10
6. SSP	N	14. TRK QRY AU	00060	24. GUBL RSND	10
7. LATA	000	15. COT RETST	120		
		16. RSC SHORT	10		
ADV SVC PLATFORM		17. RSC LONG	0180		
8. ASP RESP	3	CCIS6 ONLY			
		18. BAND AU	0005		

SCREEN 2 OF 2

## CCS OFFICE PARAMETERS

ISUP ONLY		LEASED NETWORK	CCS FEATURES	
25. RLS COMP	60	34. TIME OUT	39. EXPANDED SLS	
—				
26. CRA TIMER	25	35. GLBL TITLE	000000	40. IMPROVED SLT
—				
27. EXM D TIMER	0300	36. DAS	00	41. MTP NODE RESTART
—				
28. GRS RSND	10	37. ACTION POINT	N	
29. BUSY ANNC	N			
30. LEC ANNC	N	ISVM OPTION		
31. LEC IW REL	N	38. ISVM TCAP TIMER	3	
32. RCD 3PT1 ITC SPEECH				

CCIS6 AND TUP ONLY  
33. CLF                    10

---

**Figure 2 SAMPLE CCS OFFICE PARAMETERS VIEW 5E11 AND LATER SOFTWARE RELEASES**

**SEC. 10: COMMON CHANNEL SIGNALING FORMS**

## **SEC. 10A: 6001 RECORD LEVEL 3 TIMER PARAMETER- CC7PR**

### **1. GENERAL**

The 6001 Record is available with 5E11 and later Software Releases and is used to specify and update the CCITT7 office parameters and MTP Level 3 timers. This form was added to support the VCDX SS7 on the PSU Feature. For more information on this feature, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.2.

### **2. FORM ENTRIES - 6001-1 RECORD**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: Enter the Global switching module used to specify the SM that supports the signaling system.

Data Rules:

When GSM is entered, it must be defined on the CCGSM form (6008 Record).

Required Field.

Valid Entries: 1 - 192

#### **2.3 PROTOCOL**

Description: This field specifies protocol type of combined link set. This is a no change field.

Required Field.

Default: C7NATL

Valid Entries: C7NATL

#### **2.4 LINK AFFECT**

Description: Enter the the maximum number of attempts to uninhibit or inhibit a link when an acknowledgement is not received.

Required Field.

Default: 2

Valid Entries: 1 - 6

#### **2.5 CONGESTION**

Description: Enter the congestion threshold level which specifies the number of messages received by a DPC (Destination Point Code) before a transfer control message is sent.

Required Field.  
Valid Entries: 6 - 10

## 2.6 CO DELAY

Description: Enter the changeover delay which specifies the delay interval used to avoid message mis-sequencing during changeover (to be specified in milliseconds).

Required Field.  
Default: 500 (milliseconds)  
Valid Entries: 500 -1200

## 2.7 CO ACK

Description: Enter the changeover acknowledgement. This field is used to specify the maximum wait time for the changeover acknowledgement (to be specified in milliseconds).

Required Field.  
Default: 700 (milliseconds)  
Valid Entries: 700 - 2000

## 2.8 CB DELAY

Description: Enter the changeback delay which specifies the delay to avoid message mis-sequencing during changeback. The result of changeback is that signaling traffic is returned from an alternate link to a normal link (to be specified in milliseconds).

Required Field.  
Default: 500 (milliseconds)  
Valid Entries: 500 - 1200

## 2.9 CB ACK1

Description: Enter the maximum wait time for the changeback acknowledgement - first attempt (to be specified in milliseconds).

Required Field.  
Default: 500 (milliseconds)  
Valid Entries: 500 - 1200

## 2.10 CB ACK2

Description: Enter the maximum wait time for the changeback acknowledgement - second attempt (to be specified in milliseconds).

Required Field.  
Default: 500 (milliseconds)  
Valid Entries: 500 - 1200

## 2.11 CRR DELAY

Description: Enter the controlled rerouting delay which is the delay to avoid message mis-sequencing during controlled rerouting (to be specified in milliseconds).

Required Field.  
Default: 500 (milliseconds)  
Valid Entries: 500 - 1200

## 2.12 TRANSFER

Description: Enter the maximum wait time "transfer prohibited" can be inhibited (to be specified in milliseconds).

Required Field.  
Default: 1000 (milliseconds)  
Valid Entries: 800 - 1200

## 2.13 SRT WAIT

Description: Enter the amount of time to wait before repeating the signaling route test (to be specified in milliseconds).

Required Field.  
Default: 30000 (milliseconds)  
Valid Entries: 30000 - 60000

## 2.14 UA WAIT

Description: Enter the maximum wait for the uninhibit acknowledgement (to be specified in milliseconds).

Required Field.  
Default: 1000 (milliseconds)  
Valid Entries: 800 - 1500

## 2.15 MSU WAIT

Description: Enter the maximum wait for MSU (Message Signal Unit) during "forced uninhibit" (to be specified in milliseconds).

Required Field.  
Default: 1000 (milliseconds)  
Valid Entries: 800 - 1500

## 2.16 INHIBIT ACK

Description: Enter the maximum wait for an inhibit acknowledgement (to be specified in milliseconds).

Required Field.  
Default: 3000 (milliseconds)  
Valid Entries: 2000 - 3000

## 2.17 RSC TEST

Description: Enter the time for route set congestion (to be specified in milliseconds).

Required Field.  
Default: 3000 (milliseconds)

Valid Entries: 2000 - 3000

## 2.18 RSC UPDATE

Description: Enter the route set congestion update time (to be specified in milliseconds).

Required Field.

Default: 1400 (milliseconds)

Valid Entries: 1400 - 2000

## 2.19 LINK RESTART

Description: Enter the maximum wait for a link restart (to be specified in milliseconds).

Required Field.

Default: 1000 (milliseconds)

Valid Entries: 800 - 1500

## 2.20 LOCAL INHIBIT

Description: Enter the maximum wait time for local inhibit test (to be specified in milliseconds).

Required Field.

Default: 120000 (milliseconds)

Valid Entries: 90000 - 120000

## 2.21 REMOTE INHIBIT

Description: Enter the maximum wait for remote inhibit test (to be specified in milliseconds).

Required Field.

Default: 120000 (milliseconds)

Valid Entries: 90000 - 120000

## 3. FORM ENTRIES - 6001-2 RECORD

### 3.1 BASE AND CONTROL, ESS UNIT

### 3.2 STOP SEND WAIT

Description: Enter the stop send wait timer. This field is used to allow TDTP (traffic diversion terminal process) to die if "stop send" signal is not received (to be specified in milliseconds).

Required Field.

Default: 1000 (milliseconds)

Valid Entries: 800 - 1200

### 3.3 SLS DELAY

Description: Enter the delay time to avoid message mis-sequencing during SLS (Signaling Link Selection) correction (specified in milliseconds).

Required Field.

Default: 1000 (milliseconds)  
Valid Entries: 800 - 1200

### 3.4 BSNT WAIT

Description: Enter the maximum wait time for BSN (Backward Sequence Number) to arrive during changeover (specified in milliseconds).

Required Field.  
Default: 200 (milliseconds)  
Valid Entries: 160 - 240

### 3.5 LEVEL 2 WAIT

Description: Enter the maximum wait time for a message from CCS (Common Channel Signaling) level 2 which indicates that previous unsent messages are now being sent to SMH (Signaling Message Handler) (specified in milliseconds).

Required Field.  
Default: 300 (milliseconds)  
Valid Entries: 240 - 360

### 3.6 RC TIME

Description: Enter the maximum time a destination will be marked "remotely congested", after receiving a transfer control message. If the destination stays congested, another transfer control message must be received before the timer expires (specified in milliseconds). Upon receiving a message, the timer is reset to 0.

Required Field.  
Default: 8000 (milliseconds)  
Valid Entries: 2000 - 24000

### 3.7 SMH WAIT

Description: Enter the wait time before sending the SMH (Signaling Message Handler) the last sequence number (specified in milliseconds).

Required Field.  
Default: 900000 (milliseconds)  
Valid Entries: 780000 - 1020000

### 3.8 ACK LINK TEST

Description: Enter the maximum wait time for the signaling data link test acknowledgement (specified in milliseconds).

Required Field.  
Default: 4000 (milliseconds)  
Valid Entries: 4000 - 12000

### 3.9 DELAY LNK TST

Description: Enter the signaling link test delay timer (specified in milliseconds).

Required Field.

Default: 90000 (milliseconds)

Valid Entries: 30000 - 90000

### **3.10 FALSE LINK CONG**

Description: The FALSE LINK CONG timer is used to specify the time used to detect a link in false link congestion.

Required Field.

Default: 30 (seconds)

Valid Entries: 10 - 120 (seconds)

### **3.11 FALSE LINK REF**

Description: This field is used to specify the link alignment procedures start time.

Required Field.

Default: 400 (seconds)

Valid Entries: 180 - 600 (seconds)

### ***MTP RESTART***

The following fields (Section 3.12 - Section 3.15 ) are associated with the Message Transfer Protocol Node Restart feature. For more information about this feature, see Division 2, Section 4a177.

### **3.12 ANSI TRA WAIT**

Description: Enter the Traffic Restart Allowed timer; it is used by ANSI (American National Standards Institute) protocol only. This field specifies the timer at the signaling point that is adjacent to the restarting signaling point, waiting for TRA (Traffic Restart Allowed) messages.

Software Release: 5E14 and later

Required Field.

Default: 32 (seconds)

Valid Entries: 30 - 60

### **3.13 ANSI TRW WAIT**

Description: Enter the Traffic Restart Waiting timer; it is used by ANSI protocol only. This field specifies the timer at the signaling point that is adjacent to the restarting signaling point, waiting for TRW (Traffic Restart Wait) messages.

Software Release: 5E14 and later

Required Field.

Default: 5 (seconds)

Valid Entries: 3 - 60

### **3.14 ANSI TRA ANSWER**

Description: Enter the TRA Sent timer; it is used by ANSI protocol only. This field specifies that the timer has

started when a TRA is sent in response to unexpected TRA or TRW messages.

Software Release: 5E14 and later

Required Field.

Default: 62 (seconds)

Valid Entries: 30 - 90

### 3.15 MTP STPO

Description: Enable MTP STPO (Message Transfer Part Short Term Processor Outage) procedures? This field is used to determine whether or not the MTP short term processor outage procedures are enabled for a particular GSM (Global Switching Module).

Software Release: 5E14 and later

Required Field.

Default: Y

Valid Entries: Y, N

### 3.16 X-LIST

Description: The field designates the duration a signaling point (cluster member) can remain on a dynamic exception list for a cluster route.

Required Field.

Default: 60 (seconds)

Valid Entries: 20 - 1440 by 5

### 3.17 LOW PRI SRST

Description: This field specifies the timer for the SRST (Signaling Route Set Test) message transmission interval for routes that are alternate or of a lower priority.

Required Field.

Default: 600 (seconds)

Valid Entries: 0 - 864000 by 30

---

```

cc7pr                               5ESS Switch           _
(6001)                             OFFICE DATA ADMINISTRATION
                                   CCITT7 PARAMETER VIEW

*1. GSM          _____  13. UA WAIT          1000      25. RC TIME          8000
   PROTOCOL      C7NATL      14. MSU WAIT          1000      26. SMH WAIT          900000
#3. LINK AFFECT  2          15. INHIBIT ACK         3000      27. ACK LINK TEST    4000
#4. CONGESTION  _____  16. RSC TEST          3000      28. DELAY LNK TST    90000
  5. CO DELAY    500         17. RSC UPDATE        1400
  6. CO ACK      700         18. LINK RESTART      1000
  7. CB DELAY    500         19. LOCAL INHIBIT    120000
  8. CB ACK1     500         20. REMOTE INHIBIT   120000
  9. CB ACK2     500         21. STOP SEND WAIT   1000
 10. CRR DELAY   500         22. SLS DELAY         1000

```

11. TRANSFER	1000	23. BSNT WAIT	200
12. SRT WAIT	30000	24. LEVEL 2 WAIT	300

---

**Figure 1 SAMPLE CC7PR FORM 5E11 AND 5E12 SOFTWARE RELEASES**


---

```

cc7pr                                5ESS Switch                -
OFFICE DATA ADMINISTRATION
(6001-1/2)                           LEVEL 3 TIMER PARAMETER

*1. GSM          ___      13. UA WAIT          1000    25. RC TIME          8000
   PROTOCOL      C7NATL  14. MSU WAIT          1000    26. SMH WAIT         900000
  3. LINK AFFECT 2      15. INHIBIT ACK       3000    27. ACK LINK TEST    4000
#4. CONGESTION  ___      16. RSC TEST           3000    28. DELAY LNK TST    90000
  5. CO DELAY     500    17. RSC UPDATE         1400    29. FALSE LINK CONG  30
  6. CO ACK       700    18. LINK RESTART       1000    30. FAILED LINK REF  400
  7. CB DELAY     500    19. LOCAL INHIBIT      120000
  8. CB ACK1      500    20. REMOTE INHIBIT     120000
  9. CB ACK2      500    21. STOP SEND WAIT     1000
10. CRR DELAY    500    22. SLS DELAY           1000
11. TRANSFER     1000    23. BSNT WAIT           200
12. SRT WAIT     30000   24. LEVEL 2 WAIT        300

```

---

**Figure 2 SAMPLE CC7PR FORM 5E13 SOFTWARE RELEASE**


---

```

cc7pr                                5ESS Switch                -
SCREEN 1 OF 2                        OFFICE DATA ADMINISTRATION
(6001-1/2)                           LEVEL 3 TIMER PARAMETER

*1. GSM          011     13. UA WAIT          1000    25. RC TIME          8000
   PROTOCOL      C7NATL  14. MSU WAIT          1000    26. SMH WAIT         900000
  3. LINK AFFECT 2      15. INHIBIT ACK       3000    27. ACK LINK TEST    4000
#4. CONGESTION  6       16. RSC TEST           3000    28. DELAY LNK TST    90000
  5. CO DELAY     500    17. RSC UPDATE         1400    29. FALSE LINK CONG  30
  6. CO ACK       700    18. LINK RESTART       1000    30. FAILED LINK REF  400
  7. CB DELAY     500    19. LOCAL INHIBIT      120000
  8. CB ACK1      500    20. REMOTE INHIBIT     120000
  9. CB ACK2      500    21. STOP SEND WAIT     1000    31. ANSI TRA WAIT    32
10. CRR DELAY    500    22. SLS DELAY           1000    32. ANSI TRW WAIT    5
11. TRANSFER     1000    23. BSNT WAIT           200     33. ANSI TRA ANSWER  62
12. SRT WAIT     30000   24. LEVEL 2 WAIT        300     34. MTP STPO         Y

```

---

```

cc7pr                                5ESS Switch                -
SCREEN 2 OF 2                        OFFICE DATA ADMINISTRATION
(6001-1/2)                           LEVEL 3 TIMER PARAMETER

```

35. X-LIST           60  
36. LOW PRI SRST 600

---

**Figure 3 SAMPLE CC7PR FORM 5E14 AND LATER SOFTWARE RELEASES**

## **SEC. 10B: 6002 RECORD DATA LINK RATE TIMER PARAMETERS FORM - CCPDL**

### **1. GENERAL**

The 6002 Record is available with 5E11 and later Software Releases and is used to specify and update the CCITT7 MTP (Message Transfer Part) Level 2 Data Link Rate timers. This form supports the VCDX CCS7 on the PSU feature. For more information on this feature, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.3.

### **2. FORM ENTRIES - 6002 RECORD**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* DATA LINK RATE**

Description: Enter the Data Link Rate. This field specifies the transmission rate of the data link.

Required Field.

Valid Entries: 56KB or 64KB

#### **2.3 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

When is GSM entered on this form, it must be defined on the CCGSM form (6008 Record).

#### **2.4 ALIGNED READY**

Description: Enter the MTP level 2 Aligned Ready Wait Timer. This field is used to specify the maximum time to wait (in milliseconds) for the other side of the connection to align when this side of the connection is already aligned.

Software Release: 5E11 and later

Required Field.

Default: 13000 (milliseconds)

Valid Entries: 13000 - 300000

#### **2.5 NOT ALIGNED**

Description: Enter the MTP level 2 Not Aligned Ready Wait Timer. This field specifies the timer used during the Not Aligned state of the initial alignment control.

Required Field.  
Default: 115000 (milliseconds)  
Valid Entries: 5000 - 150000

## 2.6 ALIGNED

Description: Enter the MTP level 2 Aligned Wait Timer used during the Aligned state of the initial alignment control.

Required Field.  
Default: 11500 (milliseconds)  
Valid Entries: 125 - 50000

## 2.7 EMERG PROVING

Description: Enter the MTP level 2 Emergency Proving Timer used during the Emergency Proving state.

Required Field.  
Default: 600 (milliseconds)  
Valid Entries: 400 - 3000

## 2.8 NORM PROVING

Description: Enter the MTP level 2 Normal Proving Timer used during the Normal Proving state when there is no emergency conditions.

Required Field.  
Default: 2300 (milliseconds)  
Valid Entries: 2300 - 9500

## 2.9 SENDING SIB

Description: Enter the Status Indication Busy Timer used when the receiving end of a signaling data link detects a congestion situation. This receiving end periodically returns a status indication "busy" to the remote transmitting end of the link. The timer between two of these indications is specified by this timer.

Required Field.  
Default: 100 (milliseconds)  
Valid Entries: 80 - 250

## 2.10 REMOTE CONGESTION

Description: Enter the MTP level 2 Remote Congestion Timer specifies the maximum wait time to wait for a remote congestion situation to clear.

Required Field.  
Default: 3000 (milliseconds)  
Valid Entries: 3000 - 10000

## 2.11 EXCESS DELAY ACK

Description: Enter the level 3 Excess Delay Acknowledgement Timer. This timer specifies the maximum time to wait for the acknowledgement of a transmitted MSU (Message Signal Unit).

Required Field.  
Default: 500 (milliseconds)  
Valid Entries: 500 - 2000

---

```
ccpdl                                5ESS Switch      _
                                OFFICE DATA ADMINISTRATION
(6002)                            DATA LINK RATE TIMER PARAMETERS

*1. DATA LINK RATE      _____
*2. GSM                  _____
3. ALIGNED READY        13000
4. NOT ALIGNED          11500
5. ALIGNED              11500
6. EMERG PROVING        600
7. NORM PROVING         2300
8. SENDING SIB          100
9. REMOTE CONGESTION    3000
10. EXCESS DELAY ACK    500
```

---

**Figure 1 SAMPLE CCPDL FORM 5E11 AND LATER SOFTWARE RELEASES**

## SEC. 10C: 6003 RECORD SIGNALING LINK SET FORM - LNKSET

### 1. GENERAL

The 6003 Record is available with 5E11 and later Software Releases and is used to define CCS7 signaling link sets. For more information on this feature, see Division 2, Section 7L and Division 2, Section 9L.

#### 1.1 Recent Change View

The corresponding Recent Change View for this form is 16.5.

### 2. FORM ENTRIES - 6003 RECORD

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

#### 2.2 \* LINK SET

Description: Enter the link set number.

Required Field.

Valid Entries: 1 - 255

#### 2.3 \* GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

#### 2.4 APC

Description: Enter the the 9-digit network indicator which specifies the Adjacent Point Code number to which this link is connected in the following format.

For the 5E11 Software Release, APCs can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record).

Required Field.

**Valid ANSI APC Entries - 5E11 and later**

Definition	Format	Valid Entries
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

**Valid AT&T APC Entries - 5E12 and later**

Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7

Member	XXX	000 - 255
--------	-----	-----------

Data Rules:

For 5E14 and later, APC cannot be equal to the ALIAS PC on the CCGSM form for the same GSM.

## 2.5 PHYSICAL LINKS

Description: This field indicates the number of SS7 links in a link set and is a no change field.

Valid Entries: 0 - 16

## 2.6 CLS COUNT

Description: This field indicates the number of combined link sets of which the link set is a member and is a no change field.

Valid Entries: 0 - 1

## 2.7 LINK TYPE

Description: This field indicates the type of link used for signaling between a 5ESS Switch and an adjacent signaling point. A-links are links used between a 5ESS Switch and a local STP (Signal Transfer Point). E-links are links used between a 5ESS Switch and a remote STP. F-links are links used between a 5ESS Switch and another signaling endpoint (i.e., 5ESS Switch and/or a database).

Software Release: 5E14 and later

Required Field.

Default: A

Valid Entries:

Valid Entries-5E14 and later	
Entry	Definition
A	A-Link
E	E-Link
F	F-Link

## 2.8 LINK SET NAME

Description: This field is used as the alphanumeric Identifier of the link set. This field supports the SAAL SS7 High Speed Signaling Links feature. For more information on this feature see Division 2, Section 4A670.

Software Release: 5E16 and later

Valid Entries: 1 to 12 alphanumeric characters

## 2.9 SAAL HSL COUNT

Description: This is a Display Only field that displays the number of SAAL (Signaling ATM (Automatic Transfer Mode) Adaptation Layer) High Speed SS7 (Signaling System 7) links associated with this Link Set. This field also supports the SAAL SS7 High Speed Signaling Links feature.

Software Release: 5E16 and later

Valid Entries: 0 - 16

## 2.10 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

```
lnkset                5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(6003)                SIGNALING LINK SET

*1. LINK SET         ____
*2. GSM              ____
#3. APC              _____
    PHYSICAL LINKS   _
    CLS COUNT        _
```

---

**Figure 1 SAMPLE LNKSET FORM 5E11 - 5E13 SOFTWARE RELEASES**

---

```
lnkset                5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(6003)                SIGNALING LINK SET

*1. LINK SET         ____
*2. GSM              ____
#3. APC              _____
    PHYSICAL LINKS   _
    CLS COUNT        _
6. LINK TYPE        A
```

---

**Figure 2 SAMPLE LNKSET FORM 5E14 SOFTWARE RELEASE**

---

```
lnkset                5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(6003)                SIGNALING LINK SET

*1. LINK SET         ____
*2. GSM              ____
#3. APC              _____
    PHYSICAL LINKS   _
    CLS COUNT        _
6. LINK TYPE        A
```

7. CRIT IND N

---

**Figure 3 SAMPLE LNKSET FORM 5E15 SOFTWARE RELEASE**

---

```

lnkset                5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(6003)                SIGNALING LINK SET

*1. LINK SET         ____
*2. GSM              ____
#3. APC              _____
    PHYSICAL LINKS  ____
    CLS COUNT        _
6. LINK TYPE        A
7. CRIT IND         N
8. LINK SET NAME    _____
    SAAL HSL COUNT  ____

```

---

**Figure 4 SAMPLE LNKSET FORM 5E16 AND LATER SOFTWARE RELEASES**

## **SEC. 10D: 6004-1/2 RECORD SIGNALING LINK SET RECORD - CCLNK**

### **1. GENERAL**

The 6004-1/2 Records are available with the 5E11 Software Releases. CCLNK, the external link set member form, is used to define the CCS7 (Common Channel Signaling System No. 7) link sets and members. For more information on this feature, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.6.

### **2. FORM ENTRIES - 6004-1 RECORD**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* LINK SET**

Description: Enter the link set number.

Required Field.

Valid Entries: 1 - 255

Data Rules:

The ISCN must be a unique value within an SM. ISCNs cannot be duplicated on one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- IPDSL
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- PSULNK
- PSUPIPE
- RTERM
- TRUNK
- XAT

CCLNK and MDLNK forms can share an ISCN SHELF and CHANNEL GROUP on an SM. They cannot have an ISCN SHELF and CHANNEL GROUP which are mixed with Protocol Handler assignments from either of the following forms:

- AMLBDSL

DSL  
DSLAP  
DSLUSR  
IPDSL  
MISLINK  
ODBRES  
OSPSDSL  
PSISM  
PSULNK  
PSUPIPE  
QPHPIPE  
RTERM  
TRUNK  
XAT

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form (5742 Record) on the same SWITCHING MODULE and having a matching PSU SHELF.

### **2.3 \* MEMBER**

Description: Enter the member number.

Required Field.

Valid Entries: 0 - 15

### **2.4 \* GSM**

Description: Enter the Global SM number. GSM field is used to specify the global switching module that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

There can be, at most, 128 CCLNK forms entered with the same GSM.

When GSM, SHELF, CHANNEL GROUP combinations assigned on this form with corresponding SM, PSU, PSU SHELF and GRP combinations assigned on the PSUGP form, the PH TYPE on the PSUGP form must be "PH3" or "PH22".

For 5E14 and later:

When GSM matches a GSM on a CLU form, the PH TYPE on the PSUGP form must not be set to "PH3".

When GSM matches a GSM on a NID form, and PH TYPE on the PSUGP form must not be set to "PH3".

### **2.5 SLC**

Description: Enter the signaling link code. The signaling link code is part of the header of a signaling network management message. For 5E16(2) and later this is a Display Only field.

Required Field.

Valid Entries: 0 - 15

Data Rules:

SLCs assigned on the CCLNK form terminating to the same APC on the corresponding LNKSET form must be unique.

## 2.6 PRIORITY

Description: This field indicates the link priority within the link set. This is a no change field.

Default: 1

Valid Entries: 1

## 2.7 TRANSM TYPE

Description: Enter the transmission type. This field displays the transmission type for CCS message. This is a no change field.

Default: BASIC

Valid Entries:

Valid TRANSM TYPE Entries	
Entry	Definition
BASIC	Basic retransmission will retransmit only once.
CYCLIC	Cyclic retransmission will try to retransmit several times if necessary.

## 2.8 RATE

Description: Enter the data link rate. This field represents the transmission rate of data link.

Required Field.

Valid Entries: 56KB or 64KB

## 2.9 # OE

Description: Enter OE TYPE and number.

Required Field.

Valid OE TYPE Entries	
Entry	Definition
D	DEN (DLTU (Digital Line and Trunk Unit) Equipment Number).
N	NEN (DNU-S (Digital Network Unit - SONET) Equipment Number).
O	Software Release: 5E16(2) and later. OIUEN (Optical Interface Unit Equipment Number)

If OE TYPE is set to "D", this OE number consists of:

Valid OE Number Entries - TYPE D			
Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Line Trunk Unit	DLTU	X	0 - 5 (5E14 and earlier)

		XX	0 - 11 (5E15 and later)
Digital Facility Interface	DFI	XX	01 - 10
Digital Channel	DCHAN	XX	01 - 48

If OE TYPE is set to "N", this OE number consists of:

Valid OE Number Entries - Type N - 5E12 and earlier			
Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Networking Unit - SONET	DNU-S	X	0 - 7
Data Group	DG	X	0 - 1
Synchronous Transport Signal	STS	X	0 - 5
Virtual Tributary	VT	XX	01 - 28
Digital Signal Level 0	DS0	XX	01 - 24

Valid OE Number Entries - TYPE N - 5E13 and later			
Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
SONET Termination Equipment	STE	X	1-6
Synchronous Transport Signal	STS	X	1
Virtual Tributary Group	VTG	X	1-7
Virtual Tributary Member	VTM	X	1-4
Digital Signal Level 0	DS0	XX	01-24

When OE TYPE is "O", the OIU Equipment Number consists of:

OE NUMBER, TYPE "O" - (5E16 and later)			
Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
Protection Group	PG	X	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container Member	LVC MEM	X	1 - 4
Channel	CH	XX	01 - 24

Data Rules:

When CCLNK and XAT forms have an OE TYPE of "D" and a DEN specified, there must be corresponding DFIs or the DFIs that exist on the EQDUP form must have a FAC 0 specified.

For 5E12 and earlier, when CCLNK and XAT forms have an OE TYPE of "N" and a NEN is specified, there must be a corresponding EQVT form with VT EQSTAT and DS1S EQSTAT both set to "O". The associated EQVT form may be found by matching OE[1,3(SM)] with EQVT SM, OE[4(DNU-S)] with EQVT DNUS, OE[5(DATA GROUP)] with EQVT DATA GROUP, OE[6(STS)] with EQVT STS, and OE[7,8(VT)] with EQVT VT.

For 5E13 and later, when CCLNK and XAT forms have an OE TYPE of "N" and a NEN is specified, there must be a corresponding EQVT form with VT EQSTAT and DS1S EQSTAT both set to "O". The associated EQVT form may be found by matching OE[1,3(SM)] with EQVT SM, OE[4(DNU-S)] with EQVT DNUS, OE[5(DATA GROUP)] with EQVT DATA GROUP, OE[6(STE)] with EQVT STE, and OE[7(STS)] with EQVT STS, OE[8] with EQVT GROUP, and OE[9] with EQVT MEMBER.

For 5E15 and later, the SM number (first three digits of the OE) entered must be defined on the EQIM form

with CONFIGURATION set to "LOADED", "SM2000", "2KPPC", or "SIGNALING".

For 5E16(2) and later, when OE type is "O", OE must have a corresponding OIU SM, OIU, PROTECTION GRP, HVC, VT GROUP, and VT MEMBER defined on the EQLVC form (5764 Record).

## 2.10 TRANSRATE

Description: Enter the data link rate. This field represents the transmission rate of the data link (i.e., number of MSUs (Message Signal Unit) transmitted every 20 milliseconds). An entry of 0 denotes an unlimited rate.

Required Field.

Default: 0

Valid Entries: 0 - 8

## 2.11 # SHELF

Description: Enter the PSU (Packet Switching Unit) shelf on which the protocol handler is equipped.

Required Field.

Valid Entries: 0 - 4

## 2.12 # CHANNEL GROUP

Description: Enter the PH (Protocol Handler) channel group. This field specifies the logical shelf position of the PH.

Required Field.

Valid Entries: 0 - 15

## 2.13 # CH GP MEMBER

Description: Enter the channel group member.

Required Field.

Valid Entries: 0 - 3

## 3. FORM ENTRIES - 6004-2 RECORD

### 3.1 BASE AND CONTROL, ESS UNIT

### 3.2 H RET ONSET

Description: Enter the retransmission buffer onset (high level onset congestion threshold). When this threshold is reached, the buffer is marked as congested, and a message is sent to the STRM (Signaling Traffic Route Management) process. For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, high level congestion treatment is in effect.

Required Field.

Default: 80

Valid Entries: 1 - 100

Data Rules:

H RET ONSET must be greater than H RET ABATE.

### 3.3 H RET ABATE

Description: Enter the retransmission buffer abatement (high level abatement congestion threshold). When this threshold is reached, the buffer is marked as uncongested (if it was previously marked as congested), and a message is sent to the STRM process. This message indicates the current level of the signaling SDL (Signaling Data Link). For multiple congestion levels, when the retransmission buffer occupancy decreases below the value of this threshold, medium level congestion treatment is in effect.

Required Field.

Default: 65

Valid Entries: 1 - 100

Data Rules:

H RET ABATE must be greater than M RET ONSET.

### 3.4 H RET DISC

Description: Enter the retransmission buffer discard (high level congestion discard threshold). For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.

Default: 90

Valid Entries: 1 - 100

Data Rules:

H RET DISC must be greater than H RET ONSET.

### 3.5 H TRAN ONSET

Description: Enter the transmission buffer onset (high level onset congestion threshold). When congestion does occur, STRM is informed of the current congestion level of the SDL. For multiple congestion levels, when the transmission buffer occupancy exceeds the value of this threshold, high level congestion treatment is in effect.

Required Field.

Default: 80

Valid Entries: 1 - 100

Data Rules

H TRAN ONSET must be greater than H TRAN ABATE.

### 3.6 H TRAN ABATE

Description: Enter the transmission buffer abatement (high level abatement congestion threshold). When this threshold is reached, the STRM is informed of the current congestion level of the SDL. For multiple congestion levels, when the transmission buffer occupancy decreases below the value of this threshold, medium level congestion treatment is in effect.

Required Field.

Default: 65

Valid Entries: 1 - 100

Data Rules:

H TRAN ABATE must be greater than M TRAN ONSET.

### 3.7 H TRAN DISC

Description: Enter the transmission buffer discard (high level congestion discard threshold). For multiple congestion levels, when transmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.

Default: 90

Valid Entries: 1 - 100

Data Rules:

H TRAN DISC must be greater than H TRAN ONSET.

### 3.8 M RET ONSET

Description: Enter the retransmission buffer onset (medium level onset congestion threshold). This field defines the percent fill, which when exceeded by the retransmission buffer occupancy will trigger the beginning of medium level congestion treatment.

Required Field.

Default: 60

Valid Entries: 1 - 100

Data Rules:

M RET ONSET must be greater than M RET ABATE.

### 3.9 M RET ABATE

Description: Enter the retransmission buffer abatement (medium level abatement congestion threshold). This field defines the percent fill, which the retransmission buffer occupancy must drop below for medium congestion to abate and/or medium congestion treatment to be in effect.

Required Field.

Default: 40

Valid Entries: 1 - 100

Data Rules:

M RET ABATE must be greater than L RET ONSET.

### 3.10 M RET DISC

Description: Enter the retransmission buffer discard (medium level congestion discard threshold). For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, messages

of lower priorities will be discarded.

Required Field.

Default: 75

Valid Entries: 1 - 100

Data Rules:

M RET DISC must be greater than M RET ONSET.

### **3.11 M TRAN ONSET**

Description: Enter the transmission buffer onset (medium level onset congestion threshold). Defines the percent fill, which when exceeded by the transmission buffer occupancy will trigger the beginning of medium level congestion treatment.

Required Field.

Default: 60

Valid Entries: 1 - 100

Data Rules:

M TRAN ONSET must be greater than M TRAN ABATE.

### **3.12 M TRAN ABATE**

Description: Enter the transmission buffer abatement (medium level abatement congestion threshold). Defines the percent fill, which the transmission buffer occupancy must drop below for medium level congestion to abate and low level congestion treatment to be in effect.

Required Field.

Default: 40

Valid Entries: 1 - 100

Data Rules:

M TRAN ABATE must be greater than L TRAN ONSET.

### **3.13 M TRAN DISC**

Description: Enter the transmission buffer discard (medium level congestion discard threshold). For multiple congestion levels, when the transmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.

Default: 75

Valid Entries: 1 - 100

Data Rules:

M TRAN DISC must be greater than M TRAN ONSET.

### **3.14 L RET ONSET**

Description: Enter the retransmission buffer onset (low level onset congestion threshold). This field defines the percent fill, which when exceeded by the retransmission buffer occupancy, triggers the beginning of low level congestion treatment.

Required Field.

Default: 30

Valid Entries: 1 - 100

Data Rules:

L RET ONSET must be greater than L RET ABATE.

### **3.15 L RET ABATE**

Description: Enter the retransmission buffer abatement (low level abatement congestion threshold). This field defines the percent fill of the retransmission buffer below which low congestion will abate.

Required Field.

Default: 10

Valid Entries: 1 - 100

### **3.16 L RET DISC**

Description: Enter the retransmission buffer discard (low level congestion discard threshold). For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.

Default: 55

Valid Entries: 1 - 100

Data Rules:

L RET DISC must be greater than L RET ONSET.

### **3.17 L TRAN ONSET**

Description: Enter the transmission buffer onset (low level onset congestion threshold). Defines the percent fill, which when exceeded by the transmission buffer occupancy, triggers the beginning of low level congestion treatment.

Required Field.

Default: 30

Valid Entries: 1 - 100

Data Rules:

L TRAN ONSET must be greater than L TRAN ABATE.

### **3.18 L TRAN ABATE**

Description: Enter the transmission buffer abatement (low level abatement congestion threshold). Defines the percent fill of the transmission buffer below which low level congestion will abate.

Required Field.  
 Default: 10  
 Valid Entries: 1 - 100

### 3.19 L TRAN DISC

Description: Enter the transmission buffer discard (low level congestion discard threshold). For multiple congestion levels, when the transmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.  
 Default: 55  
 Valid Entries: 1 - 100

### 3.20 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E16(2) and later  
 Required Field.  
 Default: N  
 Valid Entries: Y, N

---

```

cclnk                               5ESS Switch           _
                                OFFICE DATA ADMINISTRATION
(6004-1/2)                        SIGNALING LINK SET MEMBER

*1. LINK SET      _____    15. H RET ONSET  80    27. L RET ONSET  30
*2. MEMBER        _             16. H RET ABATE  65    28. L RET ABATE  10
*3. GSM           _____    17. H RET DISC   90    29. L RET DISC   55
#4. SLC           _             18. H TRAN ONSET 80    30. L TRAN ONSET 30
    PRIORITY      1             19. H TRAN ABATE 65    31. L TRAN ABATE 10
    TRANSM TYPE   BASIC         20. H TRAN DISC  90    32. L TRAN DISC  55
  7. RATE         _____    21. M RET ONSET  60
#8. OE           _             22. M RET ABATE  40
11. TRANS RATE   0             23. M RET DISC   75
#12. SHELF       _             24. M TRAN ONSET 60
#13. CHANNEL GROUP _          25. M TRAN ABATE 40
#14. CH GP MEMBER _          26. M TRAN DISC  75
  
```

---

**Figure 1 SAMPLE CCLNK FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES**

---

```

cclnk                               5ESS Switch           _
                                OFFICE DATA ADMINISTRATION
(6004)                             SIGNALING LINK SET MEMBER
  
```

*1. LINK SET	___	15. H RET ONSET	80	27. L RET ONSET	30
*2. MEMBER	___	16. H RET ABATE	65	28. L RET ABATE	10
*3. GSM	___	17. H RET DISC	90	29. L RET DISC	55
SLC	___	18. H TRAN ONSET	80	30. L TRAN ONSET	30
PRIORITY	1	19. H TRAN ABATE	65	31. L TRAN ABATE	10
TRANSM TYPE	BASIC	20. H TRAN DISC	90	32. L TRAN DISC	55
#7. RATE	___	21. M RET ONSET	60		
#8. OE	— _____	22. M RET ABATE	40	33. CRIT IND N	
11. TRANS RATE	0	23. M RET DISC	75		
#12. SHELF	—	24. M TRAN ONSET	60		
#13. CHANNEL GROUP	___	25. M TRAN ABATE	40		
#14. CH GP MEMBER	—	26. M TRAN DISC	75		

---

**Figure 2 SAMPLE CCLNK FORM 5E15 AND LATER SOFTWARE RELEASES**

## **SEC. 10E: 6005 RECORD COMBINED SIGNALING LINK SET FORM - CLKSET**

### **1. GENERAL**

The 6005 Record is available with 5E11 and later Software Releases and is used to define the link sets that comprise the combined link set. This form supports the VCDX CCS7 on the PSU feature. For more information on this feature, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.7.

### **2. FORM ENTRIES - 6005 RECORD**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* CLS**

Description: Enter the combined link set number.

Required Field.

Valid Entries: 256 - 511

Data Rules:

The maximum number of CLKSET form entries allowed in an office is 8.

For each LINK SET entered on the LNKSET forms, there can be at most one CLKSET form with a matching LS1 or LS2.

For 5E14 and later:

When CLS is entered, it must be defined as a NORMAL LINK SET on a NID form for the same GSM, and LS1 and LS2 on the CLKSET form must each be defined as a LINK SET on a LNKSET form for the same GSM.

When CLS is entered, it must be defined as a NORMAL LINK SET on a CLU form for the same GSM, and LS1 and LS2 on the CLKSET form must each be defined as a LINK SET on a LNKSET form for the same GSM.

#### **2.3 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

For 5E14 and later, when GSM, LS1 and LS2 on this form matches the LINK SET on the LNKSET form (6003 Record), the LINK TYPE on the LNKSET form must be the same.

## 2.4 # LS1

Description: Enter the 1st link set of combined link set.

Required Field.

Valid Entries: 1 - 255

Data Rules:

LS1 cannot equal LS2.

For each LS1 or LS2 entered on the CLKSET form, there must be a corresponding LNKSET form (6003 Record) where LINK SET equals LS1 or LS2.

## 2.5 # LS2

Description: Enter the 2nd link set of combined link set.

Required Field.

Valid Entries: 1 - 255

Data Rules:

For each LS1 or LS2 entered on the CLKSET form, there must be a corresponding LNKSET form (6003 Record) where LINK SET equals LS1 or LS2.

## 2.6 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

clkset	5ESS Switch	—
(6005)	OFFICE DATA ADMINISTRATION	
	COMBINED SIGNALING LINK SET	

\*1. CLS \_\_\_\_

\*2. GSM \_\_\_\_

#3. LS1 \_\_\_\_

#4. LS2 \_\_\_\_

---

**Figure 1 SAMPLE CLKSET FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES**



## SEC. 10F: 6006 RECORD SIGNALING POINT CODE FORM - PC

### 1. GENERAL

The 6006 Record is available with 5E11 and later Software Releases and is used to specify the point code and alternate link set routing for PSUs (Packet Switching Units). For more information, see Division 7, Section 2L and Division 2, Section 9L.

For 5E13 and later, the VCDX Loop-Around Intra-Module Trunk feature is available; see Division 2, Section 7AD.

#### 1.1 Recent Change View

The corresponding Recent Change View for this form is 16.10.

### 2. FORM ENTRIES - 6006

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

#### 2.2 \* POINT CODE

Description: Enter the Point Code Number. This field is used to specify and update the point code and alternate link set routing.

For the 5E11 Software Release, point codes can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record)

Required Field.

Valid Entries: 9-digit point code in the following format:

Valid ANSI POINT CODE Entries - 5E11 and earlier		
Definition	Format	Valid Entries
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255
Valid ANSI POINT CODE Entries - 5E12 and later		
Definition	Format	Valid Entries
Network Indicator	XXX	000 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255
Valid IMT Entries - 5E13 and later — VCDX/SM-2000 Only		
Definition	Format	Valid Entries
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255
Valid AT&T POINT CODE Entries - 5E12 and later		
Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31

Cluster Type	X	0 - 7
Member	XXX	000 - 255

#### Data Rules:

For 5E14 and later, when POINT CODE is entered, this value cannot be the same as the OPC or any ALIAS PC value entered on the CCGSM form.

### 2.3 \* GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

### 2.4 ADJACENT

Description: This field indicates whether this point code is an adjacent point code. This is a no change field.

Required Field.

Default: N

Valid Entries: Y, N

### 2.5 # NORMAL LINK SET

Description: Enter the Normal Link Set used for routing to this point code.

Required Field.

Valid Entries: 1 - 511

#### Data Rules:

All the link sets entered on NORMAL LINK SET or ALTERNATE LINK SETS on this form, either directly with values less than 256 or indirectly as a CLS (Combined Link Set) with values greater than 255 which the corresponding CLKSET form has two link sets defined as LS1 and LS2, must all be unique. Also, the number of total unique link sets defined for a given POINT CODE must not be greater than 7.

When NORMAL LINK SET or ALTERNATE LINK SETS entered with values less than 256, indicating a link set, the APC on the corresponding LNKSET form must be entered as the POINT CODE of a PC form. If NORMAL LINK SET or ALTERNATE LINK SETS entered as values greater than 255, indicating a Combined Link Set, check the corresponding CLS on the CLKSET form first. Then use LS1 and LS2 to find the matching LNKSET forms. The APC on the corresponding LNKSET forms must match the POINT CODE on PC forms.

### 2.6 RESTART OPTION

Description: This field indicates which restart option is currently defined for the APC (Adjacent Point code). It is used during the MTP (Message Transfer Part) inter-linkset changeback to determine which routing data update procedure to use. If the value is "RESTART", the MTP adjacent restart procedures are used for this APC. If the value is "NONE", no restart option is used.

Software Release: 5E14 and later

Required Field.

Default: NONE

Valid Entries:

Valid Entries - 5E14 and later	
Entry	Definition
NONE	Do not use a restart method.
RESTART	Use local MTP restart method.

Data Rules:

RESTART OPTION must be "NONE" or "RESTART".

When RESTART OPTION is set to "RESTART", the ACT field for SFID (Secured Feature ID) 177 on the SFSYS form (5713-1) must be set to "Y".

## 2.7 REMOTE INIT SSN ALW

Description: Activate SCCP (Signaling Connection Control Part) remote initialization of the SSNs at this destination point code? The Remote Initialization Subsystem Number Allowed indicates whether or not the SCCP status of the SSNs at this DPC (Destination Point Code) are initialized as allowed or prohibited after a remote SCCP restart.

Software Release: 5E14 and later

Required Field.

Default: Y

Valid Entries: Y, N

## 2.8 ALTERNATE LINK SETS

Description: Enter the alternate link sets for routing which can be assigned a priority to this point code when the normal link set becomes unavailable.

Required Field.

Valid Entries: 1 - 511

Data Rules:

ALTERNATE LINK SETS must not equal NORMAL LINK SET.

ALTERNATE LINK SETS must be unique.

All the Link Sets entered on NORMAL LINK SET or ALTERNATE LINK SETS on this form, either directly with values less than 256 or indirectly as a CLS with values greater than 255 on the corresponding CLKSET form which has two link sets defined as LS1 and LS2, must all be unique. Also, the number of total unique Link Sets defined for a given POINT CODE must not be greater than 7.

## 2.9 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

```

pc                               5ESS Switch           -
                                OFFICE DATA ADMINISTRATION
(6006)                           SIGNALING POINT CODE

```

```

*1. POINT CODE      _____
*2. GSM              _____
    ADJACENT         -
#4. NORMAL LINK SET _____

5. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1  _____
2  _____
3  _____
4  _____

```

**Figure 1 SAMPLE PC FORM 5E11 SOFTWARE RELEASE**

```

pc                               5ESS Switch           -
                                OFFICE DATA ADMINISTRATION
(6006)                           SIGNALING POINT CODE

```

```

*1. POINT CODE      _____
*2. GSM              _____
    ADJACENT         -
#4. NORMAL LINK SET _____
5. RESTART OPTION  NONE
6. REMOTE INIT SSN ALW Y

7. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1  _____
2  _____
3  _____
4  _____

```

**Figure 2 SAMPLE PC FORM 5E14 SOFTWARE RELEASE**

```

pc                               5ESS Switch           -
                                OFFICE DATA ADMINISTRATION
(6006)                           SIGNALING POINT CODE

*1. POINT CODE      _____
*2. GSM              _____
    ADJACENT         -

7. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1  _____

```

#4. NORMAL LINK SET	_____	2	_____
5. RESTART OPTION	NONE	3	_____
6. REMOTE INIT SSN ALW Y		4	_____
		9.	CRIT IND N

---

**Figure 3 SAMPLE PC FORM 5E15 AND LATER SOFTWARE RELEASES**

## **SEC. 10G: 6007 RECORD CHANNEL GROUP MEMBER ASSIGNMENT FORM - CHGRPM**

### **1. GENERAL**

The 6007 Record is available with 5E11 and later Software Releases and is used to define the CCS (Common Channel Signaling) and message delivery channel groups. This form supports the VCDX CCS7 on the PSU feature. For more information, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.11.

### **2. FORM ENTRIES - 6007 RECORD**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* SM**

Description: Enter the SM (Switching Module) that supports SS7 (Signaling System 7) system.

Required Field.

Valid Entries: 1 - 192

#### **2.3 \* SHELF**

Description: Enter the PSU (Packet Switching Unit) shelf on which the protocol handler is equipped.

Required Field.

Valid Entries: 0 - 4

#### **2.4 \* CHGRP**

Description: Enter the PH channel group. This field specifies the logical shelf position of PH (Protocol Handler).

Required Field.

Valid Entries: 0 - 15

#### ***ASSIGNMENT TABLE (DSLDATA)***

The following fields (Section 2.5 - Section 2.7 ) specify the channel group member assignment table which is used to define the channel group link information.

The channel group member assignment table consists of 4 channel group links 0 - 3.

#### **2.5 TYPE**

Description: Enter the channel group type.

Valid Entries: Up to 8 alpha characters

### 2.6 LINKSET

Description: Enter the Link set number.  
Valid Entries: 1 - 255

### 2.7 MEMBER

Description: Enter the member within the link set.

Software Release: 5E11 and later.  
Valid Entries: 0 - 7

---

```

chgrpm                5ESS Switch          -
                      OFFICE DATA ADMINISTRATION
(6007)                CHANNEL GROUP MEMBER ASSIGNMENT

```

- \*1. SM \_\_\_\_\_
- \*2. SHELF \_
- \*3. CHGRP \_\_\_

5. ASSIGNMENT TABLE (DSLDATA)

ROW	CH	GP	LINK	TYPE	LINK SET	MEMBER
1		0		_____	___	-
2		1		_____	___	-
3		2		_____	___	-
4		3		_____	___	-

---

**Figure 1 SAMPLE CHGRPM FORM 5E11 AND LATER SOFTWARE RELEASES**

## **SEC. 10H: 6008 RECORD CCITT7 GLOBAL SM FORM - CCGSM**

### **1. GENERAL**

The 6008 Record is available with 5E11 and later Software Releases and is used to specify data used for the global switching module. One CCGSM is entered for each GSM (Global Switching Module), up to a maximum of 16 per office. For more information, see Division 2, Section 7L and Division 2, Section 9L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.1.

### **2. FORM ENTRIES - 6008 RECORD**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

The CCGSM form must have a matching EQIM form with EQSTATUS of "O".

When this form is defined for the office and the GSM matches the GSM on the CCPDL form, two corresponding CCPDL forms (6002 Record) must exist with DATA LINK RATE set to "56KB" and "64KB".

When this form is entered, CCS must be set to "PSU" on the OFCOPT form (5509 Record).

When GSM is entered on this form, it must be defined on the CC7PR form (6001 Record).

When a CCGSM form is entered,

- there must be a corresponding MDLNK form (6009 Record) entered with the SM on the MDLNK form equal to the GSM on the CCGSM form.
- there must be a corresponding EQIM form (5700-1/2 Record). The CONFIGURATION on the EQIM form must be either "SM2000", "2KPPC", or "SIGNALING".

For 5E14 and later, for each CCGSM form there must be a CMTMH or MDLNK form with the GLOBAL SM equal to the GSM on the CCGSM form.

#### **2.3 # OPC**

Description: Enter the Originating Point Code that is assigned to the GSM (Global Switching Module).

For the 5E11 Software Release, OPCs can be entered in the ANSI (American National Standards Institute)

format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Code must also be defined on the PC (SIGNALING POINT CODE) form (6006 Record).

Valid Entries: 9 - digit point code in the the following format:

Valid ANSI OPC Entries - 5E11 and later		
Definition	Format	Valid Entries
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

Valid AT&T OPC Entries - 5E12 and later		
Definition	Format	Valid Entries
Network Indicator	XXX	236 or 254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

Data Rules:

The OPC entered on the TKGRP must match the OPC entered on this form.

## 2.4 CONGEST TYPE

Description: This field specifies the congestion type used by the GSM. The default value "MPRT" specifies multiple congestion levels with priorities. This is a no change field.

Required Field.

Default: MPRT

Valid Entries: MPRT

## 2.5 CONGEST METHOD

Description: Enter the congestion method used by the GSM.

Required Field.

Default: RCT

Valid Entries:

Valid CONGEST METHOD Entries	
Entry	Definition
RCT	Method by which a Route Set Congestion Test message is sent.
TIMER	Method of setting a timer and lowering the congestion level after the timer expires.

## 2.6 LOAD SHARING

Description: This field specifies the load sharing to be used during changeover. The default value "ANSILS" specifies ANSI 7 Load Sharing. This is a no change field.

Required Field.

Default: ANSILS

Valid Entries: ANSILS

## 2.7 EXPANDED SLS

Description: This field is used to indicate whether 5 bit SLS or 8 bit SLS load sharing is used.

Software Release: 5E14 and later  
 Required Field.  
 Default: N  
 Valid Entries:

Valid Entries - 5E14 and later	
Entry	Definition
Y	8 bit SLS load sharing.
N	5 bit SLS load sharing.

Data Rules:

When EXPANDED SLS is set to "Y", the PH TYPE on the PSUGP form must not be set to "PH3".

If EXPANDED SLS is "Y", SIF 175 must be activated on the SFSYS form (5713 Record).

## 2.8 RESTART OPTION

Description: This field specifies that no restart method is used. This is a no change field.

Software Release: 5E14 and later  
 Required Field.  
 Default: NONE  
 Valid Entries: NONE

## 2.9 SUFFICIENT RTE

Description: This field contains the value for the percentage of signaling routes (received TRAs (Traffic Restart Allowed Message Signaling Units)) that must be made accessible before phase one of the MTP restart can be complete.

Software Release: 5E14 and later  
 Required Field.  
 Default: 50  
 Valid Entries: 0 - 100

## 2.10 SUFFICIENT LNK

Description: This field contains the value for the percentage of signaling links that must be made accessible before phase one of the MTP restart can be considered completed.

Software Release: 5E14 and later  
 Required Field.  
 Default: 50  
 Valid Entries: 0 - 100

## 2.11 DEDICATED

Description: This field indicates whether or not the GSM is a dedicated GSM.

Software Release: 5E16(1) and later  
 Required Field.  
 Default: N  
 Valid Entries: Y, N

Data Rules:

When DEDICATED GSM on the CCGSM form (6008 Record) is set to "Y":

the SMs referenced on the SMLDIT form (5315 Record) must not be assigned on the SMLDIT form.

CKT SM(s) and/or PKT SM(s) on the HGRPAS form (5115 Record) must not be assigned.

the GSM must be entered on the CMTMH form (6021 Record) as a HOST GSM.

**ALIAS POINT CODES**

**2.12 ALIAS PC**

Description: This field is used to specify the point code number.

Required Field.

Software Release: 5E14 and later

Valid Entries: 9 characters

VALID ALIAS POINT CODES	
Value	Valid Entry
ANSI	[001 - 235, 237 - 253] [000 - 255] [000 - 255]
ATT-C	[236, 254] [00 - 31] [0 - 7] [000 - 255]

Data Rules:

ALIAS PC must not match either OPC or ALIAS PC on another CCGSM form.

Each ALIAS PC must be unique.

**2.13 CRIT IND**

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

```

ccgsm                5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(6008)                GLOBAL SM
    
```

```

*1. GSM              _____  10. ALIAS POINT CODES (APCLIST)
#2. OPC              _____  ROW ALIAS PC  ROW ALIAS PC
   CONGEST TYPE     MPRT         1  _____  9  _____
   4. CONGEST METHOD RCT         2  _____  10 _____
   LOAD SHARING     ANSILS       3  _____  11 _____
    
```

6. EXPANDED SLS	N	4	_____	12	_____
7. RESTART OPTION	NONE	5	_____	13	_____
8. SUFFICIENT RTE	50	6	_____	14	_____
9. SUFFICIENT LNK	50	7	_____	15	_____
		8	_____		

**Figure 1 SAMPLE CCGSM FORM 5E14 SOFTWARE RELEASE**

---

```

ccgsm                               5ESS Switch
                                OFFICE DATA ADMINISTRATION
(6008)                             GLOBAL SM

*1. GSM      _____          10. ALIAS POINT CODES (APCLIST)  15. CRIT IND N
#2. OPC      _____          ROW ALIAS PC   ROW ALIAS PC
  CONGEST TYPE  MPRT           1  _____   9  _____
 4. CONGEST METHOD RCT         2  _____   10 _____
  LOAD SHARING  ANSILS        3  _____   11 _____
 6. EXPANDED SLS  N            4  _____   12 _____
  RESTART OPTION NONE         5  _____   13 _____
 8. SUFFICIENT RTE 50         6  _____   14 _____
 9. SUFFICIENT LNK 50         7  _____   15 _____
                                8  _____
    
```

**Figure 2 SAMPLE CCGSM FORM 5E15 SOFTWARE RELEASE**

---

```

ccgsm                               5ESS Switch
                                OFFICE DATA ADMINISTRATION
(6008)                             GLOBAL SM

*1. GSM      _____          11. ALIAS POINT CODES (APCLIST)  16. CRIT IND N
#2. OPC      _____          ROW ALIAS PC   ROW ALIAS PC
  CONGEST TYPE  MPRT           1  _____   9  _____
 4. CONGEST METHOD RCT         2  _____   10 _____
  LOAD SHARING  ANSILS        3  _____   11 _____
 6. EXPANDED SLS  N            4  _____   12 _____
  RESTART OPTION NONE         5  _____   13 _____
 8. SUFFICIENT RTE 50         6  _____   14 _____
 9. SUFFICIENT LNK 50         7  _____   15 _____
10. DEDICATED    N            8  _____
    
```

**Figure 3 SAMPLE CCGSM FORM 5E16(1) AND LATER SOFTWARE RELEASES**

## **SEC. 10J: 6009 RECORD MESSAGE DELIVERY LINK FORM - MDLNK**

### **1. GENERAL**

The 6009 Record is available with 5E11 and later Software Releases and is used to specify and update the message delivery link and the "bunny-hop" PH (a link internal to the SM where SS7 messages originate or terminate). For more information, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.17.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* SM**

Description: Enter the SM (Switching Module) of the message delivery link.

Required Field.

Valid Entries: 1 - 192

Data Rules:

For each SM entered on the MDLNK form, there must be a matching GSM entered on the CCGSM form (6008 Record).

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

The ISCN must be a unique value within an SM. ISCNs cannot be duplicated on one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

MDLNK and CCLNK forms can share an ISCN SHELF and CHANNEL GROUP on an SM. They cannot have

an ISCN SHELF and CHANNEL GROUP which are mixed with Protocol Handler assignments from any of the following forms:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

For 5E14 and later:

When SM matches a GSM on a CLU form, PH TYPE on the PSUGP form must not be set to "PH3".

When SM matches a GSM on a NID form, PH TYPE on the PSUGP form must not be set to "PH3".

### **2.3 SHELF**

Description: Enter the shelf of MDL (Message Delivery Link).

Required Field.

Valid Entries: 0 - 4

### **2.4 CHANNEL GROUP**

Description: Enter the channel group. This field specifies the shelf position of the MDL (Message Delivery Link).

Required Field.

Valid Entries: 0 - 15

### **2.5 MEMBER**

Description: Enter the channel group member. This field specifies the PH (Protocol Handler) of the message delivery link.

Required Field.

Valid Entries: 0 - 3

### **2.6 CRIT IND**

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

mdlnc	5ESS Switch	—
(6009)	OFFICE DATA ADMINISTRATION	
	MESSAGE DELIVERY LINKS	
*1. SM	_____	
#2. SHELF	—	
#3. CHANNEL GROUP	___	
#4. MEMBER	—	

---

**Figure 1 SAMPLE MDLNK FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES**

---

mdlnc	5ESS Switch	—
(6009)	OFFICE DATA ADMINISTRATION	
	MESSAGE DELIVERY LINK	
*1. SM	_____	
#2. SHELF	—	
#3. CHANNEL GROUP	___	
#4. MEMBER	—	
5. CRIT IND N		

---

**Figure 2 SAMPLE MDLNK FORM 5E15 AND LATER SOFTWARE RELEASES**

## **SEC. 10K: 6010 RECORD SCCP NETWORK DEFINITION FORM - CCNET**

### **1. GENERAL**

The 6010 Record is available with 5E11 and later Software Releases. The SCCP (Signaling Connection Control Part) network definition form was added to support the VCDX SS7 on the PSU feature. For more information concerning this feature, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.20.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

When GSM is entered with SCCP TYPE of "NA7" and PROTOCOL of "C7NATL", it must be defined on the CC7PR form (6001 Record).

When GSM is entered on this form, a corresponding CCGSM form (6008 Record) must exist where the CCGSM GSM equals the CCNET GSM.

When GSM is entered on this form, a corresponding CCSPR form (6011 Record) must exist where the CCSPR GSM equals the CCNET GSM.

#### **2.3 # PROTOCOL**

Description: Enter the protocol type. This field is used to specify the SCCP (Signaling Connection Control Part) protocol type.

Required Field.

Valid Entries: C7NATL

Data Rules:

No more than 16 CCNET forms may be entered with PROTOCOL set to "C7NATL".

#### **2.4 # SCCP TYPE**

Description: Enter the SCCP type associated with GSM. Currently, there is only one entry for this field.

Required Field.

Valid SCCP TYPE Entries	
Entry	Definition
NA7	North American CCS - C7.

## 2.5 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

```

ccnet                5ESS Switch                -
(6010)              OFFICE DATA ADMINISTRATION
                   SCCP NETWORKS DEFINITION
    
```

- \*1. GSM            \_\_\_
- #2. PROTOCOL     \_\_\_\_\_
- #3. SCCP TYPE    \_\_\_

---

**Figure 1 SAMPLE CCNET FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES**

---

```

ccnet                5ESS Switch                -
(6010)              OFFICE DATA ADMINISTRATION
                   SCCP NETWORKS DEFINITION
    
```

- \*1. GSM            \_\_\_
- #2. PROTOCOL     \_\_\_\_\_
- #3. SCCP TYPE    \_\_\_

4. CRIT IND N

---

**Figure 2 SAMPLE CCNET FORM 5E15 AND LATER SOFTWARE RELEASES**

## **SEC. 10L: 6011 RECORD SCCP PARAMETER DEFINITION FORM - CCSPR**

### **1. GENERAL**

The 6011 Record is available with 5E11 and later Software Releases. The SCCP (Signalling Connection Control Part) parameter definition form is used to define individual parameters for a SCCP GSM and was added to support the VCDX CCS7 on the PSU feature. For more information concerning this feature, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.21.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

When GSM is defined on this form with PROCESSING set to "Y", it must also be entered on at least one CCTT form (6014 Record) and at least one CCSGT form (6015 Record).

#### **2.3 PROTOCOL**

Description: This field indicates the SCCP protocol type. This is a no change field.

Required Field.

Default: C7NATL

Valid Entries: C7NATL

#### **2.4 SCCP TYPE**

Description: This field indicates the SCCP type associated with GSM. This is a no change field.

Required Field.

Default: NA7

Valid Entries: NA7

#### **2.5 INIT STATUS**

Description: Enter the SCCP initialization status.

Required Field.

Default: GROW  
Valid Entries: GROW, OPER

Data Rules:

When INIT STATUS is "GROW", PROCESSING must be "N".

## 2.6 SUBSYS STATUS TIMER

Description: Enter the SCCP subsystem status timer.

Required Field.  
Default: 30  
Valid Entries: 30 - 90

## 2.7 PROCESSING

Description: Should SCCP messages be processed in the PH?

Required Field.  
Default: N  
Valid Entries: Y, N

## 2.8 VERSION

Description: This field indicates the SCCP version associated with GSM. This is a no change field.

Required Field.  
Default: ATT89  
Valid Entries: ATT89

## 2.9 SUBSYS ALLOW

Description: Enter the subsystem allowed message priority.

Required Field.  
Default: 3  
Valid Entries: 0 - 3

## 2.10 SUBSYS PROHIB

Description: Enter the subsystem prohibit message priority.

Required Field.  
Default: 3  
Valid Entries: 0 - 3

## 2.11 SUBSYS TEST

Description: Enter the subsystem test message priority.

Required Field.  
Default: 2  
Valid Entries: 0 - 3

## 2.12 SUBSYS NORMAL

Description: Enter the subsystem normal message priority.

Required Field.

Default: 0

Valid Entries: 0 - 3

## 2.13 SUBSYS BACKUP

Description: Enter the subsystem backup message priority.

Required Field.

Default: 0

Valid Entries: 0 - 3

## 2.14 UNIT DATA

Description: Enter the unit data message priority.

Required Field.

Default: 1

Valid Entries: 0 - 3

## 2.15 UD SERVICE

Description: Enter the unit data service message priority.

Required Field.

Default: 1

Valid Entries: 0 - 3

## ***SCCP STATUS MGMT***

The following fields (Section 2.16 -Section 2.18 ) provide the signaling connection control part status management information.

## 2.16 REMOTE SCCP MGMT

Description: Does this global switching module perform signaling, connection control part management? This field determines whether or not this GSM (Global Switching Module) performs SCCP (Signaling Connection Control Part) management.

Software Release: 5E14 and later

Required Field.

Default: N

Valid Entries: Y, N

## 2.17 LOCAL INIT SPEC

Description: Is the initialization value of the subsystem numbers, states-specific per GSM or per PC? This field determines whether or not the initialization value of the SSNs' (Subsystem Numbers') states is specific per

GSM or per PC.

Software Release: 5E14 and later  
 Required Field.  
 Default: N  
 Valid Entries: Y, N

**2.18 LOCAL INIT SSN ALW**

Description: Is SSN status initialization allowed? This field determines whether or not the SSN status is initialized as allowed.

Software Release: 5E14 and later  
 Required Field.  
 Default: Y  
 Valid Entries: Y, N

**2.19 CRIT IND**

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later  
 Required Field.  
 Default: N  
 Valid Entries: Y, N

---

```

ccspr                               5ESS Switch           -
(6011)                             OFFICE DATA ADMINISTRATION
                                   SCCP PARAMETER DEFINITION

*1. GSM                            ____ MESSAGE PRIORITY
   PROTOCOL                        C7NATL  8. SUBSYS ALLOW  3
   SCCP TYPE                        NA7    9. SUBSYS PROHIB 3
4. INIT STATUS                      GROW  10. SUBSYS TEST  2
5. SUBSYS STATUS TIMER 30           11. SUBSYS NORMAL 0
6. PROCESSING                       N     12. SUBSYS BACKUP 0
   VERSION                          ATT89 13. UNIT DATA  1
                                   14. UD SERVICE  1
    
```

**Figure 1 SAMPLE CCSPR FORM 5E11 - 5E13 SOFTWARE RELEASES**

---

```

ccspr                               5ESS Switch           -
(6011)                             OFFICE DATA ADMINISTRATION
                                   SCCP PARAMETER DEFINITION

*1. GSM                            ____ 11. SUBSYS NORMAL 0
   PROTOCOL                        C7NATL 12. SUBSYS BACKUP 0
    
```

SCCP TYPE	NA7	13. UNIT DATA	1
4. INIT STATUS	GROW	14. UD SERVICE	1
5. SUBSYS STATUS TIMER	30		
6. PROCESSING	N	SCCP STATUS MGMT	
VERSION	ATT89	15. REMOTE SCCP MGMT	N
		16. LOCAL INIT SPEC	N
8. SUBSYS ALLOW	3	17. LOCAL INIT SSN ALW	Y
9. SUBSYS PROHIB	3		
10. SUBSYS TEST	2		

---

**Figure 2 SAMPLE CCSPR FORM 5E14 SOFTWARE RELEASE**


---

ccspr		5ESS Switch	—
		OFFICE DATA ADMINISTRATION	
(6011)		SCCP PARAMETER DEFINITION	
*1. GSM	___	11. SUBSYS NORMAL	0
PROTOCOL	C7NATL	12. SUBSYS BACKUP	0
SCCP TYPE	NA7	13. UNIT DATA	1
4. INIT STATUS	GROW	14. UD SERVICE	1
5. SUBSYS STATUS TIMER	30		
6. PROCESSING	N	SCCP STATUS MGMT	
VERSION	ATT89	15. REMOTE SCCP MGMT	N
		16. LOCAL INIT SPEC	N
8. SUBSYS ALLOW	3	17. LOCAL INIT SSN ALW	Y
9. SUBSYS PROHIB	3		
10. SUBSYS TEST	2	18. CRIT IND	N

---

**Figure 3 SAMPLE CCSPR FORM 5E15 AND LATER SOFTWARE RELEASES**


---

## **SEC. 10M: 6012 RECORD SCCP PRIMARY/BACKUP DESTINATION FORM - CCPBD**

### **1. GENERAL**

The 6012 Record is available with 5E11 and later Software Releases. The SCCP (Signaling Connection Control Part) Primary/Backup Destination Record is used to define the primary and backup destinations for SCCP signaling. For more information, see Division 2, Section 7L and Division 2, Section 9L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.22.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM PRIMARY**

Description: Enter the Primary GSM (Global Switching Module). This field specifies the Global GSM dedicated as the primary GSM-DPC-SSN (Global Switching Module - Destination Point Code - SubSystem Number).

Required Field.

Valid Entries: 1 - 192

Data Rules:

GSM-DPC-SSN BACKUP must be different from GSM-DPC-SSN PRIMARY.

Each combination of PRIMARY/BACKUP GSM/DPC can be defined with a maximum of nine different SSNs.

The maximum number of unique DESTINATION (PRIMARY or BACKUP) combinations per Global SM is 4095. DESTINATION combinations are entered on this form and consist of PRIMARY/BACKUP GSM, DPC, and SSN.

Each GSM PRIMARY entered on this form must be defined on the CCNET form (6010 Record). If SCCP TYPE set to "NA7" and PROTOCOL set to "C7NATL" on the CCNET form, then DPC PRIMARY on this form must be defined as a POINT CODE on the PC form (6006 Record).

#### **2.3 \* DPC PRIMARY**

Description: Enter the Primary Destination Point Code. This field specifies the DPC (Destination Point Code) for the primary GSM-DPC-SSN.

For the 5E11 Software Release, DPCs can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Code must also be defined on the PC (SIGNALING POINT CODE) form (6006 Record).

Required Field.

Valid Entries: 9 - digit point code in the following format:

Valid ANSI DPC PRIMARY Entries - 5E11 and later		
Definition	Format	Entry
Network indicator	XXX	[001 - 254]
Cluster number	XXX	[000 - 255]
Member	XXX	[000 - 255]

Valid AT&T DPC PRIMARY Entries - 5E12 and later		
Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

Data Rules:

For 5E14 and later:

DPC PRIMARY and DPC BACKUP must not be equal to either the OPC from the CCGSM form or ALIAS PC from the APCLIST on the CCGSM form for the same GSM.

When GSM PRIMARY and DPC PRIMARY do not match a GSM and OPC or GSM and ALIAS PC from the CCGSM form respectively, the DPC PRIMARY must be defined in one of the following three ways:

as a POINT CODE on the PC form

as a CLUSTER on the CLU form and a CLUSTER is defined as the concatenation of the attributes NETWORK and CLUSTER, or

as a NETWORK on the NID form.

When DPC PRIMARY is entered, it must first be defined for the same GSM in one of the following three ways:

as a POINT CODE on the PC form

as a CLUSTER on the CLU form and a CLUSTER is defined as the concatenation of the attributes NETWORK and CLUSTER, or

as a NETWORK on the NID form.

The maximum number of DPC PRIMARYs plus DPC BACKUPs for any given GSM on the CCPBD form cannot exceed a maximum of 2000 tuples per GSM.

## 2.4 \* SSN PRIMARY

Description: Enter the Primary Subsystem Number. This field specifies the SSN for the primary GSM-DPC-SSN.

Required Field.

Valid SSN PRIMARY Entries - 5E11 and later	
Definition	Entry
Intermediate	0
Final	2 - 255

## 2.5 GSM BACKUP

Description: Enter the Backup Global Switching Module. This field specifies the GSM for the backup GSM-DPC-SSN.

Required Field.

Valid Entries: 1 - 192

Data Rules:

When GSM BACKUP is entered, DPC BACKUP and SSN BACKUP must be entered.

When GSM BACKUP is not entered, DPC BACKUP and SSN BACKUP must not be entered.

When GSM BACKUP is entered on this form, GSM BACKUP must equal GSM PRIMARY.

For each CCPBD form where GSM BACKUP is entered, and DPC PRIMARY is the same as DPC BACKUP, then SSN PRIMARY and SSN BACKUP must be non-zero and different. Otherwise, the SSN PRIMARY and SSN BACKUP must both be 0 or both be non-zero.

5E14 and later:

When GSM BACKUP and DPC BACKUP do not match a GSM and OPC or GSM and ALIAS PC from the CCGSM form respectively, the DPC BACKUP must be defined in one of the following three ways:

as a POINT CODE on the PC form

as a CLUSTER on the CLU form and a CLUSTER is defined as the concatenation of the attributes NETWORK and CLUSTER, or

as a NETWORK on the NID form.

## 2.6 DPC BACKUP

Description: Enter the Backup Destination Point Code. This field specifies the DPC (Destination Point Code) for the backup GSM-DPC-SSN.

For the 5E11 Software Release, DPCs can be entered in the ANSI format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record).

Required Field.

Valid Entries: 9 - digit point code in the following format:

**Valid ANSI DPC BACKUP Entries - 5E11 and later**

Definition	Format	Entry
Network indicator	XXX	[001 - 254]
Cluster number	XXX	[000 - 255]
Member	XXX	[000 - 255]

**Valid AT&T DPC BACKUP Entries - 5E12 and later**

Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31

Cluster Type	X	0 - 7
Member	XXX	000 - 255

**2.7 SSN BACKUP**

Description: Enter the Backup Subsystem Number. This field specifies the SSN (SubSystem Number) for the backup GSM-DPC-SSN.

Required Field.

Valid SSN BACKUP Entries - 5E11 and later	
Definition	Entry
Intermediate	0
Final	2 - 255

**2.8 CRIT IND**

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

```

ccpbd                5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(6012)              SCCP PRIMARY/BACKUP DESTINATION

*1. GSM PRIMARY ____
*2. DPC PRIMARY ____
*3. SSN PRIMARY ____
  4. GSM BACKUP ____
  5. DPC BACKUP ____
  6. SSN BACKUP ____
    
```

**Figure 1 SAMPLE CCPBD FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES**

---

```

ccpbd                5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(6012)              SCCP PRIMARY/BACKUP DESTINATION

*1. GSM PRIMARY ____
*2. DPC PRIMARY ____
*3. SSN PRIMARY ____
  4. GSM BACKUP ____
  5. DPC BACKUP ____
  6. SSN BACKUP ____
    
```

7. CRIT IND N

---

**Figure 2 SAMPLE CCPBD FORM 5E15 AND LATER SOFTWARE RELEASES**

## **SEC. 10N: 6015 RECORD SCCP SINGLE GLOBAL TITLE TRANSLATION FORM - CCSGT**

### **1. GENERAL**

The 6015 Record is available with 5E11 and later Software Releases. The SCCP (Signaling Connection Control Part) Single Global Translation form is used to maintain the single fixed or primary plus secondary digit string for Global Translations. For more information concerning this feature, see Division 2, Section 7L and Division 2, Section 9L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.25.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system. This field specifies the GSM on which this translation group exists.

Required Field.

Valid Entries: 1 - 192

#### **2.3 \* TRANS GROUP**

Description: Enter the Translation Group. This field specifies the 2-digit translation group number.

Required Field.

Valid Entries: 0 - 63

#### **2.4 \* FIX DIG STR**

Description: Enter the Fixed Digit String.

Required Field.

Valid Entries: Up to 6 hexadecimal numbers (0 - 9, A - F)

Data Rules:

FIX DIG STR and/or PRIM PLUS SEC DIG STR must be entered.

When FIX DIG STR is entered, MAX TRANS must be entered.

When FIX DIG STR is not entered,

- MAX TRANS must not be entered
- a CCTGM form (6013 Record) must exist with the same GSM and TRANS GROUP, and NUM FIXED

must be set to 0.

The maximum number of FIXED DIG STRs allowed on the CCSGT form per GSM/TRANS GROUP is 100.

For each FIX DIG STR entered on the CCSGT form, the number of CCSGT forms with the same GSM, TRANS GROUP, and FIX DIG STR:

- must have the same value entered for MAX TRANS.
- must not exceed MAX TRANS for that FIX DIG STR.

If a CCGST form has the same GSM and TRANS GROUP as the CCTGM form (6013 Record), the length of the FIX DIG STR on the CCSGT form must be equal to the value of NUM FIXED on the CCTGM form.

## **2.5 \* PRIM PLUS SEC DIG STR**

Description: Enter the Primary Plus Secondary Digit String.

Required Field.

Valid Entries: Up to 10 hexadecimal numbers (0 - 9, A - F)

Data Rules:

FIX DIG STR and/or PRIM PLUS SEC DIG STR must be entered.

When PRIM PLUS SEC DIG STR is entered, DEST GSM, DPC and DEST SS NUM must be entered.

When PRIM PLUS SEC DIG STR is not entered, DEST GSM, DPC and DEST SS NUM must not be entered.

The length of PRIM PLUS SEC DIG STR must not exceed the sum of NUM PRIM and NUM SEC on the CCTGM form (6013 Record). For all CCTGM (6013 Record) and CCSGT (6015 Record) forms with the same GSM, the sum of PRIM PLUS SEC DIG STR and MAX TRANS must not exceed 251000.

### ***FIXED DIGIT STRING INFORMATION***

The following field describes the maximum number of translation strings.

## **2.6 MAX TRANS**

Description: Enter the maximum number of translation strings. This field specifies the optional primary plus secondary digit string.

Valid Entries: 1 - 131071

### ***PRIME PLUS SEC DESTINATION INFORMATION***

The following fields (Section 2.7 - Section 2.9) describe the primary and secondary destination information.

## **2.7 DEST GSM**

Description: Enter the Destination Global Switching Module.

Valid Entries: 1 -192

Data Rules:

The combination of DEST GSM, DPC, and DEST SS NUM must exist as a combination of GSM PRIMARY, DPC PRIMARY, and SSN BACKUP or as a combination of GSM BACKUP, DPC BACKUP, and SSN BACKUP on the CCPBD form (6012 Record)

**2.8 DPC**

Description: Enter the Destination Point Code.

For the 5E11 Software Release, DPCs can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record).  
Valid Entries: 9 - digit point code in the following format:

Valid ANSI DPC Entries - 5E11 and later		
Definition	Format	Entry
Network indicator	XXX	[001 - 254]
Cluster number	XXX	[000 - 255]
Member	XXX	[000 - 255]

Valid AT&T OPC Entries - 5E12 and later		
Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

**2.9 DEST SS NUM**

Description: Enter the Destination Subsystem Number.

Valid Entries:

For 5E11 and later: 0, or 2 - 255

**2.10 CRIT IND**

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

```

ccsgt                5ESS Switch                -
(6015)              OFFICE DATA ADMINISTRATION
                   SCCP SINGLE GLOBAL TITLE TRANSLATION
    
```

- \*1. GSM \_\_\_\_\_
- \*2. TRANS GROUP \_\_\_\_\_
- (\* )3. FIX DIG STR \_\_\_\_\_

(\* ) 4. PRIM PLUS SEC DIG STR \_\_\_\_\_

FIXED DIGIT STRING INFORMATION

5. MAX TRANS \_\_\_\_\_

PRIM PLUS SEC DESTINATION INFORMATION

6. DEST GSM \_\_\_\_\_

7. DPC \_\_\_\_\_

8. DEST SS NUM \_\_\_\_\_

---

**Figure 1 SAMPLE CCSGT FORM 5E11 THROUGH 5E14 SOFTWARE RELEASE**

---

ccsgt 5ESS Switch \_\_\_\_\_

OFFICE DATA ADMINISTRATION

(6015) SCCP SINGLE GLOBAL TITLE TRANSLATION

\*1. GSM \_\_\_\_\_

9. CRIT IND N

\*2. TRANS GROUP \_\_\_\_\_

(\* ) 3. FIX DIG STR \_\_\_\_\_

(\* ) 4. PRIM PLUS SEC DIG STR \_\_\_\_\_

FIXED DIGIT STRING INFORMATION

5. MAX TRANS \_\_\_\_\_

PRIM PLUS SEC DESTINATION INFORMATION

6. DEST GSM \_\_\_\_\_

7. DPC \_\_\_\_\_

8. DEST SS NUM \_\_\_\_\_

---

**Figure 2 SAMPLE CCSGT FORM 5E15 AND LATER SOFTWARE RELEASES**

---

## **SEC. 100: 6014 RECORD SCCP TRANSLATION TABLE FORM - CCTT**

### **1. GENERAL**

The 6003 Record is available with 5E11 and later Software Releases. The SCCP (Signalling Connection Control Part) Translation Table form is used to define whether the global title data in the called party address will receive Global Title Translation or Point Code Extraction treatment. This form supports the VCDX CCS7 on the PSU feature. For more information, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.24.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

When GSM is defined on this form, it must be defined on the CCNET form (6010 Record).

#### ***CALLED PARTY ADDRESS DATA***

The following fields (Section 2.3 - Section 2.4 ) define the global title data in the called party address.

#### **2.3 (\*) TRANS TYPE**

Description: Enter the Translation Type.

Required Field.

Valid Entries: 0 - 254

#### **2.4 \* GLOBAL TITLE IND**

Description: This field indicates the Global Title Indicator. This is a no change field.

Required Field.

Default: 2

#### ***GLOBAL TITLE TRANSLATIONS***

The following fields (Section 2.5 - Section 2.6 ) define the translation treatment the global title data in the called party address receives.

**2.5 # TRANS GROUP**

Description: Enter the Translation Group.

Required Field.

Valid Entries: 0 - 63

Data Rules:

When TRANS GROUP is entered, the combination of GSM and TRANS GROUP must be entered on the CCTGM form (6013 Record)

**2.6 # START GTT DIGIT**

Description: Enter the Starting Global Title Translation Digits. This field specifies the starting digits for Global Title Translation.

Required Field.

Valid Entries: 1 - 255

**2.7 CRIT IND**

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

```

cctt                                5ESS Switch                _
(6014)                             OFFICE DATA ADMINISTRATION
                                     SCCP TRANSLATION TABLE

*1. GSM ____

CALLED PARTY ADDRESS DATA
*2. TRANS TYPE                      ____
    GLOBAL TITLE IND 2

GLOBAL TITLE TRANSLATIONS
#4. TRANS GROUP                     ____
#5. START GTT DIGIT                 ____
    
```

---

**Figure 1 SAMPLE CCTT FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES**

---

```

cctt                                5ESS Switch
(6014)                             OFFICE DATA ADMINISTRATION
                                     SCCP TRANSLATION TABLE
    
```

\*1. GSM \_\_\_\_

8. CRIT IND N

CALLED PARTY ADDRESS DATA

\*2. TRANS TYPE \_\_\_\_  
GLOBAL TITLE IND 2

LOCAL SWITCH GLOBAL TITLE TRANSLATIONS

5. TRANS GROUP \_\_\_\_  
6. START GTT DIGIT \_\_\_\_

REMOTE GLOBAL TITLE TRANSLATIONS

7. DPC \_\_\_\_\_

---

**Figure 2 SAMPLE CCTT FORM 5E15 AND LATER SOFTWARE RELEASES**

## **SEC. 10P: 6013 RECORD SCCP TRANSLATION GROUP MASK FORM - CCTGM**

### **1. GENERAL**

The 6013 Record is available with 5E11 and later Software Releases. The SCCP (Signalling Connection Control Part) Translation Group Mask form defines the SCCP GTT (Signaling Connection Control Part Global Title Translation) mask for a translation group. This form supports the VCDX CCS7 on the PSU. For more information concerning this feature, see Division 2, Section 7L.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.25.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

When GSM is defined on this form, it must also be defined on the CCNET form (6010 Record).

#### **2.3 \* TRANS GROUP**

Description: Enter the 2-digit Translation Group number.

Required Field.

Valid Entries: 0 - 63

#### **2.4 NUM FIXED**

Description: Enter the Number of Fixed Digits. This field specifies the number of fixed address digits.

Required Field.

Valid Entries: 0 - 6

Data Rules:

When NUM FIXED is 0, PRIM PLUS SEC must be entered.

When NUM FIXED is greater than 0, PRIM PLUS SEC must not be entered.

The sum of NUM FIXED, NUM PRIM and NUM SEC must be between 1 and 12.

## 2.5 NUM PRIM

Description: Enter the Number of Primary Digits. This field specifies the primary address digits.

Required Field.

Valid Entries: 1 - 10

Data Rules:

The sum of NUM PRIM and NUM SEC must be between 1 and 10.

## 2.6 NUM SEC

Description: Enter the Number of Secondary Digits. This field specifies the number of secondary address digits.

Required Field.

Valid Entries: 0 - 9

## 2.7 PRIM PLUS SEC

Description: Enter the Maximum Number of Primary plus Secondary Strings.

Valid Entries: 1 - 131071

Data Rules:

If PRIM PLUS SEC is entered, the number of CCSGT forms (6015 Record) with the same GSM and TRANS GROUP must not exceed PRIM PLUS SEC for this form.

## 2.8 STRING MATCH

Description: Enter the String Match Method. This field specifies the Global Title Translation string match method.

Required Field.

Valid STRING MATCH Entries	
Entry	Definition
FULL	GTT is done on the supplied digits (called address) against the required and optional digits of the translations group. If no match is found, then GTT is done on the supplied digits (called address) against the required digits of the translations group.
PART	GTT is done on the supplied digits (called address) against the required digits of the translations group. If no match is found, then GTT is done on the supplied digits (called address) against the required + optional digits of the translations group.
VAR	GTT is done on the supplied digits (called address) against the required + optional digits of the translations group. If no match is found, then the last digit of the supplied address is overwritten with 0xF and the GTT is redone. This is continued while there is no match and the available digits is greater than the number of required digits.

## 2.9 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

```

cctgm                5ESS Switch                -
(6015)              OFFICE DATA ADMINISTRATION
                   SCCP TRANSLATION GROUP MASK

*1. GSM              ____
*2. TRANS GROUP     ____

      GTT MASK DATA
#3. NUM FIXED       _
#4. NUM PRIM        ____
#5. NUM SEC         _
  6. PRIM PLUS SEC  _____
#7. STRING MATCH    ____

```

---

**Figure 1 SAMPLE CCTGM FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES**

---

```

cctgm                5ESS Switch                -
(6013)              OFFICE DATA ADMINISTRATION
                   SCCP TRANSLATION GROUP MASK

*1. GSM              ____
*2. TRANS GROUP     ____

      GTT MASK DATA
#3. NUM FIXED       _
#4. NUM PRIM        ____
#5. NUM SEC         _
  6. PRIM PLUS SEC  _____
#7. STRING MATCH    ____

  8. CRIT IND N

```

---

**Figure 2 SAMPLE CCTGM FORM 5E15 AND LATER SOFTWARE RELEASES**

---

## **SEC. 10S: 6019 RECORD NETWORK ROUTING - NID**

### **1. GENERAL**

The 6019 Record is available with the 5E14 Software Release. NID, the Network Routing form, is used to define the MTP (Message Transport Part) network route sets that supports the SS7 (Signaling System 7) PSU (Packet Switch Unit) MTP Routing Enhancements feature. For more information on this feature, see Division 2, Section 4A522.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.8.

### **2. FORM ENTRIES - 6004-1 RECORD**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* NETWORK**

Description: This field is used to specify the network code number.

Required Field.

Valid Entries: 1 - 254

#### **2.3 \* GSM**

Description: The GSM is used to specify the Global Switching Module used to support the CCS7 (Common Channel Signaling, CCITT Version 7) signaling system.

Required Field.

Valid Entries: 1 - 192

#### **2.4 # NORMAL LINK SET**

Description: This field is used to specify the normal link set number used for routing to this point code.

Required Field.

Valid Entries: Blank, or 1 - 511

Data Rules:

When NORMAL LINK SET is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

When NORMAL LINK SET is entered and is less than 256 and ALTERNATE LINK SETS are defined as a CLS on a CLKSET form on the same GSM, the NORMAL LINK SET on the NID form must not be the same value as LS1 or LS2 on the CLKSET form.

#### ***ALTERNATE LINK SETS***

## 2.5 SET

Description: This field is used to specify the alternate link set for routing which can be assigned a priority to this point code when the normal link set becomes unavailable.

Valid Entries: Blank, or 1 - 511

Data Rules:

ALTERNATE LINK SETS must be unique.

When ALTERNATE LINK SETS is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

When ALTERNATE LINK SETS is entered and is less than 256 and ALTERNATE LINK SETS is defined as a CLS on a CLKSET form on the same GSM, the NORMAL LINK SET on the NID form must not be the same value as LS1 or LS2 on the CLKSET form.

When ALTERNATE LINK SETS in row 1 is defined as a CLS on a CLKSET form on the same GSM and have ALTERNATE LINK SETS in row 2 entered with a value less than 256, the ALTERNATE LINK SETS in row 2 must not be the same value as LS1 and LS2 on the CLKSET form.

When ALTERNATE LINK SETS in row 2 is defined as a CLS on a CLKSET form on the same GSM and have ALTERNATE LINK SETS in row 1 entered with a value less than 256, the ALTERNATE LINK SETS in row 1 must not be the same value as LS1 and LS2 on the CLKSET form.

## 2.6 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

```

nid                               5ESS Switch           _
                                OFFICE DATA ADMINISTRATION
(6019)                            NETWORK ROUTING

*1. NETWORK                       ____
*2. GSM                            ____
#3. NORMAL LINK SET                ____

4. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1  ____
2  ____

```

---

**Figure 1 SAMPLE NID FORM 5E14 SOFTWARE RELEASE**

---



## SEC. 10T: 6020 RECORD CLUSTER ROUTING - CLU

### 1. GENERAL

The 6020 Record is available with the 5E14 Software Release. CLU, the Cluster Routing form, is used to define the MTP (Message Transport Part) cluster route sets that supports the SS7 (Signaling System 7) PSU (Packet Switch Unit) MTP Routing Enhancements feature. For more information on this feature, see Division 2, Section 4A522.

#### 1.1 Recent Change View

The corresponding Recent Change View for this form is 16.9.

### 2. FORM ENTRIES - 6004-1 RECORD

#### 2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

#### 2.2 \* NETWORK

Description: This field is used to specify the network code number.

Required Field.

Valid Entries: 1 - 254

#### 2.3 \*CLUSTER

Description: This field is used to specify the cluster code number.

Required Field.

Valid Entries:

Valid Cluster Numbers		
Entry	Valid Value	Definition
ANSI	[000 - 255]	Cluster number
	[00 - 31]	Region number
LEC	[0 - 7]	Cluster number

#### 2.4 \* GSM

Description: The GSM is used to specify the Global Switching Module used to support the CCS7 (Common Channel Signaling, CCITT Version 7) signaling system.

Required Field.

Valid Entries: 1 - 192

Data Rules:

The maximum populated cluster index value cannot exceed the maximum number of tuples per GSM.

#### 2.5 X-LIST

Description: This field indicates whether an X-list should be kept for this cluster routeset or not, to track the remote status of cluster members with a more restrictive status than the cluster as a whole.

Required Field.

Default: N

Valid Entries: Y, N

## 2.6 # NORMAL LINK SET

Description: This field is used to specify the normal link set number used for routing to this point code.

Required Field.

Valid Entries: 1 - 511

Data Rules:

When NORMAL LINK SET is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

## ALTERNATE LINK SETS

### 2.7 SET

Description: This field is used to specify the alternate link set for routing which can be assigned a priority to this point code when the normal link set becomes unavailable.

Valid Entries: Blank, or 1 - 511

Data Rules:

ALTERNATE LINK SETS must be a unique number.

ALTERNATE LINK SETS must not equal NORMAL LINK SET.

When ALTERNATE LINK SETS is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

### 2.8 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later

Required Field.

Default: N

Valid Entries: Y, N

---

clu	5ESS Switch	—
	OFFICE DATA ADMINISTRATION	
(6020)	CLUSTER ROUTING	
*1. NETWORK	—	
*2. CLUSTER	—	



## **SEC. 10U: 6021 RECORD CCS MESSAGE TRANSPORT MESSAGE HANDLER - CMTMH**

### **1. GENERAL**

The 6021 Record is available with the 5E15 and later Software Releases. It defines which message handler will be used for CCS (Common Channel signaling) message transport for communication between a GSM (Global Switching Module) and a NGSM (Non-GSM). This form supports the SS7 (Signaling System 7)-PSU (Packet Switch Unit) Architectural Enhancements feature (99-CP-4246). For more information on this feature, see Division 2, Section 7AG. This form also supports the Decouple CCS from GSM Initializations (99-5E-7428) feature. See Division 2, Section 8U.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.16.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GLOBAL SM**

Description: The GLOBAL SM field is used to specify a GSM (Global Switching Module) number which supports national SS7 signaling.

Valid Entries: 1 - 192

Data Rules:

When GLOBAL SM and NON-GLOBAL SM are set to the same value, MH SM 1 must also be set to this same value.

When GLOBAL SM is equal to NON-GLOBAL SM, MH SM 2 must not be entered.

A GLOBAL SM with a different NON GLOBAL SM entered on the CMTMH form cannot be entered as an SM on a MDLNK form.

When the GLOBAL SM is not equal to the NON-GLOBAL SM on the CMTMH form, the GLOBAL SM must be defined on another CMTMH form where the GLOBAL SM is equal to the NON-GLOBAL SM.

GLOBAL SM must be defined on the QPHPIPE form for both QLPS NETWORK 0 and QLPS NETWORK 1. The GLOBAL SM, PSU SHELF, and CHANNEL GROUP must be the same within each set on the QPHPIPE forms and SERVICE TYPE must be "CCS". Note that there should be 2 sets of QPH Pipes.

The GLOBAL SM and NON GLOBAL SM entered must be defined as SM on the EQIM for with EQSTATUS set to "O".

When the GLOBAL SM on the CMTMH form is a Host GSM where the GLOBAL SM is not equal to the NON GLOBAL SM, the GLOBAL SM and the SM on the ENETPIPE form where SERV TYPE is "EEC" or "RTCD" cannot be the same.

### 2.3 \* NON-GLOBAL SM

Description: This field specifies a NGSM (Non-Global Switching Module) number. A NGSM is a SM equipped with CCS trunks or TCAP (Transaction Capabilities Application Part) applications that generate CCS messages that need to be transported to the PSU (Packet Switch Unit) on the GSM so that the CCS messages can be sent or received over CCS links.

Required Field.

Valid Entries: 1 - 192

Data Rules:

When the NON GLOBAL SM does not have an SM-2000 class processor on the corresponding EQIM form, the MH SM 1 must be different from the NON GLOBAL SM and must be defined as NON GLOBAL SM on another CMTMH form with the same GLOBAL SM. The NON GLOBAL SM on the CMTMH form must have an SM 2000 class processor.

When the NON-GLOBAL SM has a SM2000 class processor defined on the EQIM form, the NON-GLOBAL SM and the MH SM 1 must be the same and the MH SM 2 must not be entered.

When NON-GLOBAL SM does not have an SM-2000 class processor defined on the EQIM form and CM VINTAGE is 2 on the EQCORE form (5701 Record), there must be EQPC forms (5703 Record) entered on SIDE 0 and SIDE 1 with PC NO. set to 32 and EQSTATUS set to "O".

When the NON GLOBAL SM does not have an SM-2000 class processor on the corresponding EQIM form and the MH SM 2 is entered, the MH SM 2 must be different than the NON GLOBAL SM and must be defined as NON GLOBAL SM on another CMTMH form with the same GLOBAL SM. The NON GLOBAL SM on the CMTMH form must have an SM-2000 class processor.

### MESSAGE HANDLERS

The following fields (Section 2.4 - Section 2.5 ) are used to define the MHs to be used for CMT for communication between a GSM and a NGSM.

#### 2.4 #MH SM 1

Description: This field is used to define the MH SM 1 that will be used for CMT for communication between a GSM and a NGSM.

Valid Entries: 1 - 192

Data Rules:

MH SM 1 and MH SM 2 must be unique.

When MH SM 1 is entered and CM VINTAGE on the EQCORE form is 2, a corresponding EQPIPE form must be defined for both QLPS NETWORK 0 and QLPS NETWORK 1.

#### 2.5 MH SM 2

Description: This field is used to define the MH SM 2 that will be used for CMT for communication between a GSM and a NGSM.

Valid Entries: 1 - 192

Data Rules:



## **SEC. 10V: 6016 RECORD SAAL HIGH SPEED SS7 LINK - SAALHSL**

### **1. GENERAL**

The 6016 Record is available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. This form supports the SAAL (Signaling ATM Adaptation Layer) SS7 (Signaling System 7) High Speed Signaling Links feature (99-5E-7451). For more information on this feature, see Division 2, Section 4A670.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.26.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: The Global SM field is used to specify a GSM (Global Switching Module) number which supports SAAL SS7 signaling.

Software Release: 5E16(2) and later

Valid Entries: 1 - 192

Data Rules:

#### **2.3 \* LINK SET**

Description: This field is used to specify the link set number.

Required Field.

Software Release: 5E16(2) and later

Valid Entries: 1 - 255

Data Rules:

#### **2.4 \* MEMBER**

Description: This field is used to specify the member number within the CCS7 (Common Channel Signaling 7) signaling link set.

Software Release: 5E16(2) and later

Valid Entries: 0 - 15

Data Rules:

## 2.5 # SLC

Description: The Signaling Link Code field is used to specify the signaling link code. The signaling link code is part of the header portion of a signaling network management message. This is a display only field.

Software Release: 5E16(2) and later  
Valid Entries: 0 - 15

Data Rules:

## ***PHYSICAL LAYER***

The following fields (Section 2.6 - Section 2.13 ) are used to define the Data Link Layers used for the SAAL SS7 High Speed Signaling Link feature.

## 2.6 PSU PIPE

Description: This field is used to identify which PSU PIPE is used for the SAAL.

Software Release: 5E16(2) and later  
Valid Entries: 1 to 8 alphanumeric characters

Data Rules:

## 2.7 L1 PSU

Description: The Level 1 Packet Switching Unit field is used ONLY to display the PSU number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later  
Valid Entries: 0

## 2.8 L1 SHELF

Description: The Level 1 Shelf field is used ONLY to display the PSU shelf number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later  
Valid Entries: 0 - 4

## 2.9 L1 CHGRP

Description: The Level 1 Channel Group field is used ONLY to display the Channel Group number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later  
Valid Entries: 0 - 15

## 2.10 L1 CHGRP MEM

Description: The Level 1 Channel Group Member field is used ONLY to display the Channel Group member number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later

Valid Entries: 0

## 2.11 L1 RATE

Description: The Level 1 RATE field is used ONLY to display the rate number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later

Valid Entries: 1536KB

## 2.12 L1 OE

Description: The Level 1 OE (Originating Equipment) field is used ONLY to display the OE number of the first channel of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later

Valid Entries:

Valid L1 OE Entries		
Entry	Definition	Values
D	DEN (Digital Line and Trunk Unit (DLTU) Equipment Number)	(001-192) (000-011) (01-10) (01) where: 001-192 = SM (Switching Module) 000-011 = DLTU (Digital Line and Trunk Unit) 01-10 = DFI (Digital Facility Interface) 01 = DFI
N	NEN (Digital Networking Unit - SONET (Synchronous Optical Network (High Speed Fiber)) (DNU-S) Equipment number)	(001-192) (0-7) (0-1) (1-6) (1) (1-7) (1-4) (01) where: 001-192 = SM (Switching Module) 0-7 = DNU-S (Digital Networking Unit - SONET) 0-1 = DG (Data Group) 1-6 = STE (SONET Termination Equipment) 1 = STE (Synchronous Transport Signal) 1-7 = VTG (Virtual Tributary Group) 1-4 = VTM (Virtual Tributary Member) 01 = DS0 (Digital Signal Level 0)

## 2.13 # LINK PARM SET

Description: This field is used to specify the SAAL (Signaling ATM (Asynchronous Transfer Mode) Adaption Layer) Link Parameter Set associated with the SAAL High Speed SS7 Link..

Valid Entries: 1 to 8 alphanumeric characters.

## 2.14 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E16(2) and later

Required Field.



## **SEC. 10W: 6017 RECORD SAAL LINK PARAMETER SET - SAALPRM**

### **1. GENERAL**

The 6017 Record is available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. This form is used to define values of a High Speed Signaling Link Parameter Set. This form supports the SAAL (Signaling ATM Adaptation Layer) SS7 (Signaling System 7) High Speed Signaling Links feature (99-5E-7451). For more information on this feature, see Division 2, Section 4A670.

#### **1.1 Recent Change View**

The corresponding Recent Change View for this form is 16.27.

### **2. FORM AND RECORD ENTRIES**

#### **2.1 BASE AND CONTROL, ESS UNIT**

Enter the Base and Control Number and the Office Name on each record.

#### **2.2 \* GSM**

Description: The GSM (Global Switching Module) field is used to specify a GSM number which supports national SS7 signaling.

Software Release: 5E16(2) and later

Valid Entries: 1 - 192

#### **2.3 \* PARM SET**

Description: The Link Parameter Set name field is used to identify a unique set of SAAL High Speed link parameters.

Required Field.

Software Release: 5E16(2) and later

Valid Entries: Enter up to 8 alphanumeric characters.

#### **2.4 RATE**

Description: This field is used to identify the High Speed Link Bit Transfer rate.

Software Release: 5E16(2) and later

Default: 1536KB

Valid Entries: 1536KB

#### **2.5 SIFCAP**

Description: The SIFCAP (Service Information Field Capability) field is used to identify the maximum service information capacity for an SAAL High Speed Link..

Software Release: 5E16(2) and later

Default: CCDATA272  
Valid Entries: CCDATA272

## **SSCP - NNI**

The following fields (Section 2.6 - Section 2.9 ) are used to define the time in seconds. One exception is that N1 is not a timer.

### **2.6 T1**

Description: This field is used to indicate the time in seconds between link release and re-establishment during alignment.

Software Release: 5E16(2) and later  
Default: 5  
Valid Entries: 1 - 15

### **2.7 T2**

Description: This field is used to indicate the time in seconds that a SSCP will attempt alignment.

Software Release: 5E16(2) and later  
Default: 120  
Valid Entries: 15 - 180

Data Rules:

T2 must be greater than  $(T3 * N1)/1000000$ .

### **2.8 T3**

Description: This field is used to indicate the time in microseconds between proving PDUs.

Software Release: 5E16(2) and later  
Default: 1000  
Valid Entries: 276 - 25000

### **2.9 N1**

Description: This field is used to indicate the number of PDUs sent during normal provisioning.

Software Release: 5E16(2) and later  
Default: 60000  
Valid Entries: 500 - 500000

### **2.10 CRIT IND**

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E16(2) and later  
Required Field.  
Default: N

Valid Entries: Y, N

## **SSCOP**

The following fields (Section 2.11 - Section 2.20 ) are used to provide information about the SSCOP (Service Specific Connection Oriented Protocol) SDUs (Scan And Distribution Units) and time intervals in milliseconds that are used.

### **2.11 MAX SDU SIZE**

Description: This field defines the maximum SSCOP (Service Specific Connection Oriented Protocol) SDU (Scan And Distribution Unit) size.

Software Release: 5E16(2) and later

Default: 4096

Valid Entries: 4096 Octets

### **2.12 MAX UU SIZE**

Description: This field defines the maximum SSCOP (Service Specific Connection Oriented Protocol) layer Scan and Distribution UU size.

Software Release: 5E16(2) and later

Default: 4

Valid Entries: 4 Octets

### **2.13 MAX UNACK PDU**

Description: This field defines the maximum number of unacknowledged BGN, END, ER, or RS PDUs.

Software Release: 5E16(2) and later

Default: 4

Valid Entries: 1 - 10

### **2.14 MAX NO SD PDU**

Description: This field defines the maximum number of SD PDUs set between POLL PDUs.

Software Release: 5E16(2) and later

Default: 500

Valid Entries: 5 - 2120

### **2.15 MAX NO STA PDU**

Description: This field defines the maximum number of list elements in a SD PDUs set between POLL PDUs.

Software Release: 5E16(2) and later

Default: 67

Valid Entries: 5 - 2120

### **2.16 TIMER CC**

Description: This field defines the time between transmission of unacknowledged BGN, END, ER, or RS

PDU.

Software Release: 5E16(2) and later  
Default: 200  
Valid Entries: 100 - 2000

### **2.17 TIMER KA**

Description: This field indicates the keep-alive timer for 3622 cells/second signaling rate.

Software Release: 5E16(2) and later  
Default: 100  
Valid Entries: 25 - 500

### **2.18 TIMER NR**

Description: This field defines the maximum time interval during which at least one STAT PDU must be received.

Software Release: 5E16(2) and later  
Default: 1500  
Valid Entries: 200 - 2000

### **2.19 TIMER POLL**

Description: This field indicates the POLL timer for 3622 cells/second signaling rate.

Software Release: 5E16(2) and later  
Default: 100  
Valid Entries: 25 - 500

### **2.20 TIMER IDLE**

Description: This field indicates the maximum time of the IDLE phase of an SSCOP connection.

Software Release: 5E16(2) and later  
Default: 100  
Valid Entries: 25 - 1000

### ***SAAL LM/ISERM***

The following fields (Section 2.21 - Section 2.31 ) are used to define information about the SSCOP SDUs.

### **2.21 LM MAX NRP**

Description: This field indicates the maximum number of retransmitted SSCOP PDUs permissible for link provisioning.

Software Release: 5E16(2) and later  
Default: 1  
Valid Entries: 0 - 10

### **2.22 LM MIN RR**

Description: This field indicates the minimum interval between reports of an SSCOP recovery.

Software Release: 5E16(2) and later

Default: 60

Valid Entries: 30 - 1440

### **2.23 LM MIN NO C**

Description: This field indicates the minimum interval without credit.

Software Release: 5E16(2) and later

Default: 1500

Valid Entries: 1000 - 6000

### **2.24 LM FORCE PROV**

Description: This field indicates the SAAL Management Force Provisioning timer.

Software Release: 5E16(2) and later

Default: 10

Valid Entries: 0 - 20

### **2.25 ISERM SB SIZE**

Description: The ISERM (In-Service Error Rate Monitor) SB SIZE field indicates the ISERM parameter Tsup.

Software Release: 5E16(2) and later

Default: 120

Valid Entries: 10 - 600

### **2.26 ISERM ST LOSS**

Description: This field indicates the ISERM parameter Tloss.

Software Release: 5E16(2) and later

Default: 1300

Valid Entries: 500 - 10000

### **2.27 ISERM ALPHA**

Description: This field indicates the exponential smoothing factor.

Software Release: 5E16(2) and later

Default: 10

Valid Entries: 0 - 100

### **2.28 ISERM THRESH**

Description: This field indicates the threshold for comparing the running quality of service.

Software Release: 5E16(2) and later

Default: 244

Valid Entries: 0 - 1000

### **2.29 ISERM TAU**

Description: This field indicates the error monitoring interval.

Software Release: 5E16(2) and later

Default: 100

Valid Entries: 25 - 250

### **2.30 ISERM BLK**

Description: This field indicates the monitoring interval per block.

Software Release: 5E16(2) and later

Default: 3

Valid Entries: 1 - 25

### **2.31 ISERM N**

Description: This field indicates the monitoring interval after 400 milliseconds of error events.

Software Release: 5E16(2) and later

Default: 9

Valid Entries: 1 - 25

### ***MTP CONGESTION***

The following fields (Section 2.32 - Section 2.40 ) are used to define the numbers of PDUs.

### **2.32 LVL 1 ABATE**

Description: This field indicates the MTP (Message Transfer Part) Congestion Level 1 abatement threshold.

Software Release: 5E16(2) and later

Default: 780

Valid Entries: 0 - 5730

### **2.33 LVL 1 ONSET**

Description: This field indicates the MTP Congestion Level 1 Onset threshold.

Software Release: 5E16(2) and later

Default: 930

Valid Entries: 0 - 5730

Data Rules:

LVL 1 ONSET must be greater than LVL 1 ABATE.

### **2.34 LVL 1 DISCARD**

Description: This field indicates the MTP Congestion Level 1 Discard threshold.

Software Release: 5E16(2) and later

Default: 2490  
Valid Entries: 0 - 5730

Data Rules:

LVL 1 DISCARD must be greater than LVL 1 ONSET.

### **2.35 LVL 2 ABATE**

Description: This field indicates the MTP Congestion Level 2 Abate threshold.

Software Release: 5E16(2) and later  
Default: 2640  
Valid Entries: 0 - 5730

Data Rules:

LVL 2 ABATE must be greater than LVL 1 ONSET.

### **2.36 LVL 2 ONSET**

Description: This field indicates the MTP Congestion Level 2 Onset threshold.

Software Release: 5E16(2) and later  
Default: 2790  
Valid Entries: 0 - 5730

Data Rules:

LVL 2 ONSET must be greater than LVL 2 ABATE.

LVL 2 ONSET must be greater than or equal to LVL 1 DISCARD.

### **2.37 LVL 2 DISCARD**

Description: This field indicates the MTP Congestion Level 2 Discard threshold.

Software Release: 5E16(2) and later  
Default: 4350  
Valid Entries: 0 - 5730

Data Rules:

LVL 2 DISCARD must be greater than LVL 2 ONSET.

### **2.38 LVL 3 ABATE**

Description: This field indicates the MTP Congestion Level 3 Abate threshold.

Software Release: 5E16(2) and later  
Default: 4500  
Valid Entries: 0 - 5730

Data Rules:

LVL 3 ABATE must be greater than LVL 2 ONSET.

### **2.39 LVL 3 ONSET**

Description: This field indicates the MTP Congestion Level 3 Onset threshold.

Software Release: 5E16(2) and later

Default: 4560

Valid Entries: 0 - 5730

Data Rules:

LVL 3 ONSET must be greater than LVL 3 ABATE.

LVL 3 ONSET must be greater than or equal to LVL 2 DISCARD.

### **2.40 LVL 3 DISCARD**

Description: This field indicates the MTP Congestion Level 3 Discard threshold.

Software Release: 5E16(2) and later

Default: 5250

Valid Entries: 0 - 5730

Data Rules:

LVL 3 DISCARD must be greater than LVL 3 ONSET.

## ***MARGINAL PERFORMANCE***

The following fields (Section 2.41 - Section 2.44 ) are used to define the the various thresholds involved with Marginal Performances.

### **2.41 MTP AC THRESH**

Description: The MTP (Message Transfer Part) AC (Automatic Changeover) Threshold field indicates the MTP Marginal Performance threshold for the number of ACs.

Software Release: 5E16(2) and later

Default: 3

Valid Entries: 1 - 32

### **2.42 RETRANS PDU THRESH**

Description: The Retransmitted PDU Threshold field indicates the SSCOP Marginal Performance threshold for a number of SD PDUs requiring retransmission.

Software Release: 5E16(2) and later

Default: 550

Valid Entries: 10 - 1000

### **2.43 CONNECT SOE THRESH**

Description: The Connection Sum-of-errors Threshold field indicates the SSCOP Marginal Performance

threshold for connection sum-of-errors counters.

Software Release: 5E16(2) and later

Default: 5

Valid Entries: 1 - 32

#### **2.44 ERROR PDU SOE THRESH**

Description: The Error PDU Sum-of-errors Threshold field indicates the SSCOP Marginal Performance threshold for connection sum-of-errors counters.

Software Release: 5E16(2) and later

Default: 2

Valid Entries: 1 - 32

### ***L2 FLOW CONTROL***

The following fields (Section 2.45 - Section 2.47 ) provides information about the SAAL Level 2 Flow Control parameters. are used to define the time in seconds.

#### **2.45 FCI**

Description: The Fixed Credit Increment field indicates the SAAL Level 2 Flow Control parameter Nr.

Software Release: 5E16(2) and later

Default: 1200

Valid Entries: 3 - 2000

#### **2.46 EFCAR**

Description: The Equivalent Fixed Credit Allocation Rate field indicates the SAAL Level 2 Flow Control parameter Rpdu.

Software Release: 5E16(2) and later

Valid Entries: 600 - 3622

#### **2.47 ECAF**

Description: The Equivalent Fixed Credit Allocation Frequency field indicates the SAAL Level 2 Flow Control parameter bc.

Software Release: 5E16(2) and later

Default: 1

Valid Entries: 1 - 5

Data Rules:

ECAF only allows the value of one.

---

saalprm  
SCREEN 1 OF 2  
(6017)

5ESS Switch  
OFFICE DATA ADMINISTRATION  
SAAL LINK PARAMETER SET

*1. GSM	_____	SSCOP		SAAL LM/ISERM	
*2. PARM SET	_____	10. MAX SDU SIZE	4096	20. LM MAX NRP	01
3. RATE	1536KB	11. MAX UU SIZE	4	21. LM MIN RR	0060
4. SIFCAP	CCDATA272	12. MAX UNACK PDU	04	22. LM MIN NO C	1500
		13. MAX NO SD PDU	0500	23. LM FORCE PROV	10
		14. MAX NO STAT PDU	0067	24. ISERM SB SIZE	120
SSCF-NNI		15. TIMER CC	0200	25. ISERM ST LOSS	001300
5. T1	5	16. TIMER KA	100	26. ISERM ALPHA	10
6. T2	120	17. TIMER NR	1500	27. ISERM THRESH	0244
7. T3	01000	18. TIMER POLL	100	28. ISERM TAU	100
8. N1	060000	19. TIMER IDLE	0100	29. ISERM BLK	03
9. CRIT IND	N			30. ISERM N	09

---

saalprm		5ESS Switch	—
SCREEN 2 OF 2		OFFICE DATA ADMINISTRATION	
(6017)		SAAL LINK PARAMETER SET	
MTP CONGESTION		MARGINAL PERFORMANCE	
31. LVL 1 ABATE	0780	40. MTP AC THRESH	03
32. LVL 1 ONSET	0930	41. RETRANS PDU THRESH	0550
33. LVL 1 DISCARD	2490	42. CONNECT SOE THRESH	05
34. LVL 2 ABATE	2640	43. ERROR PDU SOE THRESH	02
35. LVL 2 ONSET	2790		
36. LVL 2 DISCARD	4350	L2 FLOW CONTROL	
37. LVL 3 ABATE	4500	44. FCI	1200
38. LVL 3 ONSET	4560	EFCAR	_____
39. LVL 3 DISCARD	5250	46. ECAF	1

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**Figure 1 SAMPLE SAALPRM FORM 5E16(2) AND LATER SOFTWARE RELEASES**