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Bell Labs Innovations



# **4ESS™ Switch Product Release Document**

## **4E27 Release 1 Generic**

234-090-271AC  
Issue 1, September 2001

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# About this information product

**Purpose** The purpose of the Product Release Document (PRD) is to provide customers with information pertaining to the new features that are introduced in the *4ESS* switch. A PRD is written to cover the features introduced in full generic releases and quarterly generic releases.

This PRD provides information pertaining to the new features included in the Release, plus features that are released as Software Change Packages (SCPs), and features that are Non Release Specific (NRS).

**Safety Labels** There are three types of safety labels used in Lucent Technologies documentation: DANGER, WARNING, and CAUTION. This document contains safety labels in the form of CAUTIONS. A CAUTION safety label indicates the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided.

**Scope** The Product Release Document provides customers with information not covered in other *4ESS* switch documentation. It is not a replacement for other documentation such as Standard Lucent Technologies Practices, Task Oriented Practices (TOP), Maintenance Reference Handbooks, etc. that support the *4ESS* switch. The information in this document is intended only for the introduction of the new Release, not the long-term maintenance. Since other documentation is used for the operation and maintenance of features after their introduction into the *4ESS* switch, this PRD will not be reissued, unless there are changes or added SCP features.

**Intended Audience** The document is intended for people involved in testing, provisioning, maintenance, administration, and technical support of the *4ESS* switch. Feature managers, Integrated Test Network (ITN) personnel, field support, Network Control Center (NCC), Product Engineering Control Center (PECC), and National Electronic Switching Assistance Center (NESAC) personnel are examples of some of the people who will use the PRD.

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# 1 Switched Access 8YY Originations at the Edge - Phase 1 (Features 8024 and 8024i)

## Overview

---

**Description** This feature allows the Edge Switch to process basic 8YY calls and upchain the rest to the *4ESS*. This feature supports 8YY to IXC Exit messages and 8YY multimedia calls (tollfree data calls).

**Purpose** This chapter provides a feature description, provisioning information, and transition considerations.

Feature 8024 is provided with 4E27 Release 1, but is to be turned on in the 4E27 Release 2 timeframe, after network elements are turned on. Feature 8024i is used to track the effort to be done in the 27R2 timeframe.

**Contents** This chapter contains the following topics:

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## Feature Description

---

**Description** This feature continues the migration of Toll-Free/8YY calls in the Segmentation Directory (SD) architecture from the *4ESS* to the Edge Switch. This feature focuses on the originating service processing for switched access Basic 8YY calls. The 8YY calls that come in on the switched access trunks that have been moved to the Edge Switch as part of Feature 7698 query the SD and are forwarded to the appropriate 2DSD/2NCP for processing. Calls to Basic 8YY numbers are sent to the appropriate INWATS Database (IDB) 2DSD/2NCP and are handled based on the processing and upchaining rules established for this feature. Calls to Advanced 8YY numbers are sent to the appropriate Global Transaction Network (GTN) 2DSD/2NCP and are handled based on processing rules established for nodal access calls in Features 7264 and 8230.

**Benefits** This feature allows more traffic to be migrated to the edge network to conserve *4ESS* resources.



## Call Flows (Not Affected)

---

## Provisioning

---

**Recent Change Form 809** Recent Change Form 809 is modified to allow feature bit **PF88** to turn this feature ON and OFF. RC Form 809 is shown in the TG-4, Division 7, Section 8.

This flag is verified by form 16az (TG-4 Division 8, Section 16az – Request Verification of Miscellaneous Data) and form 8j (Division 8, Section 8j –Feature Bit Status).



## Recording (Not Affected)

---

## Network Management (Not Affected)

---

## Maintenance/Troubleshooting (Not Affected)

---

## Transition Considerations

---

**Feature Deployment** It is not necessary for this feature to be deployed in all switches for it to be fully operational.

**Feature Dependencies** This feature depends on the following features:

- 7264 - Toll Free Service Processing on Edge Switches with Segmentation Directory (Documented in Product Release Document 234-090-261AC)
- 7698 - Traffic Transition Phase 1 - Switched Access to the Edge (Documented in Product Release Document 234-090-262AC)
- 8230 - MR to Feature 7264 (Documented in Product Release Document 234-090-262AC)

**Feature Activation** To activate this feature, PF88 (Feature 8024) must be set to **ON** (Default = OFF). Also, the following feature bits must be set to ON:

- **PF79** (Feature 7264) must be set to ON (Default = OFF)
- **PF82** (Feature 7698) must be set to ON (Default = OFF)

Please note the following:

- This feature (Feature 8024) and its corresponding feature bit (PF88) should not be turned on in the 4E27 Release 1 timeframe.
- The activation of PF88 is independent of PF79 and PF82.



## Input/Output Manual Pages (Not Affected)

---

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## 2 Capacity Relief on 1B Main Memory for 4E27 Feature (8045)

### Overview

---

**Description** This feature mines 1B main memory by moving several dynamic structures to segmented memory.

**Purpose** This chapter provides the user with a feature description, information on provisioning, information on network management, and transition considerations.

<b>Contents</b>	This chapter contains the following topics:	
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## Feature Description

---

**Description** This feature continues 1B memory capacity relief to support service expansion and new development on the 4ESS by moving some structures to Segmented Memory and streamlining other structures for better efficiency. In 4E27 four different things are done:

1. If the data item 8045\_SGM on the 406C ODA form is equal to "Y", then the following structures are moved to segmented memory (SM):
  - Compool counts for Carrier Identification Code (CIC), Network Routing Number (NRN) database, and Multiple Carrier Treatment (MCT)
  - SI traffic data 5-minute counts
  - Real-Time Network Routing (RTNR) node-to-node counts
  - Multiple Routing Table (MRT) counts
  - End-to-End Class of Service Routing (ECOS) VTEng counts
  - ECOS status structures
  - ECOS route history data
  - Network Management ECOS Route list overrides
2. Two 6-digit translation structures are redesigned.
3. The Carrier Completion Rate Feature (CCRF), and the Success To the Top (STT) structures are removed.
4. The SI traffic data hourly counts are removed. However, the 5-Minute SII traffic data is still provided.

In addition, this feature moves Trunk Subgroup Data, Hard-to-Reach, and Long Term Storage structures from 1B disk only memory in Segment 0 of the disk file to Segment 2 of the disk file.

**Benefits** This feature frees up 1B main memory.

## Call Flow (Not Affected)

---

## Provisioning

---

**Recent Change Form 317:** CCRF (Carrier Completion Rate Feature) field is no longer used. The field remains on the recent change, but is no longer used by call processing.  
**Associated Verify forms:**  
3m

**Recent Change Form 321:** Remove STT as a valid entry on the Per Cent Field.  
**Associated Verify forms:**  
13h, 3o

**Recent Change Form 653:** ASCIT question 21 is made spare  
**Associated Verify forms:**  
16au, 6bb

**Recent Change Form 809:** PF41 is unassigned and made spare. Remove the "OFF" dependency of PF47 on PF41. Remove the "ON" dependency of PF47 on PF41  
**Associated Verify forms:**  
16az, 8j

**Recent Change Form 811:** The "FEATURE INFO" entry field no longer supports the "SISETHRR" and "SISETHER"  
**Associated Verify forms:**  
16az, 6bp, 6bq

**ODA Form: 406C**

8045\_SGM = Y moves the engineered structures to Segmented Memory

8045\_SGM = N keeps the engineered structures on Main Memory



## Recording (Not Affected)

---

## Network Management

---

**NEMOS** The interface between the *4ESS* and Network Management Operations Support (NEMOS) is affected by this feature as follows:

- Message 1 - 30 Second Discrete Data - Modified to delete CCRF Country Code Change Discrete
- Message 17 - Demand Data Message - STT MRT TAS Demand Request: Deleted.
- Message 54 - Demand Data Message - CCRF Active Country Code: Deleted.
- Message 75 - Demand Data Message - ODA MRTT Content Demand Data: Modified to delete the STT indicator.
- Message 116 - Five Minute Data Message - ECOS Area ERPI Traffic Data: Modified to delete CCRF Usage Count.



## Maintenance/Troubleshooting (Not Affected)

---

## Transition Considerations

---

**Feature Deployment** It is not necessary for the 4E27 Release 1 Generic to be deployed in all switches for this feature to be fully operational.

**Feature Activation** This feature is activated by software deployment.



## Input/Output Manual Pages

---

**Input Messages - Modified** The following 4ESS input message is modified with 4E27R1 and later generics:

**VER:MISC**

**Output Messages - Modified** The following 4ESS output message is modified with 4E27R1 and later generics:

**VER:CODEGRP-MRT**

**Output Messages - Deleted** The following 4ESS output messages are deleted with 4E27R1 and later generics:

**VER:SISETHER**

**VER:SISETHRR**





# 3 *4ESS*<sup>TM</sup> Real Time Capacity Mining Feature (8092)

## Overview

---

- Description** This feature meets the need for additional call capacity in the *4ESS* Switch. It provides improvements in switch processing to improve Real Time (RT) capacity. In addition, it removes features that are no longer used on the AT&T Switched Network (ASN).
- Purpose** This chapter provides the user with a feature description, information on provisioning, information on network management, and transition considerations.

**Contents** This chapter contains the following topics:

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## Feature Description

---

**Description** This feature includes a Real Time Call Processing improvement Package as well as a number of individual Real Time relief measures. The real-time relief measures included in this feature are:

- Remove the Reduction of Software Defined Network (SDN) Transfer
- Remove SDQueries for Switched-Access 8YY Calls
- Remove 1B SDQueries for Present Mode of Operation (PMO) Calls
- Remove CCIS6 and CCITT#6 Call Handling
- Remove Forced Voice Path Assurance (VPA) for International Outbound Overflow
- Remove Direct Common Channel Interactive Signaling (DCIS) Checks
- Call Processing Real-Time Improvements
- Via Avoidance
- Move Call Irregularity Message Translations to the 3B.

**Benefits** This feature increases 1B real-time.



## Call Flow (Not Affected)

---

## Provisioning

---

- Recent Change Forms 803, 804, 805, 806, and 807** RC forms 803, 804, 805, 806, and 807 are no longer used with 4E27R1 and later generics.
- Recent Change Form 809** Recent Change Form 809 is modified to allow feature bit **PF87** to turn the capability Call Irregularity Save 1B Real Time to ON and OFF. RC Form 809 is shown in the TG-4, Division 7, Section 8.
- This flag is verified by form 16az (TG-4 Division 8, Section 16az – Request Verification of Miscellaneous Data) and form 8j (Division 8, Section 8j –Feature Bit Status).
- Recent Change Form 810** Two new office-wide structures are provided for Base Level Cycle threshold variables, number, and length. Both of these structures are recent changeable using RC Form 810 as follows:
- **BLCTNUM (Base Level Cycles Threshold Number) -**  
The BLCTNUM ODA variable affects the setting of the 30-second "Real Time Overload" discrete which is sent to NEMOS.  
Values: 1-15
  - **BLCTLLEN (Base Level Cycles Threshold Length) -**  
The BLCTLLEN ODA variable in centi-seconds affects the setting of the 30-second "Real Time Overload" discrete which is sent to NEMOS. Values: 1-15
- These structures are verified by using the absolute word dump input message DUMP:CSS. Structure BLCTNUM uses address 7144551, and structure BLCTLLEN uses address 7144552. NOTE: These addresses are valid only for the 4E27 generic.
- Both structures are initialized to a default value by ODMS. BLCTNUM is initialized to a default value of "3," and BLCTLLEN is initialized to a default value of "8."



## Recording (Not Affected)

---

## Network Management

---

**NEMOS** The interface between the 4ESS and Network Management Operations Support (NEMOS) is affected by the Via Avoidance capability as follows:

- Message 1 - 30 Second Discrete - Modified to add: Signaling Congestion Discrete, Real Time Overload Discrete, Real Time Via Avoidance Change Discrete, Average Length of last eight base level cycles in centiseconds.
- Message 70 - New Demand Data Message: Real Time Via Avoidance Demand Data.
- Message 129 - New Control Message: Real Time Via Avoidance Control Request.



## Maintenance/Troubleshooting (Not Affected)

---

## Transition Considerations

---

**Feature Deployment** It is not necessary for the 4E27 Release 1 Generic to be deployed in all switches for this feature to be fully operational.

**Feature Activation** This feature is activated by software deployment.

The capability of Call Irregularity Save 1B Real Time is provisioned separately, using feature bit **PF87**. This feature bit must be set to ON (Default = OFF).



## Input/Output Manual Pages

---

**Input Messages - New** The following APS input message is new with 4AP20 and later generics:

**INIT:CIFMT**

**Input Messages - Modified** The following 4ESS input messages are modified with 4E27R1 and later generics:

**OP:SDLST**  
**SET:SDSTAT**

**Output Messages - Modified** The following 4ESS output messages are modified with 4E27R1 and later generics:

**OP:SDLST**  
**SET:SDSTAT**





# 4 *4ESS*<sup>TM</sup> API Capacity Mining Feature (8093)

## Overview

---

- Description** This feature meets the need for more call capacity in the *4ESS* Switch. It improves switch processing to raise Attached Processor Interface (API) capacity.
- Purpose** This chapter provides the user with a feature description and transition considerations.

**Contents** This chapter contains the following topics:

<b>Overview</b>	<b>4-1</b>
Description	4-1
Purpose	4-1
Contents	4-2
<b>Feature Description</b>	<b>4-3</b>
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## Feature Description

---

- Description** This feature includes the following individual API-relief measures:
- Turn Network Access Interruption (NAI) Off During Congestion: Previously, NAI was suspended if the 1B processor approached overload. This measure would also suspend NAI if the API or other parts of the signaling path approach overload.
  - Transaction Capabilities Application Part (TCAP) Header Reduction and Additional ISDN User Part (ISUP) Header Reduction: With this measure, message headers are reformatted to shorten them before they pass through the API.
  - Q.931 and AT&T Trigger Platform (ATP) Header Reduction: With this measure, message headers are reformatted to shorten them before they pass through the API.

**Benefits** This feature provides a 10-12% increase in API throughput.



## Call Flow (Not Affected)

---

## Provisioning (Not Affected)

---

## Recording (Not Affected)

---

## Network Management (Not Affected)

---

## Maintenance/Troubleshooting (Not Affected)

---

## Transition Considerations

---

**Feature Deployment** It is not necessary for the 4E27 Release 1 Generic to be deployed in all switches for this feature to be fully operational.

**Feature Activation** This feature is activated by software deployment.



## Input/Output Manual Pages (Not Affected)

---



# 5 TTA Over ATM Route Advance Trigger Feature (8141)

## Overview

---

- Description** This feature supports route advance at the *4ESS* for Terminating Traffic Architecture (TTA) over Asynchronous Transfer Mode (ATM) calls that can not be completed via the ATM backbone due to some resource unavailable condition.
- Purpose** This chapter provides a feature description, call flows, and transition considerations.

**Contents** This chapter contains the following topics:

<b>Overview</b>	<b>5-1</b>
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## Feature Description

---

- Description** This feature supports route advance at the *4ESS* for TTA over ATM calls that can not be completed via the ATM backbone due to some resource unavailable condition. The *4ESS* previously triggered route advance on TTA calls when a circuit to a Local Service Provider (LSP) is not available based on receipt of an ISDN User Part (ISUP) Release message with cause 34. This feature allows the *4ESS* to trigger route advance on TTA calls when an ISUP Release message with cause 47 is received.
- Benefits** Since voice over ATM is a new technology, this alternate routing mechanism ensures that a back-up route can be used in case the ATM backbone does not meet the voice network reliability needs in the early deployment.

**Architecture** Figure E-1 shows AT&T's desired network architecture which supports TTA over the ATM backbone network. In this architecture, the ATM capable edge switches are interconnected via an ATM backbone. A 4ESS that is connected to an edge switch that is ATM capable can route TTA over ATM traffic to any LSP access tandem/end office that is connected to another ATM capable edge switch.

**Figure E-1 - TTA Over ATM Network Architecture**

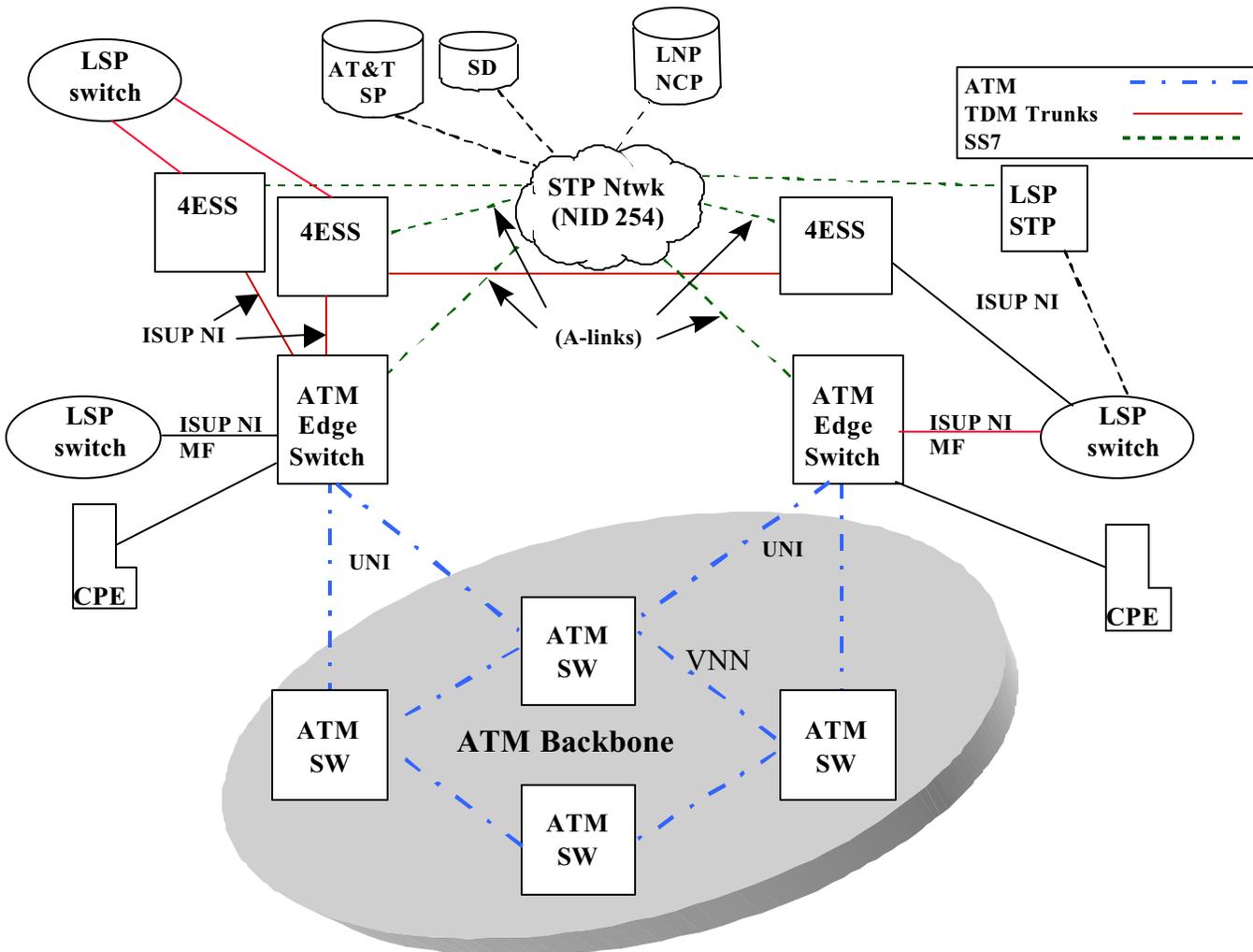
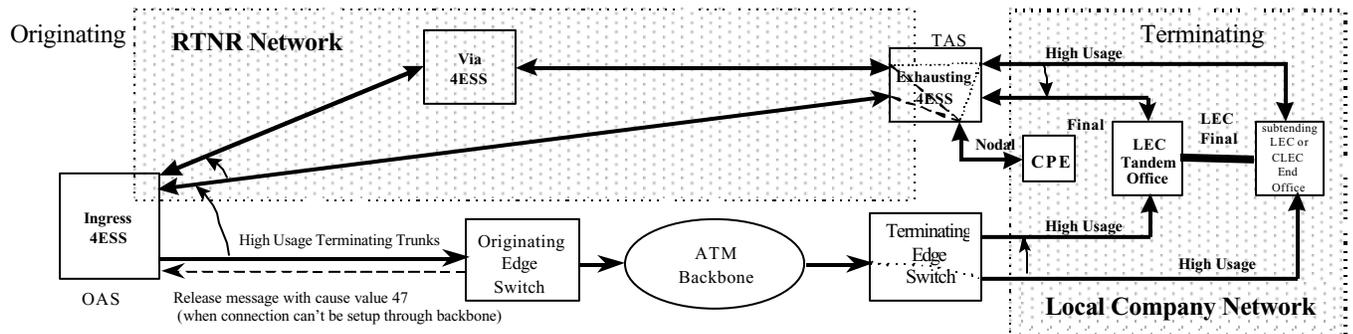


Figure E-2 shows the Route Advance architecture. If the 4ESS can not complete a TTA over ATM call because some resource is not available in the ATM backbone network, then the 4ESS receives an ISUP RELease message with cause value 47. This feature allows the 4ESS to try an alternate path via the Real-Time Network Routing (RTNR) network in this situation.

**Figure E-2 - Route Advance Architecture**



## Call Flow

---

**Call Flow** The following call flow is a variation on the call flow in Feature 6745 - Terminating Traffic Architecture, documented in Product Release Document 234-090-233AC. The following call flow demonstrates route advance on receipt of a RELEase message with a cause value 47.

1. A caller dials 908-234-1111.
2. The call arrives at the Originating AT&T Switch (OAS). The call may have originated from any one of a number of scenarios: incoming international, incoming switched access, incoming nodal access, incoming from a network adjunct, etc.
3. The OAS completes all the service processing on the call, and then begins to determine call routing based on the Dialed Number/Routing Number (DN/RN).
4. The OAS performs six-digit translation on the DN/RN.
5. In this case, the six-digit translation points the OAS to a Multiple Routing Treatment (MRT) table because a TTA over ATM path from this 4ESS to an ATM edge switch serving this NPA-NXX exists.
6. The MRT table indicates that the call should be routed on the high usage (HU) trunk route that connects to an Originating Edge Switch (OES).
7. The OAS attempts to route the call on the HU trunk route.
  - a) If this route is busy, the MRT indicates the overflow RTNR route to the exhausting Terminating AT&T Switch (TAS). The OAS routes the call on this route, and the call completes as previously. **End of call flow.**
  - b) If this route is not busy, The OAS sends an ISUP IAM message to the OES.
8. The OES translates the value in the Called Party Number (CdPN)

(which could be an LRN) and derives a Destination Point Code associated with the Terminating Edge Switch (TES) that is used to route the Bearer Independent Call Control (BICC) IAM to the TES serving the destination LSP switch (End Office or Tandem). Also, the OES chooses a CIC from the CIC range provisioned for calls between the OES and TES.

9. The OES sends a BICC IAM to the TES.
10. The TES determines routing to the LSP based on the Called Party Number to determine the trunk group to the LSP and sends an ISUP IAM.
11. The TES sends a UNI SETUP message to the ATM backbone to establish a connection through the ATM backbone to OES.
12. If the ATM backbone cannot establish a connection due to resources not being available, a UNI RELease message will be sent to the TES.
13. The TES sends a BICC RELease message with cause value 47 to the OES.
14. The OES sends an ISUP RELease message with cause value 47 to the OAS.
15. The OAS receives the ISUP RELease message with cause value 47. Since this is received over a trunk group that has the TTA indicator set to "YES", the OAS checks the MRT provisioned for the NPA-NXX and selects the next choice route which is an RTNR route. The 4ESS pegs a count for route advances on cause code 47.
16. The OAS routes the call via RTNR and sends an ISUP IAM to the 4ESS TAS.

## Provisioning (Not Affected)

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## Recording (Not Affected)

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## Network Management (Not Affected)

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## Maintenance/Troubleshooting (Not Affected)

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## Transition Considerations

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**Feature Deployment** It is not necessary for the 4E27 Release 1 Generic to be deployed in all switches for this feature to be fully operational.

**Feature Activation** This feature is activated automatically by software deployment.



## Input/Output Manual Pages (Not Affected)

---



# 6 Billing Number for Switched Data Video Gateway (SDVG) Feature (8202)

## Overview

---

**Description** This feature acts as a gateway between a customer's Asynchronous Transfer Mode/Internet Protocol (ATM/IP) network and AT&T's Switched Data Services/Software Defined Data Network (SDS/SDDN). Originating calls from within this network arrive at the *4ESS* switch over a nodal Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) link. The only identification of the customer will be via the delivered Calling Party Number (CPN). Therefore this feature forces the *4ESS* switch to use the delivered CPN as the Automatic Number Identification (ANI) for all call processing (TCAP, ISUP, AMA recording). A new indicator in the Parameterized Network-Specific Facilities Information Element (NSF IE) in the SETUP will identify calls.

This feature is valid for Generics 4E27 and later. A previous version of this feature, 7883, was valid for Generics 4E25 and 4E26. Feature 7883 is documented in Product Release Document 234-090-253AC.

**Purpose** This chapter provides the user with a feature description, information on a final handling code, and transition considerations.

**Contents** This chapter contains the following topics:

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<b>Feature Description</b>	<b>6-3</b>
Description	6-3
Benefits	6-3
<b>Call Flow (Not Affected)</b>	<b>6-3</b>
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RC Forms 100, 101, 107, and 108	6-4
Verify Forms 1a, 1b, 11d, and 1e	6-4
<b>Recording (Not Affected)</b>	<b>6-5</b>
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## Feature Description

---

**Description** SDVG service allows interoperability of SDS and SDDN based video (for example narrowband ISDN) with similar services provided over broadband (for example, ATM, IP). The SDVG acts as a gateway between the customer's ATM/IP network and AT&T's SDS/SDDN network. For originating calls that require transport outside of the customer's ATM/IP network, the SDVG performs ATM/IP-ISDN protocol conversion and sends the calls to the *4ESS* over a commercial ISDN nodal PRI.

Since the customer is behind the SDVG and is only identified by the incoming Q.931 CPN, this feature requires that the *4ESS* use the Called Party Number (CPN) rather than the *4ESS* Trunk Subgroup (TSG) Billing Number, as the ANI for call processing (including TCAP queries, ISUP signaling, and AMA recording).

For terminating calls that require transport to the customer's ATM/IP network, the *4ESS* is currently designed to send calls to the SDVG over the same ISDN PRI. The SDVG performs ISDN-ATM/IP protocol conversion and completes the call to the customer.

**Benefits** This feature allows AT&T to properly bill and route customer calls which arrive at the *4ESS* switch from behind a subscribers video gateway.



## Call Flow (Not Affected)

---

## Provisioning

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### **RC Forms 100, 101, 107, and 108**

The following Recent Change form modifications apply to Generic 4E27 and later. The following RC forms are modified to add the new field **SDVG** to determine if the TSG is assigned as the SDVG TSG. This parameter is only provisionable for AT&T, incoming Q931 TSGs.

- RC FORM 100 – ADD a new two way Trunk Subgroup
- RC FORM 101 – ADD a new one way incoming Trunk Subgroup
- RC FORM 107 – CHANGE a two way Trunk Subgroup
- RC FORM 108 – CHANGE a one way incoming Trunk Subgroup

The **SDVG** field can have the following input values:

- **Blank** or **N** – DEFAULT, the TSG is NOT an assigned Switched Data Video Gateway.
- **Y** – The TSG is an assigned Switched Data Video Gateway.

**Note:** The SDVG field replaces the temporary use of the spare S10 field used in Generics 4E25 and 4E26.

### **Verify Forms 1a, 1b, 11d, and 1e**

The following Verify form modifications apply to Generic 4E27 and later. The following Verify forms are modified to add the new **SDVG** field:

- VERIFY Output Form 1a - Two-Way TSG Characteristics
- VERIFY Output Form 1b - One-Way Incoming TSG Characteristics
- INPUT Verify Request Forms 11d and 1e - VER:TSGLIST Input Request



## Recording (Not Affected)

---

## Network Management (Not Affected)

---

## Maintenance/Troubleshooting

---

**Final Handling Code** The following final handling code was created for Feature 7883 and continues to be used for this feature:

**FHC - 699**

**Last Normal Condition:** Received an NSF IE with the SDVG value in the parameterized field.

**Irregular Condition:** Did not receive a 10 digit calling party number IE or the subscription bit not set to Y.

**Final Handling:** The switch sends a release complete message indicating invalid information element.

## Transition Considerations

---

**Feature Deployment** It is not necessary for the 4E27 Release 1 Generic to be deployed in all switches for this feature to be fully operational.

This feature is valid for Generics 4E27 and later. The previous version of this feature, 7883, was valid for Generics 4E25 and 4E26.

**Feature Activation** This feature is activated by software deployment.



## Input/Output Manual Pages

---

**Input Messages - Modified** The following input message is modified with 4E27R1 and later generics:

**VER:TSGLIST**

**Output Messages - Modified** The following output messages are modified with 4E27R1 and later generics:

**VER:TSG-IN1WAY**  
**VER:TSG-LIST**  
**VER:TSG-TWOWAY**



# 7 AT&T Digital Link 711 Calling Capability Feature (8214)

## Overview

---

**Description** This feature provides the capability for AT&T Digital Link 2 (ADL2) customers to access the Telephone Relay Service (TRS) in any state using the three-digit code 711. Prior to this feature, customers must dial a specific 8YY number to connect to the TRS provider in a given state. This feature provides a simple and uniform way for callers to access TRS across the country. The Federal Communications Commission (FCC) has mandated that all local carriers support 711 service by October 1, 2001.

**Purpose** This chapter provides a feature description, network management information, and transition considerations.

**Contents** This chapter contains the following topics:

<b>Overview</b>	<b>7-1</b>
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Contents	7-2
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LDNC2 5ESS Customer Dials 711	7-8
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## Feature Description

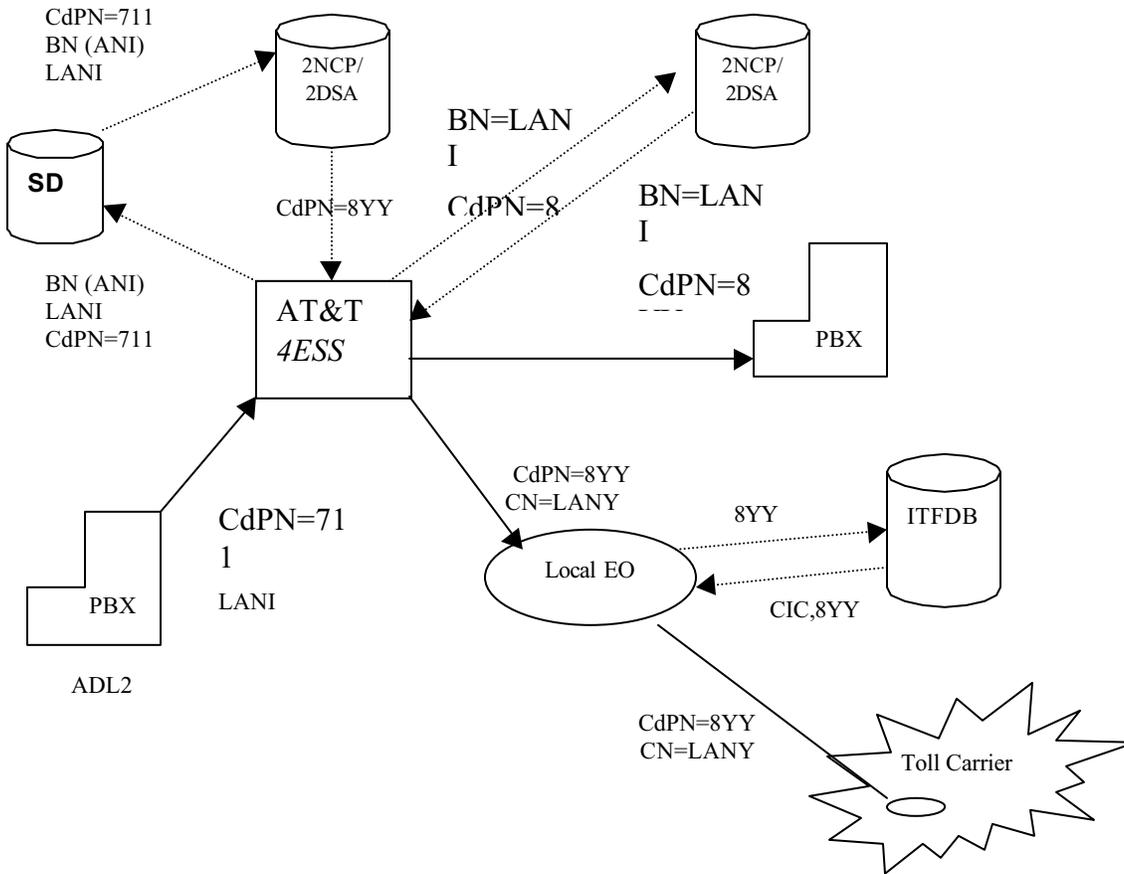
---

**Description** The Telephone Relay Service (TRS) is an existing service that allows Communication Associate (CAs) to facilitate phone conversations between a speech or hearing impaired person with a Telecommunication Device for the Deaf (TDD) and a hearing person. Deaf and hearing-abled callers access the TRS by calling a state specific 8YY number. Typically, each state contracts with a TRS provider, and the state specific 8YY number routes to this designated TRS provider. The customer must dial a different 8YY number in each state where he/she requires access to TRS. The three-digit code 711 has been designated and reserved to provide a uniform way for the callers to access TRS across the country, without regard to whom the actual TRS provider is in each state. Although the existing 8YY access numbers will remain available, 711 will provide a uniform alternative.

The Federal Communications Commission (FCC) has mandated that all local carriers support 711 service by October 1, 2001.

**Benefits** This feature provides a simple and uniform way for the callers to access TRS across the country, without regard to whom the actual TRS provider is in each state.

**Architecture** Figure 7-1: The Network Architecture.



## Call Flows

---

### ADL2 Customer Dials 711

The following call flow occurs when an ADL2 customer makes a call by dialing 711 over a PBX trunk group using DTMF, MF, DP, or Q.931 signaling.

1. The 4ESS recognizes the 3 digit dialed number of 711 and launches a query to the SD based on provisioning 711 with the new calldata value=XX (Note: XX is an existing spare call data value which will be defined for use by 711 as well as any other dialed string for which the 4E must query SD, but the 4E does not need to support a direct query to a 2DSA/2NCP). The query includes the BN, LANI, CPN, provided CPN (either LANI for inband customers or if PRI customers, provided CPN and if none provided = LANI)
2. The 4ESS sets the transition type based on the domain provisioned on the trunk group of SDN (SDNA domain or MEG (POTS domain) per Segmentation Directory Phase 2. Given that SDN and MEG are in SMO, the 4ESS will wait for a response from SD.
3. Based on the Dialed Number "711" SD derives a Customer ID and routes the query to the appropriate 2DSA/2NCP. (Note that a common customer ID is used for all "711" calls). The 711dialed number match takes precedence over SDN and PCP ANI matches. Note also that a single 2NCP pair (probably SDN) will be used for both SDN and MEG/PCP customers.
4. The 2DSA/2NCP Autonomous Logic performs normal processing and executes the CAL account associated with the Customer ID.
5. The new CAL account derives the 8YY number for the Telephone Relay Service Provider based on the customer location (State). The customer location (State) can be determined by the NPA or NPA-NXX of the LANI. If the NPA or NPA-NXX is not found the 2DSA/2NCP will send the 4E a vacant code announcement.
6. The 2DSA/2NCP sends the 4E an 8YY routing number (NOTE: There is no restriction against the NCP returning a POTS or APN). A charge bill call operation will not be provided.
7. If the routing number is a POTS or APN number, the 4ESS follows existing procedures defined for ADL by FRF 5371 and FRF 6330. **End of Call Flow** (Note: For 711, the routing number will be 877).
8. If the routing number is 8YY and in the HICAP Originating Table, then the call is processed as an AT&T 8YY call and the DSD is not queried. **End of Call Flow**
9. If the 8YY is not in the HICAP, then the 4E launches a query to the DSD based on call type of INWATS. The query includes the

- 8YY number as dialed number, LANI as the billing number, and backhaul screening indicator to "1" based on identifying the originating caller as ADL2 per FRF 5645.
10. If the 8YY number belongs to AT&T, the DSD will return an APN (or POTS) number. The 4ESS will route the call to the PBX and generate AMA of Structure Codes 0901-0904 and Local Module 947 per DSD instructions. **End of Call Flow.** (Note: In this case, the PBX customer is a center which performs the telephone relay service)
  11. If the 8YY number does not belong to AT&T or if the number is in the backhaul table, the DSD will send the 4ESS a message of "Missing Customer record" or "8YY Number Not in Database, Error in Customer Record, Other Miscellaneous Problems" respectively.
  12. The 4ESS will check the ISET table. If provisioned, will follow existing procedures. The 4ESS will generate a basic inbound 8YY record consisting of structure code 0901-0902. **End of Call Flow.**
  13. If the 8YY is not in the ISET, then because the Backhaul Screening indicator is set, the 4ESS will route the call to a local end office based on multiple treatment screening provisioning subject to the availability of 8YY haulback trunk groups. Based on trunk provisioning, the 4ESS will generate terminating access charge verification records (1098-1099).
  14. The Local end office will provide the Industry Toll Free Database (ITFDB) 8YY processing. The ITFDB will return the CIC of the carrier which owns the 8YY number. The End Office will route the call to the carrier. Note: The carrier could be AT&T if the 8YY number is shared. The carrier might also be the LEC. **End of Call Flow.**

#### 4E Nodal Dials 711

A nodal customer who is not subscribed to ADL should not be sending a 711 call to the 4ESS. However, if this does occur, the end result is that the 2DSA/2NCP will return an instruction for the 4ESS to play vacant code. The 2DSA/2NCP will not provide alarms for this scenario.

1. A Nodal customer dials 711 call over a PBX trunk group using DTMF, MF, DP, or Q.931 signaling.
2. The 4ESS recognizes the 3 digit dialed number of 711 and launches a query to the SD based on provisioning 711 with the new calldata value =XX (Note: XX is an existing spare call data value which will be defined for use by 711 as well as any other dialed string for which the 4E must query SD, but the 4E does not need to support a direct query to a 2DSA/2NCP if PRI customers, provided CPN if not available, blank). Note: A LANI is not available for nodal customers, and hence not sent in the query.

3. The 4ESS sets the transition type based on the domain provisioned on the trunk group of SDN (SDNA domain) or MEG (POTS domain) per Segmentation Directory Phase 2. Given that SDN and MEG are in SMO, the 4ESS will wait for a response from SD.
4. Based on the Dialed Number “711” SD derives a Customer ID and routes the query to the appropriate 2DSA/2NCP. (Note that a common Customer ID is used for all “711” calls). The 711 dialed number match takes precedence over SDN and PCP ANI matches. Note also that a single 2NCP pair (probably SDN) will be used for both SDN and MEG/PCP customers.
5. The 2DSA/2NCP Autonomous Logic performs normal processing and executes the CAL account associated with the Customer ID.
6. The new CAL account is unable to derive the 8YY number for the Telephone Relay Service Provider based on the customer location (State) since the customer location (State) can only be determined by the NPA or NPA-NXX of the LANI, which is not available.
7. The 2DSA/2NCP returns a vacant code to the 4ESS.
8. The 4ESS plays a vacant code announcement. **End of Call Flow.**

#### ADL5 Customer Dials 711

1. An ADL5 Customer dials 711 call over a PBX trunk group using DTMF, MF, DP, or Q.931 signaling.
2. The 5ESS pre-query ADL DAS is populated to allow 711 to query the SD using the ADL5 OHD trigger
3. The 5ESS queries the SD with the info\_collected message where
  - Calling Party ID= CPN if provided else blank
  - CollectedAdressInfo = 711, Domestic, ISDN
  - ChargeNumber = EON BN (End Office Billing Number, i.e. ANI),
  - Primary Carrier ID = 0288 or dialaround CIC
  - Carrier Selection Parameter = 00000001 if no dialaround, 00000010 if dial around and 0288, 00000100 if dialaround and not = 0288.
  - Extension parameter: LANI = 10 digits
  - Extension parameter: Access Type = Direct
4. Based on the Dialed Number “711” SD derives a Customer ID and routes the query to the appropriate 2DSA/2NCP. (Note that a common Customer ID is used for all “711” calls). The 711 dialed number match takes precedence over SDN and PCP ANI matches. Note also that a single 2NCP pair (probably SDN) will be used for both SDN and MEG/PCP customers.
5. The 2DSA/2NCP Autonomous Logic performs normal processing and executes the CAL account associated with the Customer ID.
6. The new CAL account derives the 8YY number for the Telephone Relay Service Provider based on the customer location (State). The customer location (State) can be determined by the NPA or NPA-NXX of the LANI. If the NPA or NPA-NXX is not found,

the 2DSA/2NCP will send the 5ESS a vacant code announcement.

7. The 2DSA/2NCP sends the 5ESS an Analyze\_ROUTE message with the
  - CallingPartyID = CPN, if provided else = LANI
  - CalledParty = 8YY routing number (Note: There is no restriction against the NCP returning a POTS or APN)
  - Charge Number = LANI
  - Primary Carrier = 0110 (i.e. LEC/Pseudo).
  - Carrier Usage = 0
  - No Furnish\_AMA or AMAslpd will be sent in the message.
8. If the routing number is a POTS (local/toll) or APN number, the 5ESS follows existing procedures defined for ADL by FRF 6938. **End of Call Flow. (Note: For 711, the routing number will be 8YY)**
9. Given that the PrimaryCarrier = 0110 (LEC/PSUEDO), the 5ESS will analyze the digits in the Local DAS.
10. The 8YY digits in the Local DAS will be defined as calltype = NS800 which causes the 5ESS to query the Industry Toll-Free Database (ITFDB).
11. The 5ESS will receive a CIC, a routing number, and AMA information from the ITFDB.
12. The 5ESS will route the call to the carrier based on CIC. The carrier could be the LEC, AT&T, or another IXC. The 5ESS will create an IEC Number Service Record (Structure Code 0360, Call Code 141). **End of Call Flow.**

#### LDNC2 5ESS Customer Dials 711

1. An LDNC2 Customer dials 711 call over a PBX trunk group using DTMF, MF, DP, or Q.931 signaling.
2. The 5ESS pre-query LDNC2 DAS is populated to allow 711 to query the SD using the ADL5 OHD trigger.
3. The 5ESS queries the SD with an info\_collected message where
  - Calling Party ID= CPN if provided else blank
  - CollectedAdressInfo = 711, Domestic, ISDN
  - ChargeNumber = EON BN (End Office Billing Number, i.e. ANI),
  - Primary Carrier ID = 0288 (Note: LDNC2 customers are not allowed dial around)
  - Carrier Selection Parameter = 00000001 if no dialaround
  - Extension parameter: LANI = 0000000000
  - Extension parameter: Access Type = Direct Connect.
4. Based on the Dialed Number "711" SD derives a Customer ID and routes the query to the appropriate 2DSA/2NCP. (Note that a common Customer ID is used for all "711 calls). The 711 dialed number match takes precedence over SDN and PCP ANI matches. Note also that a single 2NCP pair (probably SDN) will be used for

- both SDN and MEG/PCP customers.
5. The 2DSA/2NCP Autonomous Logic performs normal processing and executes the CAL account associated with the Customer ID.
  6. The new CAL account derives the 8YY number for the Telephone Relay Service Provider based on the customer location (State). The customer location (State) can be determined by the NPA or NPA-NXX of the LANI. If the NPA or NPA-NXX is 00000000, the 2DSA/2NCP will send the 5ESS a vacant code announcement.
  7. The 2DSA/2NCP sends the 5ESS a send\_to\_resource message with vacant code treatment.
  8. The 5ESS Plays the vacant code announcement. **End of Call Flow.**

## Provisioning

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**RC Forms 300-304** A new DSD calltype sub-type calltype, 4XLCDS6, will be assigned to AT&T Digital Link 711 Capabilities Feature and is populated via codegrouping Recent Change (RC) Forms: 300-304

**Verify Forms 3a, 3c, 3e, 3g, 3v, 13b, and 13c** The DSD calltype sub-type is verified by Verify Forms 3a, 3c, 3e, 3g, 3v, 13b and 13c

## Recording (Not Affected)

---

## Network Management (Not Affected)

---

## Maintenance/Troubleshooting

---

**Final Handling Code** The following final handling code was created for this feature:

**FHC** - of 729

**Last Normal Condition:** Received a response from the SD database.

**Irregular Condition:** Encountered either a revert to PMO request from the SD or an Error while communicating with a SD on a call with a Non-Routable number.

**Final Handling:** The call will be terminated.

## Transition Considerations (Not Affected)

---

## Input/Output Manual Pages (Not Affected)

---



# 8 Modification Request (MR) to Feature 4941 - ISUP to Q931 Clearing Message Feature (8364)

## Overview

---

**Description** This feature supports ISDN User Part (ISUP) Release message interworking into a Q.931 Disconnect message for Transfer Connect calls that interact with Alternate Destination Routing (ADR).

**Purpose** This chapter provides the user with a feature description and transition considerations.

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	<b>Feature Description</b>	<b>8-3</b>
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	Benefits	8-3
	<b>Call Flow (Not Affected)</b>	<b>8-3</b>
	<b>Provisioning (Not Affected)</b>	<b>8-3</b>
	<b>Recording (Not Affected)</b>	<b>8-3</b>
	<b>Network Management (Not Affected)</b>	<b>8-3</b>
	<b>Maintenance/Troubleshooting (Not Affected)</b>	<b>8-4</b>
	<b>Transition Considerations</b>	<b>8-4</b>
	Feature Deployment	8-4
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	Feature Activation	8-4
	<b>Input/Output Manual Pages (Not Affected)</b>	<b>8-4</b>



## Feature Description

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**Description** Transfer Connect Service (TCS) is a network based redirection service offered to customers who subscribe to AT&T's advanced toll-free (A8YY) service. This subscription-based service enables AT&T toll-free customers to transfer or redirect a call in progress to another 8YY number.

ADR is a toll-free advanced feature that allows the customer to specify a primary and a secondary destination for call completion. This feature defines a new ADR trigger for TCS.

**Benefits** This feature allows all No Circuit Available (NCA) conditions to be captured and documented more effectively for customer use.



## Call Flow (Not Affected)

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## Provisioning (Not Affected)

---

## Recording (Not Affected)

---

## Network Management (Not Affected)

---

## Maintenance/Troubleshooting (Not Affected)

---

### Transition Considerations

---

**Feature Deployment** Full deployment of this feature in the network is not necessary for this feature to be fully operational.

This feature is deployed as a Software Change Package (SCP) to Generic 4E26.

**Feature Dependencies** This feature is dependent on the following Features:

- 4941 - ADR Recording Changes for Interaction with TCS-NAP (Documented in Product Release Document 234-090-224AC)
- 6657 - MR to ADR Recording Change (4941) (Documented in Product Release Document 234-090-234AC)

**Feature Activation** This feature is activated by software deployment.



## Input/Output Manual Pages (Not Affected)

---



# 9 Marking All Eligible ASN Trunks Assigned on DIFs and DTs as SCGA Feature (8390)

## Overview

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**Description** This feature allows Office Data Management System (ODMS) to mark all eligible AT&T Switched Network (ASN) trunks assigned on Digital Interface Frames (DIFs) or Digroup Terminals (DTs) as Software Carrier Group Alarm (SCGA) for the 4E27R1 and 4E28R1 Office Data Assembler (ODA) retrofits.

**Purpose** This chapter provides a feature description, network management information, and transition considerations.

**Contents** This chapter contains the following topics:

<b>Overview</b>	<b>9-1</b>
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<b>Feature Description</b>	<b>9-3</b>
Description	9-3
Benefits	9-3
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## Feature Description

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**Description** The SCGA automatically handles the removal and restoral of trunks following Voice Path Assurance (VPA) call related failures. Previously, many ISDN User Part (ISUP) and E&M trunks in the AT&T Network were not provisioned with the SCGA capability. This feature provides an ODA retrofit rule to mark eligible trunks that are assigned on DIFs or DTs as SCGA for the 4E27R1 and 4E28R1 ODA retrofits.

The following is the new rule:

- Populate a "Y" on all ASN trunks that use eligible SS7 (ISUP) or E&M (MFWINK, MFDDSD, DPDDSD, DPWINK and DTMFWK) signaling AND terminate on a DIF or DT frame.
- Populate an "N" on all ASN trunks that use eligible SS7 (ISUP) or E&M (MFWINK, MFDDSD, DPDDSD, DPWINK and DTMFWK) signaling AND terminate on an XTSI frame.
- Leave this field blank for all ASN trunks that use ISDN (Q931), CCITT5 or CCITT7 (INUP or TUP) or any other signaling not mentioned above.

Note that no international trunks are eligible for this retrofit rule.

**Benefits** This feature simplifies the process of changing existing trunks to SGCA by doing it at retrofit time as part of the ODA process.



## Call Flows (Not Affected)

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## Provisioning (Not Affected)

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## Recording (Not Affected)

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## Network Management

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**SNOW-T** This feature affects Service Now - Trunking (SNOW-T).

The following is the new SCGA rule for the 200 and 203 Recent Change forms:

- Populate a "Y" on all ASN trunks that use eligible SS7 (ISUP) or E&M (MFWINK, MFDDSD, DPDDSD, DPWINK and DTMFWK) signaling AND terminate on a DIF or DT frame.
- Populate an "N" on all ASN trunks that use eligible SS7 (ISUP) or E&M (MFWINK, MFDDSD, DPDDSD, DPWINK and DTMFWK) signaling AND terminate on an XTSI frame.
- Leave this field blank for all ASN trunks that use ISDN (Q931), CCITT5 or CCITT7 (INUP or TUP) or any other signaling not mentioned above.



## Maintenance/Troubleshooting (Not Affected)

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## Transition Considerations

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**Feature Deployment** It is not necessary for this feature to be deployed in all switches for it to be fully operational.

**Feature Activation** This feature is activated automatically during the ODA retrofit process.



## Input/Output Manual Pages (Not Affected)

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# A Release Summary - 4E27 Release 1 Generic

## Overview

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**Purpose** This appendix summarizes the growth and retrofit documents, input and output messages, the OS interfaces, new or changed alarms, measurements, and the feature activation summary for the 4E27 Release 1 Generic Product Release Document (PRD). This includes Software Change Packages (SCPs) documented in this PRD.



**Contents** This Appendix contains the following topics:

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## Growth and Retrofit Documents (Not Affected)

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## Input/Output Messages (Not Affected)

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## OS Interfaces (Not Affected)

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## New or Changed Alarms (Not Affected)

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## Measurements/OSOR (Not Affected)

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## Feature Activation Summary

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### **Feature 8024 and 8024i Switched Access 8YY Originations at the Edge - Phase 1**

To activate this feature, **PF88** (Feature 8024) must be set to **ON** (Default = OFF). Also, the following feature bits must be set to ON:

- **PF79** (Feature 7264) must be set to ON (Default = OFF)
- **PF82** (Feature 7698) must be set to ON (Default = OFF)

Please note the following:

- This feature (Feature 8024) and its corresponding feature bit (PF88) should not be turned on in the 4E27 Release 1 timeframe.
- PF88 activation is independent of PF79 and PF82.

### **Feature 8045 Capacity Relief on 1B Main Memory for 4E27**

This feature is activated by software deployment.

### **Feature 8092 4ESS Real Time Capacity Mining**

This feature is activated by software deployment.

The capability of Call Irregularity Save 1B Real Time is provisioned separately, using feature bit PF87. To activate the Call Irregularity Save 1B Real Time, PF87 must be set to ON (Default = OFF).

### **Feature 8093 4ESS API Capacity Mining**

This feature is activated by software deployment.

**Feature 8141 TTA Over ATM Route Advance Trigger**

This feature is activated by software deployment.

**Feature 8202 Billing Number for Switched Data Video Gateway (SDVG)**

This feature is activated by software deployment.

**Feature 8214 AT&T Digital Link 711 Calling Capacity**

This feature is activated by software deployment.

**Feature 8364 Modification Request (MR) to Feature 4941 - ISUP to Q931 Clearing Message**

This feature is activated by software deployment.

**Feature 8390 Marking All Eligible ASN Trunks Assigned on DIFs and DTs as SCGA**

This feature is activated by software deployment.

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# B Acronyms and Abbreviations

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**Purpose** The following is a cumulative list of acronyms and abbreviations used throughout Product Release Documents (PRDs).

Acronym/Abbreviation	Definition
2DSA	No. 2 Direct Services – ANI Based
2DSD	No. 2 Direct Services Dialing
2NCP	No. 2 Network Control Point
2NCPAS	2 Network Control Point Administration System
AAP	Announcement Administrative Process
AATOS	Alternate Access to Operator Services Signaling
ACD	Automatic Call Distributor
ACG	Automatic Call Gapping
ACG	Automatic Code Gap
ACK	Acknowledge
ACM	Address Complete Message
ACP	Action Control Point
ACV	Access Charge Verification
AD3	Additional Data 3
ADA	ANC Dial-Around
ADL	AT&T Digital Link
ADL2	AT&T Digital Link 2

<b>Acronym/Abbreviation</b>	<b>Definition</b>
ADL4	AT&T Digital Link 4
ADL5	AT&T Digital Link 5
ADL-V	AT&T Digital Link-Phase V
ADR	Alternate Destination Routing
AILS	Automatic Inward Line Screening
AIN	Advanced Intelligent Network
AIWS	AT&T International Wholesale Service
ALA	Adjunct Logical Address
ALAMO	AT&T Local Access Management Option
ALI	Automatic Line Identification
ALN	AT&T Local Network
AMA	Automatic Message Accounting
ANC	AT&T Network Connections
ANI	Automatic Number Identification
ANICAR	Automatic Number Identification Call Attempt Record
ANI-TT	ANI Trigger Table
ANSI	American National Standards Institute
ANT	Alternate Number Transition
AP	Attached Processor
API	Attached Processor Interface
APN	Action Point Number
APS	Attached Processor System
AR	Automatic Routing
ARN	Advanced Remote Node
ARS	Automatic Route Selection
ASCIT	AT&T Service/Call ID Type
ASN	AT&T Switched Network
AT	Access Tandem
ATM	Asynchronous Transfer Mode
ATP	AT&T Trigger Platform
ATP	Alternate Transport Provider
ATV	AT&T Trigger Validation
AVA	Access Value Arrangement
BAF	Bellcore AMA Format
BCD	Binary Coded Decimal
BCIC	Basic Carrier ID Code
BCN	Backbone Concentrator Node
BCSN	Billing Call Sequence Number
BHCA	Busy Hour Call Attempt
BILLDATS	Billing Data Acquisition and Transfer System
BLC	Base Level Cycle
BLCNT	Billing Count

<b>Acronym/Abbreviation</b>	<b>Definition</b>
BLDS	Business Long Distance Service
BMD	Business Markets Division
BN	Billing Number
BSI	Backhaul Screening Indicator
BWM	Broadcast Warning Message
CAC	Carrier Access Code
CAC	Customized Announcement Capabilities
CADCR	Centralized Alternate Direct Call Routing
CADCS	Call Attempt Data Collection Service
CAL	Customer Account Logic
CAL	Customer Application Logic
CAL	Customer Application Language
CAMA	Centralized Automatic Message Accounting
CAS	Competitive Access Provider
CAUCS	Centralized Announcement Update Control System
CBIS	Cincinnati Billing Information System
CC	Call Code
CC	Central Control
CC	Country Code
CCCV	Commercial Credit Card Validation
CCIS	Common Channel Interoffice Signaling
CCITT	International Telegraph and Telephone Consultative Committee
CCITT7	CCITT Signaling System No. 7
CCS	Hundred-Call Seconds
CCS	Common Channel Signaling
CCS7	Common Channel Signaling System No. 7
CCT	Continuity Check Transceiver
CCT	Continuity Check Test
CDDS II	Call Detail Data System II
CDN	Calling Directory Number
CdPN	Called Party Number
CDRP	Call Detail Recording Platform
CIC	Carrier Identification Code
CID	Carrier Identification
CIM	Call Irregularity Message
CIP	Calls in Progress
CIP	Carrier Identification Parameter
CIR	Call Irregularity Report
CLD	Consumer Long Distance
CLEC	Certified Local Exchange Carrier
CLF	Clear Forward

<b>Acronym/Abbreviation</b>	<b>Definition</b>
CLLI	Common Language Location Identifier
CMC	Cellular Mobile Carrier
CMD	Consumer Market Division
CN	Calling Number
CN	Charge Number
CNI	Common Network Interface
CNRDB	Common Network Routing Database
COS	Class of Service
COT	Continuity Test Successful
CPA	Common Platform Adjunct
CPC	Calling Party Category
CPE	Customer Premises Equipment
CPED	Call Processing Execution District
CPN	Calling Party Number
CPPA	Calling Party Pays Airtime
CPPS	Call Processing Process Support
CPR	Call Processing Number
C-PRI	Commercial PRI
CPUP	Call Processing Upchained
CR	Call Register
CRB	Crankback
CRI	Carrier Routing Index
CS	Carrier Solutions
CSC	Circuit Selection Capability
CSCI	Circuit Selection Capability Indicator
CSCR	Circuit Selection Capabilities Routing
CSI	Carrier Selection Information
CSMC	Consumer Services Management Center
CSMS	CMD Service Management Center
CSN	Carrier Solutions Nodal
CSRO	Customer Specific Routing Option
CW	Compare Word
DARICS	Data Acquisition and Reports, Integrated Communications System
DAS	Digit Analysis Selector
DB	Data Base
DCI	Dual-serial Channel Interface
DCIC	Domestic Carrier ID Code
DCN	D-Channel Nodes
DDD	Direct Distance Dialing
DECOS	Domestic End-to-End Class of Service
DEMS	Dynamic Engineering Mechanized System
DFS	Directory Function Server

<b>Acronym/Abbreviation</b>	<b>Definition</b>
DHNR	Dynamic Non-Hierarchical Routing
DID	Direct Inward Dialing
DIF	Digital Interface Frame
DL	Digital Link
DLN	Direct Link Node
DMS	Database Management System
DN	Destination Number
DN	Dialed Number
DN	Directory Number
DNHR	Dynamic Non-Hierarchical Routing
DNIS	Dialed Number Identification Service
DNST	Dialed Number Services Type
DNTT	Dialed Number Trigger Table
DOD	Direct Outward Dialing
DOW	Day of Week
DP	Dial Pulse
DPM	Dual Ported Memory
DPSMO	Delete Permanent SD Mode of Operation
DS1	Digital Signal 1
DSA	Direct Services ANI
DSA	Direct Services Application
DSAS	Direct Signaling Assignment System
DSCH	Dual Serial Channel
DSD	Direct Services Dialing
DSN	Destination Switch Number
DSTAT	Domestic Status
DTIM	Display TNM Integrator Module
DTMF	Dual Tone Multi-Frequency
DTO	Dedicated Trunk Sub-group Option
DWAN	Dedicated Wide Area Network
EA	Equal Access
EACC	Equal Access Circuit Code
EBAF	Extended Bellcore AMA Format
ECD	Equipment Configuration Data
ECOS	End-to-End Class of Service
ECR	Enhanced CIC Routing
EDP	Elimination of Dual Provisioning
EDR	Efficient Data Representation
EO	End Office
EOLN	End Office Local/Nodal
EON	End Office Nodal
EOT	End of Transmission
ERI	Egress Route Number

<b>Acronym/Abbreviation</b>	<b>Definition</b>
ERPI	ECOS Routing Pattern Identity
ES	Edge Switch
ESB	Emergency Services Board
ESCR	Enhancements for Special CIC Routing
ESI	Egress Switch Indicator
ESRF	Enhancements to Special Routing Features
ESS	Electronic Switching System
ETC	End-Office Toll Connect
ETD	ECOS Trunk Data
EUSEC	Enhanced USEC
EV	Edge Vehicle
FAI	Foreign Administration Identity
FCC	Federal Communications Commission
FEALN	Far-End AT&T Local Network
FEAREA	Far End AREA
FEN	Far End Network
FENPA	Far End Numbering Plan Area
FEOFC	Far End Office Code
FG-C	Feature Group C
FG-D	Feature Group D
FHC	Final-Handling Code
FHT	Final Handling Treatment
FI	Feature ID
FITR	Forced Intertoll Routing
FO	Feature Options
FRF	Feature Request Form
FRS	Feature Requirement Specifications
FSD	Feature Specification Document
FVSR	Force Via Switch Routing
FVSR TT	FVSR Trigger Table
GAP	Generic Address Parameter
GETS	Government Emergency Telecommunications Service
GNFMC	Global Network Fraud Management Center
GOP	Generic Operations Parameter
GSDN	Global Software Defined Network
GSDS	Global Switched Digital Service
GSS	GTN Support System
GTD	Generic Transition Document
GTT	Global Title Translation
HAS	Hand-off AT&T Switch
HICAP	High Capacity
HOT	HICAP Originating Treatment

<b>Acronym/Abbreviation</b>	<b>Definition</b>
HU	High Usage
I/O	Input/Output
I800	International 800
IAM	Initial Address Message
IBSS	In-Band Supervisory Signaling
IBU	In-Band Unit
ICDR	International Call Detail Recording
ICIC	International Carrier ID Code
ICLD	International Consumer Long Distance
ICTRC	International Call Trouble Receipt
IDB	INWATS Database
IDDD	International Direct Distance Dialing
IE	Information Element
II	Information Indicator
II	Interexchange Identifier
ILD	International Long Distance
ILEC	Incumbent Local Exchange Company
INC	Industry Numbering Committee
INPA	Interchangeable NPA
INR	Intelligent Network Register
INRG	International Routing Group
INWATS	Inward Wide Area Telephone Service
IP	Internet Protocol
IPGW	IP Gateway
IR	ISDN Register
IRAS	Integrated Routing Assignment System
IRN	Integrated Ring Node
ISAIC	Improved Service Announcement & Information Collection
ISC	Incoming Signaling Characteristic
ISC	International Switching Center
ISDN	Integrated Services Digital Network
ISET	Inbound Services Emergency Translation
ISTAT	International Status
ISUP	ISDN User Part
IT	Internet Telephony
ITAMAC	International Transit, Accounting, Maintenance and Analysis of Calls
ITE	Installation Test Equipment
ITFDB	Industry Toll-Free Data Base
ITFS	International Toll Free Service (formerly I800)
ITN	Integrated Test Network

<b>Acronym/Abbreviation</b>	<b>Definition</b>
IT-T	International Telecommunications Union-Telecommunications
IVT	International Voice Transit
IWZ1	International World Zone 1
IXC	Interexchange Carrier
JIP	Jurisdiction Information Parameter
LACIDs	Logical Access Identifiers
LAN	Local Area Network
LANI	Local Automatic Number Identification
LATA	Local Access and Transport Area
LATT	Loop Around Transceiver Test
LCC	Local Carrier Connecting
LCC	Local Exchange Carrier Connecting
LCVT	Local Service Validation Test
LD	Long Distance
LDIT	Local Digit Interpreter Table
LDNC	Long Distance Nodal Concentration
LDS	Long Distance Service
LEC	Local Exchange Carrier
LERG	Local Exchange Routing Guide
LNP	Local Number Portability
LRN	Location Routing Number
LSP	Local Service Provider
LTD	Local/Toll Differentiation
LVL	Level
MAP	Mass Announcement Platform
MCC	Master Control Complex
MCS	Micro Control Store
MCT	Multiple Carrier Treatment
MDN	Miscellaneous Distribution Number
MDR	Multiple Destination Routing
MF	Multi-Frequency
MLSS	Machine Load and Service Summary
MML	huMan Machine Language
MMOC	Minicomputer Maintenance Operations Center
MOC	Maintenance Operations Center
MOSS	Modified Operator Services Signaling
MPS	Message Processing System
MR	Modification Request
MRII	Match Restriction Indicator Information
MRT	Multiple Routing Treatment
MSI	Market Segmentation Indicator
MSN	Miscellaneous Scanner Number

<b>Acronym/Abbreviation</b>	<b>Definition</b>
MTP	Message Transfer Part
MTP	Message Transfer Protocol
MUP	MCC Utility Processor
MW	Megaword
NAI	Network Access Interrupt
NAMACC	National AMA Control Center
NANP	North American Numbering Plan
NAP	Network Adjunct Platform
NCA	No Circuit Announcement
NCA	No Circuits Available
NCC	Network Control Center
NCP	Network Control Point
NCP&D	Network Capacity Planning & Delivery
NCS	Network Control Point
NDIG	Next Digit
NE	Non Emergency
NEMOS	Network Management Operations System
NESAC	National Electronic Systems Assistance Center
NESV	Network Edge Switch Vehicle
NFM	Network Fault Management (formerly TNM)
NI-2	National ISDN-2
NID	Network ID
NIS	Network Implementation Services
NN	Nation Number
NOC	Network Operations Center
NOC-INM	Network Operations Center-International Network Management
NOE	Network Operations Enterprise
NP	Node Processor
NPA	Numbering Plan Area
NPAC	Number Portability Administration Center
NPP	Network Provisioning Platform
NR	Non-Call Register
NRA	Network Remote Access
NRAMS	Network Remote Access Monitoring System
NRM	Network Recording Management
NRN	Network Routing Number
NS	Network Services
NSA	Network Service Automator
NSAC	Non-Simultaneous Authorization Code
NSD&M	Network Service Delivery & Maintenance
NSF	Network-Specific Facilities
NSM	Network Services Maintenance

<b>Acronym/Abbreviation</b>	<b>Definition</b>
NSN	Network Switch Number
NSP	Network Services Provisioning
NTM	Non-Traditional Market
NVT	Network Verification Testing
NWM	Network Management
NWZ1	Non-World Zone 1
OAID	OSPS Access ID
OAR	Originating Access Record
OAS	Originating AT&T Switch
OCC	Other Common Carrier
OCC	Originating Country Code
OCDD/RT	On-line Call Detail Data/Real Time
OCTCP	Originating Carrier/Terminating Carrier Pair
ODA	Office Data Assembler
ODAD	ODA Data
ODMS	Office Data Management System
ODP	Office Dialing Plan
OE	Operator Express
OGT	Outgoing Trunk
OHD	Off-Hook Delay
OLI	Originating Line Identifier
OLP	Off-Line Processor
OOB	Out of Band
OS	Operating System
OSC	Outgoing Signaling Characteristic
OSI	Operator Systems Indicator
OSOR	On Site Operations Report
OSPS	Operator Services Position System
OSPSID	Operator Service Position System Identification
OSSs	Operation Support Systems
OST	Originating Station Type
OTP	Operations Technical Plan
P.CarrierID	Primary Carrier ID
PABO	Protected, Disk-backed, API-Accessible, ODA-Generated
PAS	Public Announcement System
PASP	Public Safety Answering Point
PBAO	Protected, Simplex, Disk-backed, API accessible and ODA
PBX	Private Branch Exchange
PC	Point Code
PCP	Positive Call Processing
PDIT	Prefix/Feature Digit Interpreter Table

<b>Acronym/Abbreviation</b>	<b>Definition</b>
PDN	Pseudo-Destination Number
PDV	Pre-Defined Variable
PECC	Product Engineering Control Center
PI	Precedence Index
PIC	Presubscribed Inter-exchange Carrier
PLU	Positive Lookup Table
PMO	Present Mode of Operation
PNLCT	Prohibit No-Loopback Continuity Check Test
POP	Point of Presence
POTS	Plain Old Telephone Service
PRD	Product Release Document
PRI	Primary Rate Interface
PRIT	Primary Rate Interface Type
PRT	Proportional Routing Treatment
PS-ALI	Public Safety-Automatic Location Identification
PSE	Program Store Expansion
PSMO	Permanent SD Mode of Operation
PSTN	Public Switched Telephone Network
PTC	Primary Toll Carrier
PTT	Post Telephone and Telegraph
PUC	Public Utilities Commission
PV	Performance Verification
PVC	Permanent Virtual Circuits
QDRS	Quantum Data and Routing System
QH	Quiet Hear
RA	Route Advance
RAM	Random Access Memory
RAO	Revenue Accounting Office
RBC	Rate Based Control
RC	Recent Change
RC/V	Recent Change/Verify
RCAS	Recent Change Administration System
RCC	Radio Common Carrier
RDB	Routing Data Block
RICS	Recorded Information Collection System
RLC	Release Complete Message
RN	Routing Number
RO	Remote Operations
RP	Redirecting Party
RPC	Regional Processing Center
RPI	Route Pattern Index
RSI	Route Selection Index
RTNR	Real-Time Network Routing

<b>Acronym/Abbreviation</b>	<b>Definition</b>
RTR	Real-Time Reliable
RUAS	Remote Utility Access System
RUT	Routine USEC Testing
SAFER	Split Access Flexible Egress Routing
SAN	Service Circuit System Announcement
SC	Structure Code
SCCP	Signaling Connection Control Protocol
SCGA	Software Carrier Group Alarm
SCP	Software Change Package
SCS	Service Circuit System
SCSI	Small Computer Systems Interface
SCU	Service Circuit Unit
SD	Segmentation Directory
SDDN	Software Defined Data Network
SDE	Software Development Environment
SDI	Switched Digital International
SDDN	Software Defined Data Network
SDN	Software Defined Network
SDN	Switched Digital Network
SDQ	SD Query
SDR	SD Response
SDS	Switched Digital Service
SDTT	Segmentation Directory Transition Type
SDX	Subsequent Digit Index
SG	Software Generation Data
SI	Service Identity
SI	Service Index
SIC	Service Indicator Code
SID	Station Identification
SII	Service Identity Index
SMO	SD Mode of Operation
SMO	Segmentation Mode of Operation
SMS	Service Management System
SNAS	Signaling Network Administration System
SNET	Southern New England Telephone
SNOW-R	Service NOW-Routing
SNOW-T	Service NOW-Trunking
SOP-P	Signaling Operations Platform-Provisioning
SP	Service Processor
SPC	Switching and Permuting Circuit
SPSI	Service Processor Service Indicator
SPU	Signal Processing Unit
SS7	Signaling System 7

<b>Acronym/Abbreviation</b>	<b>Definition</b>
SSC	Special Service Code
SSN	Subsystem Number
SSO	Sub-System Overload
SSU	Standard Service Unit
STIM	Satellite TNM Integrator Module
STOR	Send to Outside Resource
STP	Signaling Transfer Point
STT	Success To the Top
SUR	Standard Usage Record
TA	Telecommunications Administrator
TAN	Trunk Appearance Number
TAS	Terminating AT&T Switch
TAR	Terminating Access Record
TBN	True Billing Number
TCAP	Transaction Capabilities Application Part
TCC	Technology Control Center
TCS	Transfer Connect Service
TEC	Terminal Equipment Center
TG	Trunk Group
TG-4	Translation Guide 4ESS
TIM	Tandem NFM Integrator Module
TMR	Trunk Maintenance Register
TNM	Total Network Management
TNS	Transit Network Selection
TOD	Time of Day
TOP	Task Oriented Practice
TOT	Type of Trunk
TOW	Time of Week
TP	Target Party
TPC	Transport Capability
TQR	Test Query Register
TS	Time Slot
TSAA	Terminating Switched Access Arrangement
TSG	Trunk Subgroup
TSI	Time Slot Interchange
TSM	Tandem NFM Surveillance Module
TSN	Trunk Scanner Number
TT	Transition Type
TT	Transport Tariff
TTA	Terminating Traffic Architecture
TTUSFI	Transport Tariff Usage Sensitive Feature Indicator
TUP	Telephone User Part

<b>Acronym/Abbreviation</b>	<b>Definition</b>
TV	True Voice
UGTT	Universal Global Title Translation
UIFN	Universal International Freephone Number (Format = 800+8-digits)
UMIU	Unidentified Message Investigation Unit
US	Utility System
USDS	Universal Subscriber Data Structure
USDS	Universal Subscriber Data Service
USEC	Universal Services Echo Canceler
USI	User Service Information
UTA	Universal T1.5 Access
UII	User to User
VAS	Via AT&T Switch
VCA	Vacant Code Announcement
VCR	Voicepath Cancellation Rate
VoIP	Voice Over Internet Protocol
VPA	Voice Path Assurance
VRUs	Voice Response Units
VSSID	Voice Storage System Identity
VTNS	Virtual Telecommunications Network Service
VTOC	Volume Table of Contents
WATS	Wide Area Telephone Service
WATSBN	WATS Billing Number
WCS	Windowed Call Store
WEFOS	WATS Eight Hundred Family of Services
WS	Workstation
XPCC	XTSI Per Call Control
XTSI	Expanded Time Slot Interchange
Y2K	Year 2000



# C Master Index of Product Release Documents (PRDs)

## Overview

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**Purpose** This appendix contains a complete list of all features documented in Product Release Documents (PRDs). Features are listed by number, name, and PRD number. Revisions to a PRD are shown as, “Rev1, Rev2,” etc. New issues of a PRD are shown as, “Iss 2,” etc.

# Master Index

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103a	200 Direct Services Dialing Numbering	234-090-161AC
104	6-Digit GTT	234-090-153AC
105	Signaling End Point Rehomeing	234-090-154AC
106	Message Transfer Part LATA Routing	234-090-171AC
108	Reduction of NCP Transfer	234-090-152AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
110	Inbound HICAP Network Control Point Bypass	234-090-161AC
111	Carrier Proportioned Routing	234-090-161AC
112	Feature Group D to Feature Group C Reversions-Pt 2	234-090-153AC
113	Screening/Recording of Cellular Mobile Calls	234-090-152AC
114	Multiple Progress Messages	234-090-154AC
115	ASN Switched Digital Service Network Interconnect for 384	234-090-152AC
117a	Emergency Signaling Transport Network-OA&M Requirements-Ph 2 Pt 1	234-090-154AC
117b	Emergency Signaling Transport Network-Ph 1: Pt 2	234-090-161AC
120	Inbound Action Point Numbering-GSDN Ph 3	234-090-154AC
121	Handling Additional TR-394 Exceptions	234-090-161AC
122	Coding Standard Field of the Cause Parameter	234-090-161AC
125	Expand Network Switch Number Limit	234-090-161AC
126	Intranet Signaling Connection Control Part Routing Verification Test	234-090-153AC
127a	SAFER Final Handling Announcements-Part 1	234-090-153AC
127b	SAFER Final Handling Announcements-Part 2	234-090-171AC
128	Switched Digital Service Between Direct-Connect and Switched Access Customers	234-090-154AC
129	Remote Measurement System-Gateway 2 Release 2	234-090-161AC
131	Network Management International Switching Center Transit Traffic	234-090-161AC
132	ANI Forwarding	234-090-154AC
134c	Selective Key Service Protection TSG Preference Indicator	234-090-161AC
135	Ph 0-Direct Connect ISUP	234-090-154AC
136	Command-Initiated Link Fault Sectionalization	234-090-171AC
137	Switched Digital International Premature ACM	234-090-152AC
140	Temporary Signaling Connection Teardown Command	234-090-154AC
141	4ESS Notification to CPE of Temporary Signal Connection Internal Tear-down	234-090-153AC
142	OP:TSC Command	234-090-154AC
144	CCITT7 Overlap Signaling	234-090-162AC
145	Multiquest Sponsor Flexible Rating	234-090-163AC
147	Additional Buffer for Customer Account Service Card	234-090-161AC
148	INFO II Plus	234-090-161AC
149	Centralized Alternate Destination Call Redirection	234-090-154AC
150	International Hard to Reach improvements	234-090-172AC
151a	Processor Outage-Ph 1	234-090-171AC
151d	Processor Outage-Ph 2	234-090-173AC
152	Multiple Trunk Group Assignment	234-090-172AC
156	Completion of Transmission Path	234-090-171AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
157	Handling Confusion Messages	234-090-171AC
158	Routing Based on Speech and 3.1 kHz Bearer Capability	234-090-171AC
159	Rlse Trmnt w/TNS in IAM	234-090-181AC
160	OA&M Enhancements	234-090-171AC
161	FG-D CIC Expansion (LEC)	234-090-181AC
165	Emergency Alternate Routing	234-090-171AC
166	Advanced Off-Net Overflow	234-090-154AC
167	SDDN Yellow Alarm	234-090-152AC
174	Multiquest AMA Recording for Call Counter	234-090-172AC
176	Interchangeable NPA Codes	234-090-171AC
184	CCITT Message Transfer Part Emergency Alignment	234-090-161AC
186	Egress Data Recording	234-090-164AC
189	D-Channel Node Capacity Increase	234-090-171AC
190	Extended Call Store	234-090-162AC
191	Presubscription Indicator Recording	234-090-161AC
193a	PCP Release 3 - Basic	234-090-172AC
194	Recording Capacity Improvement	234-090-171AC
195	MTP User Flow Control Via Processor Outage	234-090-154AC
198	Forced Link Node Restart-LEC	234-090-162AC
204a	800 Class Of Service-Ph 1	234-090-154AC
204b	800 Class Of Service-Ph 2	234-090-162AC
207	4ESS Access to Common Platform Adjunct	234-090-172AC
207a	Network Management for Enhanced Adjunct-Based Capability	234-090-172AC
208	Intelligent Call Processing - Caller Information Forwarding	234-090-171AC
208a	Intelligent Call Processing - Interim Caller Info Forwarding	234-090-162AC
211	Modified Trunk Sub-Group Data	234-090-171AC
212	Provide Timeout Counts and Discretes for TNM Operations Systems	234-090-161AC
213	Trunk Sub-Group Interest List for RNMS	234-090-172AC
217a	D-Channel Node Layer 2 Error Handling Enhancement	234-090-171AC
217b	ISDN HO Channel Encoding Enhancements	234-090-171AC
219a	3B Processor SCSI Disk - Hardware	234-090-162AC
219b	3B Processor SCSI Disk - Software	234-090-171AC
220	Quantum	234-090-153AC
221	Small Scale Adjunct	234-090-164AC
222	Sftwe ReEngg - Using ECS	234-090-171AC
224	Removal of Digital Preference	234-090-161AC
226	SDI Transit Fiber Request	234-090-162AC
227	Carrier Group Alarm Activate/Deactivate Message Enhancement	234-090-154AC
229	Alternate Signaling Transport Network Enhancements	234-090-162AC
230	Call Merge for Adjunct	234-090-172AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
239	DLNE Memory Increase	234-090-181AC
240	Passing Original Called Number	234-090-154AC
242	ISUP Suspend/Resume to Q.931 for SDN Improved Sequence Dialing	234-090-161AC
243	3.1 KHz Audio Mapping Between Q.931 and CCITT7 ISUP	234-090-161AC
244	SDN-Cellular Access to SDN	234-090-162AC
246	SET:TRKSTAT SUM Option on Test Control Area Channel	234-090-162AC
247	Full Pt Code Routing (FPCR)	234-090-182AC
250	Trunk Appearance Number (TAN)-to-TAN with Supervision Enhancement	234-090-162AC
251	Ring No Answer	234-090-161AC
252	Conversant Voice Information System Presentation Override	234-090-161AC
256	Glare Minimization Under an RTNR Environment	234-090-161AC
257	RTNR Reroute Control Enhancement	234-090-154AC
261	Long-Term Backout Capability for RTNR	234-090-162AC
262	108 Test Line Termination Duration	234-090-162AC
263	Wait for Answer Timing Announcement Capability	234-090-161AC
265	Service Identity Mapping to International Call Detail Recording	234-090-163AC
266	SMARTS2 Digital Data Associated Circuit Mode Connection	234-090-162AC
267	Software/Hardware Inhibits	234-090-171AC
269	Regional Network Management System-4ESS Interface Improvements	234-090-154AC
274	TCAP Terminating Announcement Feature	234-090-162AC
279	Forced Link Node Remove - NSD	234-090-164AC
280	SDN-Centrex Station Identification	234-090-162AC
282	Removal of Routing According to Bearer Capability	234-090-162AC
284	TCAP Parameter Tag Code Expansion	234-090-171AC
285	Honoring the CPN Address Presentation Restriction Indicator	234-090-162AC
289	3-Digit Billing Number Delivery	234-090-163AC
292	Announcement Restructure-Time Sensitive Pricing	234-090-163AC
294	1800 Network Routing Number Exhaust	234-090-163AC
294a	1800 Network Routing Number Exhaust-RC	234-090-171AC
295	Routing Control Service Programmability	234-090-162AC
297b	Cause Value Problem #19 (323)	234-090-163AC
297g	Backward Call Indicator in ACM (323)	234-090-163AC
303	Network Switch Number Expansion for RTNR	234-090-171AC
305	Automatic Removal of Adjunct TSG Head Cells	234-090-163AC
306	ASTN 56Kbps Capacity Increase	234-090-171AC
315	Ring No Answer Billing Enhancement	234-090-162AC
320	Improved Automatic D-Channel Recovery	234-090-163AC
323a	ICS Task Force Ph2 Enhancement	234-090-163AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
323b	Continuity Check Call With An Unsuccessful COT C	234-090-163AC
323c	Automatic Repeat Attempt on Receipt of Unreasonable Signaling Informational	234-090-163AC
323d	Automatic Repeat Attempt on Receipt of Blocking Signaling	234-090-163AC
323e	TUP Unsuccessful COT Check-CCR Received	234-090-163AC
323j	Additional Requirement for Interworking Between DSS1 and International CCITT7 ISUP	234-090-163AC
323k	Rejection of Implicit Request for User-to-User Service 1	234-090-163AC
324a	ISUP Continuity Check-CCR Received Unsuccessful: Verify T27 Timer	234-090-163AC
324b	Check of Timers T14 and T15	234-090-163AC
324c	ISUP Continuity Check Test Call-COT Unsuccessful	234-090-163AC
324e	ISUP Continuity Check Test Call - CCR Received Unsuccessful	234-090-163AC
324f	Check of Timers T1 and T5: Failure to Receive RCM	234-090-163AC
324g	Check of Timers T16 and T17	234-090-163AC
333	LEC Switched Digital Service-Ph 2	234-090-183AC
341	700/800/900/Service 4E Announcement Delay	234-090-163AC
344	E-Link	234-090-182AC
349	PCP-Preassigned Value/ANI Expansion	234-090-171AC
354	Input Message TEST:DSIG Parameter Addition	234-090-172AC
356c	Service Translator	234-090-181AC
356d	Removal of Hardware Doc	234-090-181AC
356e	TTSI Decrease	234-090-181AC
356i	Code Group Form AD3	234-090-181AC
356j	Remove DNHR Controls	234-090-181AC
356k	New TDAS MC	234-090-181AC
356l	D-Channel Node Audits	234-090-211AC
372	Generic Update Capability	234-090-172AC
373	Inter-LATA Switched Digital Service and Network Interconnect for PRI	234-090-173AC
374	SCSI Firmware Download	234-090-172AC
375	AIN Dialed Number Triggers	234-090-182AC
375a	AIN-Operator Routing	234-090-201AC
376	Address Complete Message Timeout for Study Classes	234-090-172AC
378	Threshold Alerting/MSR2	234-090-181AC
381	Teleconferencing NSCX Trunk Maintenance Enhancement	234-090-172AC
383	Expanded ETC Type of Trunk Capability for GTE	234-090-172AC
384a	Miscellaneous RC Form Values	234-090-201AC
384b	Combine ANI Tables	234-090-201AC
384c	Combine AMA RCVR/Formatter	234-090-201AC
384d	AMA Functional Program Replacement	234-090-182AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
384e	D-Channel Backup Flow Control	234-090-211AC
384f	Removal of OPAV	234-090-201AC
384h	Increase Number of FHCs	234-090-201AC
385	3B20 Conversion to 3 1/2" Disks	234-090-182AC
386	SCS-Announcement System Manager Plus	234-090-182AC
387	Software Update Merge	234-090-201AC
390	3B Initialization Time Improvement	234-090-174AC
391	CNI Routing Restructure	234-090-181AC
393	3B Upgrade from 6.4 to 21	234-090-201AC
394	Software Update Automation	234-090-201AC
395	Ring Node Version Available	234-090-182AC
400	Message Transfer Part Restart	234-090-211AC
401	SS7 Trunk Signaling Interface for Cellular Type 2A	234-090-183AC
402	15-Digit International Numbering Plan	234-090-211AC
403	CCIS2WRE Field Enhancement in Recent Change	234-090-182AC
404	SCS-4 Gigabyte Disk Drive	234-090-183AC
405	Feature Group-D CIC Exp Cause Transparency	234-090-182AC
406	Carrier Identification Parameter-CIP	234-090-184AC
408	3.1 kHz Enhancement: Switch Options Feature	234-090-183AC
410	AIN Trunk Group Routing	234-090-184AC
411	AIN Default Routing - Phase 1	234-090-201AC
414	Increase in GULP Buffer Size	234-090-201AC
414a	Increase in GULP Buffer Size	234-090-211AC
415	AIN Selective Default Routing Dialed Number Trigger Calls-Phase 2	234-090-202AC
416	NSR Domain Data Enhancements	234-090-213AC
417	Explicit 4-Digit CIC Indicator to NetMinder	234-090-202AC
419	AIN Data Calls	234-090-214AC
421	AIN-Operator Routing for AIN Calls	234-090-203AC
422	CAMA for the LECs	234-090-203AC
430	Trunk Group Control of Signaling Bits	234-090-211AC
432	LEC Toll-Free Treatment for NPA 888	234-090-211AC
433	AIN Dialed Number Trigger Table Expansion	234-090-231AC
435	NetMinder Support of Alternate Overflow Reroute	234-090-211AC
437	Buffered Recent Change Transition	234-090-204AC
440	1B ORD:MCCKEY	234-090-204AC
442	AIN Dialed Number Trigger Expansion-Ph 0	234-090-211AC
443	AIN 800 Toll-Free Capability	234-090-213AC
448	4ESS Ring and Tone Plant Replacement	234-090-213AC
449	DMS D-Channel CINs	234-090-213AC
450	Number Portability-LEC	234-090-222AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
450a	Number Portability Modification Request-LEC	234-090-224AC
451	CVU/4E Echo-Back Interface for R2.2	234-090-214AC
452	XTSI Release 2 (LEC)	234-090-222AC
455	LEC AT Toll Resale	234-090-214AC
456	SCS UN351 Board Redesign	234-090-213AC
457	3B20D 2-Gigabyte Disk Certification	234-090-214AC
461	Extend ACM Timer for CCS7	234-090-221AC
467	AIN Call Code Provisioning	234-090-214AC
468	AIN Carrier Access Module Setting	234-090-214AC
469	MUP Firmware Upgrade	234-090-222AC
470	DLN-AP30 Circuit Pack Update	234-090-223AC
471	SCS TN4000B and TN1972C Replacement	234-090-221AC
472	Redesign of SCU EPIC	234-090-221AC
473	Checksum Macro	234-090-221AC
474	MCC Alarm Enhancement	234-090-222AC
475	ASM Plus Enhancements	234-090-221AC
476	2000 A.D. Transition	234-090-233AC
477	Test Query Enhancement-MR to CALIPER(4923)	234-090-224AC
478	4ESS APS RTR 21.17 Upgrade	234-090-231AC
480	CIP Number Expansion	234-090-223AC
482	LEC ODAMANanger	234-090-222AC
487	XTSI Static A/B Bit Option(2-Wire)	234-090-222AC
488	AT Routing Enhancement	234-090-224AC
488i	AT Routing Enhancement	234-090-231AC
496	Enhance TM Messages	234-090-231AC
497	Code Group Restructure	234-090-231AC
502	Cellular Mobile Carrier SSP/800 & AIN AMA Enhancement	234-090-224AC
505	4ESS Switch Header Validation	234-090-231AC
515	Analyze Ported Number GAP for AIN CNT LNP	234-090-233AC
516	AIN 6-Digit	234-090-233AC
517	LEC LNP OA&M Enhancements	234-090-233AC
517a	LEC LNP OA&M Enhancements MR 2	234-090-233AC
517r	LEC LNP OA&M Enhancements MR 2	234-090-233AC
521	Grow D-Chan Node Cap. From 106	234-090-251AC
523	RC Form Metrics Reports	234-090-241AC
534	LEC LNP/AIN Domain Option	234-090-233AC
536/i	3B20 to 3B21 Conversion from 4E24 (LEC & AT&T)	234-090-241AC
536/i	Interim D-Channel Expansion--SW	234-090-231AC
537	LEC Originating LNP Module AMA Enhancements	234-090-234AC
538	LEC LNP Additional OA&M Enhancement	234-090-234AC
538a	LEC LNP Additional OA&M Enhancement	234-090-234AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
540	DSC SCP Interface Modification for LNP	234-090-234AC
543	New XTSI Fan Unit SW Changes	234-090-241AC
545	US/RUAS Y2K Compliance	234-090-242AC
545a	RUAS Y2K Standalone Config	234-090-242AC
552	4ESS 3B APS Upgrade to RTR 21.31	234-090-251AC
554	DECOS Changes to RC639	234-090-242AC
564	Improved ISUP Message Header Reduction for API Capacity	234-090-254AC
564i	Improved ISUP Message Header Reduction for API Capacity	234-090-261AC
566	US/RUAS Productization	234-090-253AC
568	3B20D and 3B21D Disk Replacement (9GB Disk)	234-090-251AC
572	Y2K Century Bit on IBM Tape Header	234-090-243AC, Iss 2
901	Performance and Capacity Improvements	234-090-161AC
902	Modular Recording of Data	234-090-161AC
903	Customer-Specific Recording	234-090-161AC
904	Recording of Additional Usage Data	234-090-161AC
905	10-Digit Global Title Translation	234-090-161AC
906	Common Network Interface Integration	234-090-161AC
907	Combined Link Set Routing	234-090-161AC
908	Intranet Signaling Connection Control Part Routing Verif. Test	234-090-161AC
909	Interim Dynamic-Automatic Congestion Control	234-090-161AC
910	Class of Service Parameter for Some Network Management Controls	234-090-161AC
911	Expanded ISDN Message Associated User-to-User Info. Length	234-090-161AC
912	Elimination of Double Dip and SDN NCP	234-090-161AC
913	CCITT7 ISUP-Ph 3	234-090-161AC
914	Carrier Specific Routing for Intl. Card and Global SDN Calls	234-090-161AC
915	Facsimile Identification and AMA	234-090-161AC
916	1+Spontaneous Access to Call Delivery Service	234-090-161AC
917	Intra-LATA Switched 384	234-090-161AC
918	Intra-LATA 7-Digit Free Calling	234-090-161AC
919	Unsuccessful Call Setup	234-090-161AC
920	Passing Unrecognized Parameters	234-090-161AC
921	Q.931 Information Elements Transport	234-090-161AC
1001	CCITT7 ISUP-Ph 4	234-090-172AC
3037	Signaling Connection Control Part Routing Verification Test	234-090-163AC
3066	Switched Digital International 384-Kbps Service	234-090-172AC
3068	1B24 Processor	234-090-181AC
3071	Feature Group-D Carrier Identification Code Handling	234-090-181AC
3082	ISAIC-AUI-AAP	234-090-181AC
3082	ISAIC-CORE	234-090-173AC
3082	ISAIC_CORE(109a)-Brkpt MR	234-090-173AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
3082	ISAIC_CORE(109a)- SCU	234-090-173AC
3091	ISAIC-Expanded Final Handling Announcements	234-090-173AC
3091	Expanded Final Handling Announcements (109c)	234-090-173AC
3133	15-Digit Intl Numbering Plan	234-090-211AC
3142	End-to-End Class of Service	234-090-201AC
3172	ISAIC-NSCX	234-090-181AC
3187	ISAIC-MAS Announcement System (Televote)	234-090-173AC
3195	Generation of CCS7 Discretes	234-090-174AC
3213	Resize Number of Switches Count	234-090-171AC
3214	Use and Handling of Unequipped Circuit Identification Code	234-090-172AC
3215	Provide Cause Information with Tones and Announcements	234-090-172AC
3285	SRVT Enhancements	234-090-173AC
3286	Processor Outage-Ph 2	234-090-173AC
3299	Call Detail Recording Platform	234-090-181AC
3300	0+/0- Access to AT&T Message Service	234-090-172AC
3306	1800/Country Direct Carrier Specific Routing-Ph 1	234-090-173AC
3318	MRVT Enhancements	234-090-174AC
3333	Program Store Expansion – 1B Processor	234-090-221AC
3333a	Program Store Expansion	234-090-211AC
3334	Flexible SDN Manual Control	234-090-174AC
3349	Dynamic Automatic Congestion Control, The Final Phase	234-090-172AC
3355	Extended Stores (XS) – 1B	234-090-211AC
3355a	Extended Stores (XS) – 1B	234-090-201AC
3356	1B File Expanded Program Store Disk/XS	234-090-201AC
3356a	1B File Restructuring	234-090-201AC
3410	Hard-To-Reach for SAFER Modification	234-090-174AC
3420	ISDN Extended D-Channel	234-090-201AC
3433	Increased Number of Links in Link Set	234-090-172AC
3446	Alternate Destination Routing-Ph 2	234-090-171AC
3448	Change Under Minimum Billable Call Duration Threshold	234-090-171AC
3460	PCP ANI Table Expansion	234-090-171AC
3472	Non-ISUP Public Switched Telephone Network Architecture	234-090-164AC
3472a	Non-ISUP PSTN GSDN Arch (RC)	234-090-181AC
3474	GSDN International Private Numbering Plan Option	234-090-164AC
3500	User-Entered Code Information Element Protocol Upgrade	234-090-164AC
3503	SDS Early Address Complete Message Elimination	234-090-164AC
3512	TOPAS Summary Trunk Turndown Improved Interface	234-090-163AC
3519	Transport Tariff/Usage Sensitive Feature Indicator Field Expansion	234-090-164AC
3520	Remote Adjunct Call Handling (REACH)	234-090-174AC
3520b	Remote Adjunct Call Handling (REACH)	234-090-181AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
3532	SDN-NPA Split Announcement	234-090-164AC
3534	Expand Class Of Service Parameters	234-090-171AC
3534a	Expand Class Of Service Parameters-RC	234-090-181AC
3541	RTNR Support for SSN/SRAS (Govt RTNR CAP)	234-090-181AC
3559	Carrier Routing Platform Network Management Enhancement	234-090-164AC
3564	Interchangeable NPA Additions	234-090-171AC
3566	Express Connect ANI Query	234-090-164AC
3567	Dynamic Load Control Trunk Assignment Expansion	234-090-164AC
3572	PBX High and Wet Wink Release	234-090-163AC
3587	SDN-Universal GTT Database	234-090-173AC
3590	GSDN CCS7 ISUP Network Interconnect Interface	234-090-172AC
3595	Positive Call Processing Release 3 List Transaction	234-090-172AC
3595a	Positive Call Processing Release 3 Provisioning	234-090-174AC
3597	1800 Carrier Specific Routing-Ph 2	234-090-173AC
3599	High Speed A/E Links	234-090-211AC
3604	International Calling for WATS over Network Interconnect	234-090-162AC
3606	Carrier Screening for 800 Number Portability	234-090-172AC
3607	Domestic Hard-To-Reach Data Modification for USADirect	234-090-172AC
3609	1+Directory Link	234-090-201AC
3618	Direct Connect Trunk Sub-Group Lockout	234-090-163AC
3630	Switch Based Network Call Denial	234-090-174AC
3636	Post Dialing Delay Reduction	234-090-201AC
3637	TCAP End Message Fix for NRA Improved Sequence	234-090-163AC
3640	FHC on the AMA Record	234-090-163AC
3649	Improved Recent Change for GTT	234-090-164AC
3650	Improved Recent Change for GTT	234-090-174AC
3662	Total Office Blocking Status Exchange	234-090-172AC
3664	Call Disposition Module on the Inbound AMA Record	234-090-164AC
3669	GSDN/SDN International Digits-Ph 2	234-090-173AC
3670	Remote Utility Access System (RUAS)	234-090-181AC
3671	GSDN/SDN International Digits-Ph 1	234-090-164AC
3680	ISDN 56 Kbps Routing	234-090-164AC
3741	SDN-NRA New Billing Structure Codes	234-090-164AC
3742	Far-End Network Service Category Treatment	234-090-173AC
3753	1B Processor Contingency (Undiagnosed 1A)	234-090-181AC
3776	CCITT5 Proceed To Send Signal	234-090-172AC
3777	Inbound I800 Call Prompter	234-090-173AC
3779	PROM Kit for Link Interface Encryption Removal	234-090-173AC
3795	iPCC-USEC Individual Per-Call Control	234-090-183AC
3800	GSDN Ph 2 International World Zone 1 Dedicated Access	234-090-172AC
3801	4E18 INPA Enhancements	234-090-181AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
3806	GTT Provisioning	234-090-173AC
3819	Carrier Specific Routing for ISTS	234-090-203AC
3840	SDN Digital Radio Avoidance Routing	234-090-173AC
3843	SDN NRA-Inclusion of ANI in AMA Record ANI	234-090-172AC
3844	PCP-ANI Table Limit Expansion	234-090-181AC
3847	Temporary Signaling Connection Controls	234-090-181AC
3852	AAP Maintenance Enhancements and AAP/SCANS	234-090-181AC
3857	SDN-10288 Access to SDN	234-090-202AC
3860	Alternate Signaling Transport Network NI Backup	234-090-173AC
3863	Telecommunications Relay Service Carrier of Choice	234-090-173AC
3867	Force Time-Critical Calls for AT&T NetProtect Service	234-090-172AC
3868	Prefix NPA Digits for Reroute Control	234-090-172AC
3876	ABC Architecture APN Dialing Requirements	234-090-173AC
3880	GETS-Government Emergency Telecommunications Service	234-090-184AC
3883	SDDN 700 Number Outward Dialing	234-090-172AC
3887	Integrated Access Terminating Switch Access Arrangement	234-090-184AC
3891	ANI/DN Per Call Control of Voice Enhancement	234-090-183AC
3892	RMS Interface to Network Validation Test AMA Collecting and Reporting	234-090-173AC
3898	3B/DLN Recent Change Inhibit Enhancements	234-090-172AC
3899	10-Digit GTT Expansion-Inbound	234-090-173AC
3904	Call Complete With DTMF Congestion	234-090-172AC
3917a	10-Digit GTT Support – Ph 1	234-090-174AC
3917b	10-Digit GTT Support – Ph 2	234-090-182AC
3931	A-Law/U-Law Modification Requirement/CCITT7	234-090-172AC
3932	ABC ANI Trigger Table Field Redefinition	234-090-173AC
3935	PCP Using 2NCP/NSCX	234-090-173AC
3943	PCP R2.0 Enhanced PAV	234-090-173AC
3944	ANI Table Change for SB NCP MR	234-090-174AC
3949	10-Digit GTT Table Expansion-Long Term	234-090-182AC
3956	SCS Yes or No for EFH	234-090-181AC
3957	Inbound I800 Separation of Country Code	234-090-183AC
3963	Network Access Interruption	234-090-184AC
3964	Universal Subscriber Data Structure—USDS	234-090-211AC
3967	Balancing Load Sharing	234-090-211AC
3968	Easy Reach 700 Call Forwarding Service	234-090-173AC
3978	REtract Reach to Access Toll-RETREAT	234-090-184AC
3991	BLDS Services – Call Disposition Recording	234-090-182AC
4012	Inbound Automated GTT	234-090-174AC
4013	II Digit Information Delivery	234-090-174AC
4018	End-to-End Class Of Service/AP	234-090-201AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
4018a	End-to-End Class Of Service/AP	234-090-202AC
4019	5-Digit Dialing on SDN-Ph 1	234-090-174AC
4020	Authorization Code Digits Encoding	234-090-174AC
4026	Network Call Denial for International	234-090-174AC
4029	Multiple Trunk Group Assignment	234-090-174AC
4032	Self-Provisioning GTT	234-090-182AC
4032a	Self-Provisioning GTT Deferred Requirement	234-090-183AC
4033	Alternate Signaling Transport Network Gateway/NI Backup	234-090-183AC
4043	XTSI—Release 2	234-090-221AC
4050	ASTN Forced Intertoll Routing	234-090-174AC
4053	ODA Datalinking (ODAD)-Ph 1	234-090-201AC
4057	1A/1B Processor RC Throughput Improvement	234-090-182AC
4058	Collision of REL Messages	234-090-174AC
4099	Type Digital Interface Unit(TDIU) Redefinition	234-090-211AC
4107	Calling Party Number/Billing Number Delivery Enhancement	234-090-181AC
4117	Domestic PSTN Routing CAP-GSDN	234-090-181AC
4129	Alternate Signaling Transport Network Enhanced ISUP	234-090-184AC
4133	Direct Link Node Throughput Increase-Ph 1	234-090-201AC
4136	Never Miss a Call/ADR on Busy	234-090-182AC
4168	Alternate Signaling Transport Network 56 Kbps for UNITEL	234-090-183AC
4170	Inbound 1800 Service Overseas Access	234-090-183AC
4180	INUP Echo Control-Ph 1	234-090-181AC
4180a	INUP Echo Control-Ph 2	234-090-182AC
4183	Automatic Speech Recognition-Ph1	234-090-203AC
4183a	Automatic Speech Recognition—AAP Software Update	234-090-203AC
4186	Universal Global Translator Fall-out Report	234-090-183AC
4189	Enhanced 1800 Service Using USADirect	234-090-183AC
4201	1+Directory Link for BLDS PCP	234-090-201AC
4203	ANI Trigger Table Capacity Enhancement-Ph 1	234-090-201AC
4206	ANI Trigger Table Capacity Enhancement-Ph 2	234-090-211AC
4213	Increase International Point Codes	234-090-182AC
4215	UNITEL Network Identification Code	234-090-183AC
4216	Number Portability-AT&T	234-090-223AC
4218	ABC Terminating Switch	234-090-182AC
4219	SOP to 4ESS Interface Changes	234-090-223AC
4232	Multiple 4ESS Switch Network Announcements	234-090-183AC
4232a	Multiple 4ESS Switch Network Announcements-Ph 2	234-090-202AC
4243	Nonobtrusive D-Channel Node Pump	234-090-201AC
4268	ISAIC Usage for the GETS	234-090-184AC
4271	Network Queuing Courtesy Response	234-090-184AC
4273	Verify Messages for Routing Table	234-090-184AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
4275	SDDN-I for UNITEL	234-090-202AC
4290	Inbound Services 10-Digit GTT Recent Change Packing	234-090-184AC
4291	Inbound Services 10-Digit GTT Data Consistency Check	234-090-184AC
4292	Inbound Services 10-Digit GTT File Transfer	234-090-184AC
4306	AT&T Trigger Platform Jr.	234-090-201AC
4310	4E20 ODA Requirements for CDR	234-090-201AC
4312	SDN-NRA Sequential Dialing using ATP	234-090-201AC
4314	Generic Indicators in Tracer Records	234-090-202AC
4317	Service Count Tracer Records Unanswered/Mutilated	234-090-202AC
4322	Foreign-Billed 800 Service	234-090-183AC
4323	AT&T Circuit Switched Data	234-090-203AC
4324	Easy Reach 1+500 Dialing Plan	234-090-202AC
4344	Backward Release After ACM-INUP Trunks	234-090-184AC
4355	SDN ANI Trigger Table Indicator	234-090-201AC
4364	Switched Digital Screening	234-090-213AC
4366	Recent Change Administration System-Ph 2	234-090-202AC
4366a	Recent Change Administration System-MR to Add CLI	234-090-184AC
4367	SRVT Compatibility With Feature 3957	234-090-184AC
4369	Cellular Mobil II Sets 62/63 ID	234-090-204AC
4372	ANI Trigger Data Proc Data Expn	234-090-203AC
4376	ISDN Operational Improvements	234-090-203AC
4388	IXC-Megacom 800 Service to an IXC With ANI	234-090-184AC
4401	IXC-Megacom 800 Service to an IXC with ANI Ph 2 Inband	234-090-184AC
4404	International Call Detail Record for SDN-Canada Cross-Border	234-090-184AC
4430	International Billing Number Screening-Ph 2	234-090-202AC
4438	Elimination of Via Routed Calls	234-090-221AC
4448	Clearback Suppression/Brazil	234-090-201AC
4449	Tones Announcement on TUP & ISUP	234-090-202AC
4464	CDRP & Multiple 4ESS Streams	234-090-221AC
4472	New Generation-ODA Provisioning Tools	234-090-201AC
4474	SDN 1+10D Dialing on Dedicated Access	234-090-202AC
4477	2NCP/CADCR Svc Assists/Handoff	234-090-212AC
4482	Foreign-Billed 800 Service-Ph 2	234-090-184AC
4506	IXC With ANI Billing Improvements	234-090-203AC
4507	Clearback Suppression Ph 2 Brazil	234-090-203AC
4508	SDN and GETS Service Mixing	234-090-184AC
4529	800 Services Account Codes	234-090-214AC
4530	1800 Billing for Mexico	234-090-202AC
4538	4ESS SPGTT Table Expansion	234-090-202AC
4539	SDI 1536 Kb/s Service	234-090-204AC
4540	SDN Access to SDN-MR to Feature 3857	234-090-202AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
4555	AT&T Trigger Platform Jr – Busy/Ring No Answer MR	234-090-202AC
4557	SDN NRA Using ASR	234-090-211AC
4559	Handling 4ESS SPI ASTN NI Backup	234-090-204AC
4564	Segmentation Directory	234-090-222AC
4569	PCP 10-Digit Delivery to PCP 2NCP	234-090-201AC
4570	Universal 1.5 Access	234-090-204AC
4575	Interim 1+500 Via the 4ESS	234-090-202AC
4579	PZM Triggered iPCC Gateway	234-090-202AC
4590	Call Forwarding for SDN/800	234-090-214AC
4591	SS7 Access to Nodal Services	234-090-203AC
4601	NAI ACG Type of Digit Coding	234-090-184AC
4603	Continuity Check on INUP Circuits 1877	234-090-203AC
4632	CDR Data Tracer Count MR	234-090-203AC
4642	GSDDN International On-Net Data Service	234-090-203AC
4650	10-Digit Trunk Group Rating Number	234-090-204AC
4655	SDN – ASTN/SGGTT Interworking	234-090-203AC
4656	800 Growth to Include 888	234-090-204AC
4658	PCP for Equal Access Cellular	234-090-204AC
4659	Calling Party Number Delivery	234-090-203AC
4673	SDN Customer Outage Protection	234-090-213AC
4677	iPCC Gateway Maintenance Enhancement	234-090-203AC
4677a	iPCC Gateway Maintenance Enhancement	234-090-203AC
4686	Carrier Identification Code Delivery	234-090-212AC
4692	Automatic Call Distributor in the Network-Ph 2	234-090-203AC
4694	Direct Link Node Capacity Upgrade-Ph 2	234-090-221AC
4696	RMS/4ESS Switch Testing Enhancement	234-090-212AC
4706	DTMF Inband ANI Delivery	234-090-204AC
4719	PACR on AT&T Trigger Platform Jr. Rls 1.0	234-090-204AC
4721	PACR to POTS Billing Fix	234-090-211AC
4739	Project Zebra (National Directory Assistance)	234-090-211AC
4741	AT&T Advanced 800 Automatic Speech Recognition Using Call Store	234-090-212AC
4744	PCP for CMC Service Type	234-090-203AC
4751	Improve NEMOS to 4ESS Interface	234-090-212AC
4751a	Merging RNMS and 4ESS/NEMOS-Ph 2	234-090-214AC
4753	MEGACOM 800 IXC With ANI-MR 02	234-090-203AC
4754	XTSI (Was 4043)	234-090-213AC
4760	ISC Composite Circuit Enhancement	234-090-212AC
4760a	ISC Composite Circuit Enhancement	234-090-221AC
4768	4ESS Signaling Management Enhancement	234-090-223AC
4769	Announcement Set B on SCS	234-090-214AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
4769a	Announcement Set B on SCS	234-090-221AC
4776	End-to-End Class Of Service Areas Increase	234-090-221AC
4776a	End-to-End Class Of Service MR 94-02 and 95-01	234-090-212AC
4779	Check Application Status	234-090-211AC
4785	Inbound 1800 CSR & Enhanced Call Origination	234-090-214AC
4789	XTSI Rls 3 In-band Supv Signaling	234-090-242AC
4789L	XTSI Rls 3 In-band Supv Signaling	234-090-242AC
4790	CDRP Tracer Count Consistency	234-090-214AC
4795	USDS Phase 1.1 Support for TNR Triggers	234-090-212AC
4800	CDRI Communications Web	234-090-221AC
4800i	CDRI Communications Web-Ph 2 Tracking Encryption	234-090-214AC
4801	SCS Automatic Speech Recognition-Ph 2	234-090-214AC
4815	Disaster Recovery Enhancement-Rls 1	234-090-223AC
4815a	Disaster Recovery Enhancement-Rls 1	234-090-222AC
4815i	SDRP 1B Code	234-090-222AC
4815j	SDRP 3B Code	234-090-222AC
4839	SNPA Expansion and Handling NPA Improvement	234-090-221AC
4839	SNPA Expansion/Handling NPA Improvement LEC	234-090-221AC
4850	Foreign-Billed 800-Ph 3	234-090-212AC
4866	Routing Data Block List Verify Tool	234-090-213AC
4867	Transfer Connect Service 3.0	234-090-213AC
4870	CDRP Software Release Synchronization	234-090-204AC
4875	PACR-ATP OutofBand Enhancements for VRU-BT	234-090-213AC
4880	Segmentation Directory-Ph 2 Pkg1	234-090-231AC, Ad1
4880a	Segmentation Directory-Ph 2 Pkg2	234-090-232AC
4880b	Segmentation Directory-Ph 2 Pkg3	234-090-233AC
4880c	Segmentation Directory-Ph 2 Pkg4	234-090-234AC
4893	Universal T1.5 Access-MR to Feature 4570	234-090-204AC
4898	Service Identity Traffic Data Collection	234-090-224AC
4898b	Service Identity Traffic Data Collection	234-090-223AC
4899	High Speed Links T1 Maintenance Enhancement	234-090-222AC
4903	CCS7 Signaling Transport Footprint	234-090-213AC
4903a	CCS7 Signaling Transport Footprint-Encryption Unit	234-090-213AC
4904	Domestic ECOS Class of Service	234-090-231AC
4920	Dual Sessions for Network Elements-NEMOS	234-090-223AC
4923	Calling Party Pays Airtime-CALIPER	234-090-213AC
4924	Foreign-Billed 800-Ph 4	234-090-213AC
4928	TCAP Parameter for Transmission Enhancement Control	234-090-222AC
4940	GETS Initial Operational Capacity	234-090-213AC
4941	ADR Recording Changes for Interaction with TCS-NAP	234-090-224AC
4957	Per Announcement Information Data (PAID)	234-090-212AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
4958	Global Carrier Selection	234-090-212AC
4965	Billing Fix-Cellular Access/SDN-Ph 2	234-090-212AC
4967	Automatic Routing	234-090-241AC
4967a	Automatic Routing Ph 1 (Pre-ACM)	234-090-233AC
4967b	Automatic Routing Ph 2 (Post-ACM)	234-090-233AC
4967i	Automatic Routing-Pre-AR Structure Work	234-090-231AC
4990	Associate Announcement Number with FHC 1592	234-090-212AC
4991	Removal of Routing Prefix Codes Network Security	234-090-212AC
4995	Recent Change Administration System-MR to Feature 4366	234-090-211AC
4997	Enhanced DIF-E1 Internal Bus Mismatch Diagnostics	234-090-222AC
5000	Single Entry MRTT Counts for SAFER	234-090-211AC
5003	API Capacity Improvements	234-090-221AC
5004	ANI Data Service Vu	234-090-214AC
5005	Assignment I/O for 4ESS Switch	234-090-233AC
5013	1B Processor Tape Unit Elimination	234-090-221AC
5013i	Cable Design for TUC Elimination	234-090-222AC
5020	Short Term D-Channel Expansion	234-090-214AC
5020a	Short Term D-Channel Expansion	234-090-231AC
5024	SUME for 800/900 Number Translations	234-090-224AC
5041	XTSI TM Gen DS3 Alarms Maintenance Channel	234-090-214AC
5051	LYNX Software Upgrade	234-090-213AC
5060	Positive Lookup Table in WCS	234-090-231AC
5064	Idle Link Bandwidth Adjustment NM Controls	234-090-212AC
5072	MR to Univ T1.5 Access	234-090-212AC
5111	XTSI in I/O Msg—5111a,b,c for LEC	234-090-221AC
5111a	XTSI I/O Message Specification	234-090-214AC
5111b	XTSI in I/O Messages	234-090-221AC
5111c	XTSI in I/O Messages	234-090-222AC
5113a	XTSI Software Update Tool – Ph 1	234-090-221AC
5113b	XTSI Software Update Tool – Ph 2	234-090-223AC
5123	Network Support for 8YY	234-090-231AC
5129	Inspection II Digits/Dialed Number	234-090-231AC
5131	Service Control After 2 D3Sus Fail	234-090-221AC
5153	Consolidated 0+/- & 1+ Hotel Traffic	234-090-222AC
5158	Carrier Completion Rate Feature	234-090-241AC
5161	Switch Disaster Recovery Enhancements	234-090-234AC
5163	Positive Lookup Tools (PLUTO)	234-090-231AC
5198	CIC Based Resale	234-090-221AC
5198a	CIC Based Resale	234-090-231AC
5222	3B21D APS Upgrade—Hardware	234-090-231AC
5222i	3B21D APS Upgrade—Software	234-090-231AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
5241	Segmentation Directory Black Hole Detection & Recovery	234-090-224AC
5247	Call Turn Around	234-090-214AC
5252	800 Service DSD Fix	234-090-221AC
5308	Consolidated Access Traffic-Ph 1	234-090-224AC
5341	QuietHear MR for 109 Test Lines	234-090-221AC
5349	Correction of Collusion INUP Release Messages	234-090-222AC
5352	Modify Connected Number Screening	234-090-222AC
5353	Universal International Free Phone	234-090-223AC
5361	Interim D-Channel Expansion—HW	234-090-231AC
5370	Local Service for Nodals on 4ESS-Ph 1	234-090-222AC
5370i	Local Svc for Nodals on 4ESS-Ph 1	234-090-251AC
5371	Local Service for Nodals on 4ESS-Ph 2	234-090-223AC
5371a	Local Service for Nodals on 4ESS-Ph 2	234-090-224AC
5376	SS7 Node Buffer Size Modification	234-090-214AC
5399	Foreign-Billed 800 Service Enhancement-Ph 5	234-090-223AC
5399r	Foreign-Billed 800 Service Enhancement-Ph 5	234-090-223AC
5460	NAI-Ph 3A 4ESS & CDRP	234-090-222AC
5460a	NAI-Ph 3A MR to 5460	234-090-233AC
5505	XTSI Rapid Restore	234-090-223AC
5506	Selective Blocking of Codesets	234-090-224AC
5528	Early Answer for GETS Inbound International Calling Opt 2	234-090-223AC
5529	Interim Speech Recognition ISIAAC Call Prompt	234-090-214AC
5531	MR to SI Data Collection-5-minute NEMOS Data	234-090-223AC
5531i	MR to SI Data Collection-TDAS Data	234-090-224AC
5532	Project Radar – Ph 2	234-090-231AC
5538	End Office Local Nodal (AT&T)	234-090-232AC
5563	SCS Software Update Tool	234-090-224AC
5568	9 Gigabyte Disk Units for SCS	234-090-224AC
5578	Transfer Connect Service-MR to Feature 4867	234-090-221AC
5579	SDN Access Via Network Access Platform	234-090-221AC
5589	Modification to 4557	234-090-221AC
5591	Set S DTMF to ASR Switching	234-090-221AC
5594	CPN Anomaly Report	234-090-221AC
5600	XTSI Rls 3—Digital Svc Circuits	234-090-242AC
5600L	XTSI Rls 3—Digital Svc Circuits	234-090-242AC
5613	ISDN Called Party Number Protocol Upgrade	234-090-221AC
5636	SNPA Expansion-MRs to Feature 4839	234-090-221AC
5641	Segmentation Directory Ph 3, Rel 1	234-090-242AC
5641a	Segmentation Directory Ph 3, Rel 2	234-090-243AC, Iss 2
5641b	Segmentation Directory Ph 3, Rel 3	234-090-243AC, Iss 2
5645	Local Service for Nodals Ph 2.1	234-090-224AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
5668	HSL Status Indication Busy Enhancement	234-090-223AC
5670	NAI for Direct Connect Calls	234-090-222AC
5681	Number Portability Open Portability Verify	234-090-223AC
5700	CAT FSD MRs (to Feature 5308)	234-090-224AC
5701	AAP ISDN Loopback Capability	234-090-222AC
5704	ODA Datalinking Software Tool Enhancement	234-090-221AC
5711	API Message Header Reduction-Ph 2	234-090-231AC
5724	Extend ACM Timer for CCS7	234-090-221AC
5742	Improved Codelist Verify	234-090-224AC
5754	Network Access Interruption and Directory Assistance Resell	234-090-221AC
5766	Advantis Default OLI	234-090-222AC
5773	SDN NRA Tollfree Dialed Number for CSCR	234-090-222AC
5791	Long-Term "CIC-Based NAI"	234-090-223AC
5794	SCS Announcement Seconds Expansion	234-090-224AC
5794j	SCS Announcement Seconds Expansion	234-090-224AC
5802	CIC Code Exp for 5198 & 5754	234-090-221AC
5805	Inbound Services 10-Digit GTT Table Expansion	234-090-224AC
5816	CSCI Recording	234-090-231AC
5817	International Originating Satellite Rules Modification	234-090-222AC
5822	Enhanced CIC Routing for Operator Services	234-090-233AC
5835	AAP Disk Copy Enhancement	234-090-224AC
5840	1+CIC Wholesale Features-Ph 1	234-090-224AC
5843	ISDN Operational Enhancements	234-090-242AC
5844	Announcement Set D on ISAIC	234-090-224AC
5844a	Announcement Set D on ISAIC	234-090-231AC
5874	B/RNA Cellular Monitor	234-090-224AC
5876	Segmentation Directory Recovery	234-090-243AC, Iss 2
5887	GCS Capability Near-Term Modification	234-090-222AC
5892	Transfer Connect Capacity 97	234-090-234AC
5898	Code Group Restructure	234-090-231AC
5899	MR on Feature 4323	234-090-224AC
5906	Improved Calling Party # Anomaly Report	234-090-241AC
5907	Cellular B/RNA for TC/ER Service	234-090-224AC
5915	Nodal Egress Sequential Trunk Hunt	234-090-231AC
5917	Expansion of 4ESS OSPS Table	234-090-231AC
5918	Inband Q.931 Signaling for Carrier Solutions Nodal Customers	234-090-232AC
5922	Foreign Admin Identifier Expansion	234-090-241AC
6072	OCTCP & CIC Table Expansion	234-090-231AC
6130	2000 A.D. (AT&T)	234-090-233AC
6137	Domestic ECOS: New RLI & Route Control-MR to Feature 4904	234-090-232AC
6142	Additional Support for 4ESS Local for Nodal	234-090-233AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
6142i	Additional Support for Local Nodal—OSOR	234-090-231AC
6143	Enhanced CIC Routing for Directory Assistance	234-090-233AC
6156	4ESS CMS/ESS Audit Enhancement	234-090-231AC
6164	Payphone Compensation—Ph 2	234-090-224AC
6190	AMA Recording Fix for GETS	234-090-231AC
6231	No-Loopback Continuity Check	234-090-234AC
6266	Enhanced CIC Routing for International Calls	234-090-233AC
6272	Performance Enhancements for Segmentation Directory	234-090-233AC
6273	Tones & Announcements on Unsuccessful Calls After Call Prompting	234-090-242AC
6296	Open Segment 2 of 1B File Store-3BPAS	234-090-241AC
6328	Carrier Completion Rate (5158) MR	234-090-241AC
6330	4E AT&T Digital Link LRN Capabilities	234-090-232AC
6363	Increase Number of MCT Tables	234-090-231AC
6375	Number Portability Ph 1 Architecture Extension	234-090-234AC
6413	OAS Call Processing on Inter-Toll Trunks	234-090-242AC
6426	SD CIC Based Proc & SDN Default Handling	234-090-233AC
6428	Automatic Routing (4967) MR	234-090-241AC
6468	Early Disconnect Project Radar	234-090-231AC
6483	ECOS Support of GNS Call Type (MR-3142)	234-090-231AC
6487	Int'l Toll Free Service TEST:TCAPDSD Support FSID Routing	234-090-233AC
6492	TCAP Parameter for Trans Enhancement Control	234-090-242AC
6494	Digital Link Local Service Measurement Capabilities	234-090-234AC
6500	Carrier Solutions Enhanced CIC-Based Maintenance	234-090-234AC
6512	Domestic End-to-End Class of Service	234-090-234AC
6516	4ESS Switch Routing RC/V Improvements	234-090-241AC
6516a	4ESS Routing RC/V Improvements	234-090-234AC
6516b	4ESS Routing RC/V Improvements	234-090-234AC
6516c	4ESS Routing RC/V Improvements	234-090-234AC
6516i	4ESS Routing RC/V Improvements	234-090-234AC
6563	Universal Int'l Free Phone Numb Enhancement	234-090-234AC
6605	TSAA/AVA with DL Phase 4	234-090-234AC
6617	SDN and 1+DL Feature Interaction MR	234-090-231AC
6620	MR to 5840—1+CIC Wholesale	234-090-234AC
6624	ANI Replacement on Cellular Roamer 8YY Calls	234-090-234AC
6625	Digital Link “0ZZ” on Backhauled 8YY Calls	234-090-234AC
6629	EOLN-PMO Processing of EOLN PCP Calls	234-090-234AC
6638	Ignore Calling Party # on ITFS Calls	234-090-231AC
6643	4E—NEMOS Link Upgrade	234-090-242AC
6657	MR to ADR Recording Change (4941)	234-090-234AC
6665	MR to Payphone Compensation, Phase 2	234-090-231AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
6685	Digital Link Phase 3 Equal Access Capability	234-090-242AC
6745	Terminating Traffic Architecture	234-090-233AC
6750	Dial 1 Service Integration	234-090-242AC
6757	NAI Call Redirection & ATP	234-090-233AC
6759	MR to SI Traffic Data FSD (4898, 5531)	234-090-234AC
6762	MR to 5371 FSD	234-090-242AC
6763	Impaired Via Avoidance	234-090-243AC, Iss 2
6777	DSA Based Architecture for TSAA/AVA	234-090-234AC
6881	4ESS SCS Cache Change to 256 Milliseconds	234-090-242AC, Rev1
6888	Capacity Relief on 1B Processor Memory	234-090-251AC
6896	700 PIC Verification Announcement for CSP	234-090-242AC
6915i	4ESS Switch Signaling Capacity Improvements	234-090-253AC
6938	AT&T Digital Link Phase V Architecture	234-090-251AC
6947	Segmentation Directory ND/CDN Digits Length	234-090-234AC
6955	MR to Digital Link Phase 2.1	234-090-234AC
6982	Expand ANI Trigger Table Structure Size	234-090-241AC
6989	Enhanced Scheduling and Executive Control	234-090-253AC
6990	AT&T Digital Link Ph 3 Equal Access Dial Around Capability	234-090-243AC, Iss 2
7028	Voice Over IP (VoiP) Mexico)	234-090-242AC
7038	AT&T Digital Link Ph 3 911 Capabilities	234-090-243AC, Iss 2
7063	MR to SDN Overflow Routing on Busy with ADL4	234-090-242AC, Rev 1
7064	Further Expansion of OSPS Access ID Table	234-090-251AC
7067	RTNR-Type of Origination for WZ1	234-090-243AC, Iss 2
7070	Number Pooling Target Architecture	234-090-254AC
7102	Removal of Forced Overflow on User Busy for Trunks with Access IDs	234-090-241AC
7106	Non Emergency (NE) Initial Address Message (IAM) Priority Level at the Egress of the Network	234-090-253AC
7148	AT&T Digital Link Announcements – Part 1	234-090-243AC, Iss 2
7157	International Point Code Expansion	234-090-241AC
7181	Removal of NSN for ADL LNP Processing	234-090-241AC
7217	Elimination of Dual Provisioning - Phase 1	234-090-254AC
7221	Expanding Route Skip/Cancel-(To,From) Controls	234-090-243AC, Iss 2
7222	4ESS Domain Value Output Enhancement	234-090-242AC
7236	DECOS Incoming Circuit Immediate Release	234-090-243AC, Iss 2
7240	Modified FG-D Support for ANC	234-090-242AC
7240a	Modified FG-D Support for ANC	234-090-243AC, Iss 2
7254	Restructure and Grow the Call Register	234-090-251AC
7255i	Change to 1B Prefetch Destination on IF:T	234-090-261AC
7264	Toll-Free Service Processing on Edge Switches with SD	234-090-261AC
7285	ANC II/OLI Screening – Phase 1	234-090-243AC, Iss 2

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7294	DCI at OLP	234-090-242AC
7312	Killing Fraudulent SDN NRA Calls	234-090-251AC
7323	ANC NANP CIC Routing	234-090-251AC
7335	Transfer Connect on ATP-Out of Band Enhancement	234-090-251AC
7344	1-Digit Translation Table Expansion	234-090-251AC
7412	Application Improvement	234-090-261AC
7429	Mandatory 10-Digits on LSP_LOCAL Trunks – Part 1	234-090-243AC, Iss 2
7429a	Mandatory 10-Digits on LSP_LOCAL Trunks – Part 2	234-090-251AC
7477	ALAMO (AT&T Local Access Management Option)	234-090-243AC, Iss 2
7492	Capacity Relief in 1B Memory for 4E26	234-090-261AC
7497	AT&T Network Connection (ANC) Enhancements to Special Routing Features	234-090-253AC
7501	Expand LACIDs to Support 856 D-channels	234-090-251AC
7506	NAI Call Redirection and LNP Interaction	234-090-243AC, Iss 2
7520	ANC Dial-Around (ADA) Blocking	234-090-243AC, Iss 2
7573	Segmented Memory Base Capability	234-090-261AC
7573a	Segmented Memory Base Capability	234-090-254AC
7592	Network Routing and Numbering Database for Intl. Routing	234-090-253AC
7592a	Routing Database Architecture for International Routes	234-090-254AC
7619	MR to 5645 – Digital Link Ph 2.1 – 8YY Screen	234-090-243AC, Iss 2
7633	MR to 7038 – Support for Deletion of CPN over AATOS Trunks	234-090-243AC, Iss 2
7645	National ISDN PRI for AT&T Digital Link Ph V and LDNC Ph 2	234-090-261AC
7673	ANC ECR for Operator Services UTA Update	234-090-243AC, Iss 2
7698	Traffic Transition Phase 1 - Switched Access to the Edge	234-090-262AC
7701	Procedure for Growing ATP TSGs	234-090-251AC
7752	Edge-to-Edge Routing	234-090-262AC
7815	Modified No-Loopback Continuity Check (7815)	234-090-251AC, Rev 1
7860	Edge Switch Access to Prepaid Card	234-090-261AC
7862	Direct Services ANI-Based for Access Value Arrangements/ Terminating Switched Access Arrangement--Phase 2	234-090-254AC
7872	TCS Redirection to OCC 8YY	234-090-261AC
7880	Location Routing Number (LRN) Recipient Switch Coding of Forward Call Indicator (FCI) for Interswitch Routing of DN	234-090-253AC
7883	Billing Number for Switched Data Video Gateway (SDVG)	234-090-253AC
7888	Expansion of BLCNT for Q.931 Trunks Subgroups	234-090-261AC
7944	Commercial Credit Card Validation	234-090-261AC
8024	Switched Access 8YY Originations at the Edge - Phase 1	234-090-271AC
8024i	Switched Access 8YY Originations at the Edge - Phase 1	234-090-271AC
8045	Capacity Relief on 1B Main Memory for 4E27	234-090-271AC
8072	International Transit Calls Using SS7 NI for NWZ1 Terminations	234-090-261AC
8074	Increased Number of Transfers for TCS on NAP	234-090-261AC

<b>Feature Number</b>	<b>Feature Name</b>	<b>PRD Release</b>
8092	4ESS Real Time Capacity Mining	234-090-271AC
8093	4ESS API Capacity Mining	234-090-271AC
8114	CCITT7/CCS7 CPC Interworking for Pay Phone Calls	234-090-261AC
8141	TTA Over ATM Route Advance Trigger	234-090-271AC
8202	Billing Number for Switched Data Video Gateway (SDVG)	234-090-271AC
8214	AT&T Digital Link 711 Calling Capacity	234-090-271AC
8230	MR to Feature 7264 - Tollfree Service Processing on Edge Switch With SD	234-090-262AC
8364	Modification Request (MR) to Feature 4941 - ISUP to Q931 Clearing Message	234-090-271AC
8390	Marking All Eligible ASN Trunks Assigned on DIFs and DTs as SCGA	234-090-271AC