



## 1A ESS™ Switch Advanced Services Platform/Network Access Point Feature Feature Document

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## 1. Overview

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### Definition

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- 1.01 The Advanced Services Platform/ Network Access Point (ASP/NAP) feature capability provides virtual network access to ASP subscribers who are not served directly by a service switching point (SSP).
- 1.02 This practice is reissued to support the 800 Number Exhaust Feature and the Expansion of International Direct Distance Dialing Plan to 15 Digits (IDDD15) Feature, both available with the 1AE12.05 Generic Program.
- 1.03 This practice does not contain admonishments.
- 1.04 The 800 Number Exhaust Feature provides additional (besides 800) Service Access Codes (SACs) for toll-free numbering services. The first two new toll-free SACs are 888 and 877. Other new toll-free SACs are forthcoming. Each new toll-free SAC functions virtually the same as the 800 SAC. The one exception is that 00Y codes are not supported for the new toll-free SACs.
- 1.05 Any reference in this document to "800 Number Service", "800 NS", or "800 Service" pertains to the feature which now includes all toll-free numbers. Also, in general, any reference to a "800 Call" or "800-NXX-XXXX" means a "toll-free" call or number.
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1.10 Part 7 lists the abbreviations and acronyms with applicable terms used in this practice.

## Economic Worth

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- 1.11 The NAP allows 1A ESS Switch customers access to many of the services supported by ASP either via the SSP or service control point (SCP) functionality.

## Availability

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- 1.12 The ASP/NAP feature is initially available in the 1AE11.01 and later generic programs/periodic partial updates (PPUs). In 1AE11.01 and later generic programs/PPUs, ASP/NAP uses modified equal access multifrequency (EAMF) signaling. In 1AE11.02 and later generic programs/PPUs, ASP/NAP may use either EAMF signaling or modified common channel signaling system 7 (CCS7) signaling.

## Feature Groups

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- 1.13 The ASP/NAP feature requires ASP/NAP feature group 9SPVNF and Carrier Interconnect feature group 9SCARI.
- 1.14 If modified CCS7 Network Interconnect (NI) signaling is desired between the NAP and SSP, the ASP/NAP feature requires basic network interconnect feature group 9SBNI.



**NOTE:**  
ASP call forwarding requires the call forwarding over private facilities feature group 9SCFPF.

## Feature Assignment

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- 1.15 The ASP/NAP feature is provided on a per office (switch) basis.

## 2. User Perspective

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### User Profile

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- 2.01 The ASP/NAP capability provides virtual network access to business and residential customers who are not served directly by an SSP.

### Customer Premises Equipment

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- 2.02 There is no new customer premises equipment required for the ASP/NAP feature.

### Feature Description

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- 2.03 ASP provides a base from which a variety of services can be built and, as such, represents the first step toward making intelligent networks a reality. It can be either an addition or an alternative to a customer's existing network. The architecture for ASP service (Figure 1) uses intelligent switches which interact with centralized data bases via common channel signaling. Generally, the switches and other facilities for this service are shared with POTS traffic; dedicated ASP trunks may be used between network switches.
- 2.04 Functionally, the ASP SSP switches interact with the SCP to provide screening, routing, billing information, etc. The NAP provides ASP access to customers who are not served by an ASP SSP office. The NAP concentrates ASP traffic and then routes it to an ASP SSP switch for handling.
- 2.05 The NAP, described as a non-SSP switch configured for ASP service, is linked to the ASP SSP via modified EAMF signaling in 1AE11.01 and later PPU's or either modified EAMF or CCS7 signaling in 1AE11.02 and later PPU's. Through this connection to the ASP SSP, the NAP provides the following functions:

- (a) **ASP Access:** The primary function of the NAP is to provide ASP access. The telephone company can allow the following types of customer access to the NAP:

- (1) Dedicated POTS/RSS/CTX ASP Lines [for example, dedicated lines to station sets or private branch exchanges (PBXs) (no access code needed)]
- (2) Non-Dedicated POTS/RSS ASP Lines (for example, POTS lines or PBXs which use \*XX/11XX access codes)
- (3) Dedicated ASP Trunks (for example, network access trunks from a PBX or remote centrex)
- (4) Non-Dedicated ASP Trunks (for example, central office trunks from a PBX which use \*XX/11XX access codes)
- (5) Centrex Lines (for example, lines that require a centrex access code for ASP service)
- (6) Centrex Tie Trunks (for example, trunks that require a centrex access code for ASP service)
- (7) Direct Connect Lines (for example, hot lines which can only access ASP service without dialing any digits).



**NOTE:**  
See Table A for the ASP triggers associated with these types of ASP accesses.

- (b) **ASP Dialing Plan:** From each of the above access arrangements, with the exception of direct connect lines (which do not permit dialing the called number), the ASP customer must utilize the following dialing plan:

- (1) ON-NET – 7 digits (NXX XXXX).
- (2) OFF-NET – 1 + 10 digits [(typically) 1 + NPA NXX XXXX].
- (3) INTERNATIONAL – 011 + 7 to 15 digits [011 + country code (CC) + national number

(NN)].

- (4) ATTENDANT – 0 + # (or time-out) (0- calls are routed to the ASP SSP to complete to an ASP attendant).
- (5) 800 – The telephone company may specify that toll-free calls dialed such as "1 + 800 + NXX + XXXX" receive standard 800 Service treatment or may route the calls to the ASP SSP.
- (6) 911 – The telephone company may specify that 911 calls receive standard "emergency 911" treatment, or that they route to the ASP SSP.

This assumes that the ASP customer has either dialed the ASP access code or is using a dedicated facility. For direct connect lines, no called digits are dialed.

- (c) **Interface to ASP SSP:** The NAP outpulses the same caller information that is used in EAMF or CCS7 NI signaling to the ASP SSP switch using modified EAMF or CCS7 NI signaling (over feature group D trunks).
- (d) **ASP EGRESS:** The NAP enhances the capabilities of fully and semirestricted centrex stations. These stations, as designated by the telephone company, can also receive incoming ASP calls in addition to those calls already allowed to terminate to the fully and semirestricted centrex stations. The ASP calls allowed are those over dedicated terminations allowed trunks or those over CCS7 trunks that receive an originating line information (OLI) parameter indicating ASP. Other ASP calls may terminate at the NAP by way of POTS trunks, private network trunks, and other dedicated trunks.



**NOTE:**  
All ASP calls, either originating or terminating, from a NAP are interoffice calls. There are no intraoffice ASP/NAP calls.

2.06 Private branch exchanges using traditional signaling are able to access the NAP. Upon connection to the ASP SSP, the designated trunk automatic number identification (ANI) is used in the modified EAMF signaling to the ASP SSP. If the Automatic Identified Outward Dialing (AIOD) feature is available and the AIOD IC ANI Enhancement (AIAE) feature is active, the station DN is used instead of the trunk ANI. The NAP is not capable of receiving EAMF signaling from a PBX.

2.07 Existing private networks and tie trunks are able to interface with the NAP. If a traveling class mark (TCM) is to be sent on the trunk, the incoming trunk must be marked for the number of TCM digits (0, 1, or 2) to be received. The NAP does not transmit the TCM digits to the ASP SSP nor does it perform any special screening based on those TCM digits. The TCMs which are sent from the ASP SSP cannot be passed on to the NAP except via private facilities between the ASP SSP and the NAP.

2.08 A call may use a route via an automatic route selection (ARS) or flexible route selection (FRS) route list which is not necessarily originated as an ASP call, but may be allowed to overflow to an ASP facility (FRS) or be specified as a route on a route list [electronic tandem switching (ETS) customers using ARS].

#### A. NAP to ASP SSP Interface

2.09 The NAP concentrates ASP traffic to the ASP SSP using modified EAMF signaling or modified CCS7 NI signaling. Based on the access arrangements for ASP [paragraph 2.05(a)] and the dialing plan [paragraph 2.05(b)], the NAP recognizes a call as ASP and forwards the ANI and the dialed digits to the ASP SSP using modified EAMF or CCS7 NI signaling.

#### EAMF Signaling

2.10 The following EAMF signaling changes are made for ASP.

- (a) The first stage signaling sequence remains the same as normal except the carrier identification code is set to 110 (or optionally 0110 beginning with 1AE12).



#### NOTE:

The 0ZZ code is the first 0ZZ code in the office options table auxiliary block.

- (b) The ANI information indicator (II) digits sent to the ASP SSP are defined in word 1 of the supplemental office options table. The digits indicate that this is an ASP call.



#### NOTE:

For centrex customers, the ANI digits are either station or group ANI depending on the individual billing directory number (IBDN) indicator in the centrex common block.

- (c) The second stage signaling of the dialed digits includes one of the following:
  - (1) Prefix digit (1 +) for off-net calls
  - (2) Prefix digits (011) for international calls
  - (3) No dialed digits (KP + ST only) for calls originating from a direct connect line.

2.11 When a call originates on a dedicated ASP line/trunk, the caller goes off-hook and receives a dial tone. After the caller has dialed a number satisfying the ASP dialing plan, the NAP seizes an outgoing trunk and receives a wink back from the ASP SSP (with the exception of 911 or toll-free calls which may be routed via POTS). The NAP then output pulses the first stage of EAMF using 110 (or optionally 0110 beginning with 1AE12) for the carrier identification code and receives a wink back. The NAP starts the second stage of EAMF by outputting the II and ANI digits. When dialing is complete, the NAP output pulses the dialed digits and receives an acknowledgement wink from the ASP SSP.

2.12 Overlap outputting may be used (as specified by the office options table for ASP) as it currently exists to output pulse the ASP digit stream. When the number of digits to be entered has been determined and all but the last four have been entered by the user, outputting begins.

2.13 When a call originates on a direct connect line, no digits are entered by the caller or sent from the NAP to the ASP SSP. Instead, the caller picks up the telephone, the NAP immediately seizes an outgoing trunk to the ASP SSP, and receives a wink back from the ASP SSP. The NAP then outputs the first stage of EAMF using 110 (or optionally 0110 beginning with 1AE12) for the carrier identification and receives a wink back. The NAP then starts the second stage of EAMF by outputting the ANI and II digits but does not output any dialed digits (only KP + ST). The ASP SSP must recognize this as a valid ASP call and relay this information to the SCP to receive routing information.

#### CCS7 NI Signaling

2.14 The CCS7 initial address message (IAM) is modified for the ASP/NAP feature. The NAP formulates a CCS7 integrated services digital network - user part (ISDN-UP) IAM as if it were intended for an inter-LATA destination. The following are the changes to the IAM for ASP/NAP.

- (a) **IAM Called Number Parameter:** The address signal field of the called number contains the dialed digits (prefixing and deleting is inhibited). All ASP calls have the called party number parameter built as follows:
- (1) Nature of address indicator - set to national significant number
  - (2) Odd/even indicator - set if the number of address signal digits is odd and reset otherwise.
  - (3) Numbering plan - set to ISDN/telephony
  - (4) Address signal - (dialed/routing digits)
    - NXX XXXX
    - 911 (if the telephone company specifies that emergency 911 calls route to the ASP SSP)
    - 0 (ASP attendant calls)
    - 1 + NPA NXX XXXX
    - 011 + country code (CC) + national number (NN)

(International Calls)

- 1 + 800 NXX XXXX (if the telephone company specifies that toll-free calls route to the ASP SSP)
  - No digits dialed.
- (b) **IAM Charge Number Parameter:** The charge information is included in all IAMs sent from the equal access end office to the access tandem (AT)/SSP. If the billing number is not equal to the calling party number, the charge number parameter, which contains the billing number is sent in the IAM.
- (c) **IAM Calling Number Parameter:** The calling party number parameter is included in all IAMs sent from the equal access end office to the AT/SSP.
- (d) **IAM Transit Network Selection (TNS) Parameter:** The TNS parameter contains the carrier code assigned for ASP (decimal 110 (or optionally 0110 beginning with 1AE12)) in the carrier identification code field, and the circuit code subfield contains the 4-bit mapping equivalent of the "0ZZ" value assigned for the ASP invocation request.
- (e) **IAM Originating Line Information (OLI) Parameter:** The OLI parameter corresponds to the II digits in EAMF signaling and contains the code from the supplemental office options table indicating an ASP call.

2.15 Once a caller has dialed a number that satisfies the ASP dialing plan and the NAP seizes a CCS7 outgoing trunk, an IAM is formatted according to NI requirements. The TNS parameter carrier code is set to 110 (or optionally 0110 beginning with 1AE12) and the OLI parameter is set to the value contained in the supplemental office options table. After the IAM is sent and continuity check is completed (if requested), the NAP expects an exit message (EXM) and an address complete message (ACM). From this point, ASP call completion is handled as a NI SSP call (the EXM returned from the SSP contains no outgoing trunk group number). If the EXM is not received, the AMA record is not updated, but the call can complete. If the ACM is not received, the call is torn down. Refer to Part 6

A(26) for details.

**2.16** For direct connect line ASP calls (without the second entry on a speed call list built), when the NAP seizes a CCS7 outgoing trunk, the IAM is formatted as above, but the called party number parameter contains no address digits. The ASP SSP must recognize this as a valid ASP call and relay this information to the SCP to receive routing information.

**2.17** After an originating call is determined to be an ASP call, the first digit received is examined to determine whether the call is on-net or off-net. With the exception of "911" calls, if the first digit is any digit other than a "1" or a "0", the call is assumed to be an on-net call and six more digits are expected. If the first digit is a "0" and no other digits follow, the call is treated as an on-net ASP operator assisted call and is sent to the ASP SSP. If the first digit is "0" followed by "11", the call is treated as an off-net international call. If the first digit is a "1", the call is treated as an off-net call and ten more digits are expected before being sent to the ASP SSP. The exception to off-net processing is when a toll-free SAC is collected as the NPA (e.g., 1+800+XXX+XXXX). The telephone company can then allow the call to route to the ASP SSP or receive normal toll-free processing as if the customer had not dialed or originated ASP. The telephone company can also allow "911" calls to route to the ASP SSP or receive normal emergency 911 treatment at the switch. The option to route toll-free and 911 calls (which originate as ASP calls) via normal processing is on an office option basis only.

**2.18** Calls using ASP facilities and conforming to the ASP dialing plan are routed to the ASP SSP (using modified EAMF or CCS7 NI signaling) for further instructions. The route to the ASP SSP is selected by using a route index as stored in the translations office options table. This route index should route the call over a trunk group connected to the ASP SSP. If alternate routing is desired, the next route index should also route to a trunk group connected to the SSP. No inter-LATA carrier (IC) information translations are performed on the pseudo carrier 110 (or optionally 0110 beginning with 1AE12).

#### **B. Screening**

**2.19** No screening of the dialed digits is done at the NAP. All calls conforming to the

dialing plan are sent to the ASP SSP/SCP for ASP treatment. All calls not conforming to the ASP dialing plan receive reorder treatment at the NAP.

**2.20** Calls terminating at the NAP are routed using normal signaling.

#### **C. ASP SSP to NAP Interface**

**2.21** Fully and semirestricted stations with ASP can also receive calls that are determined to be ASP calls. If a call terminates on an ASP dedicated incoming trunk, the call is allowed to complete. If a call terminates on a CCS7 incoming trunk and the incoming IAM has an OLI parameter with a value the same as in the supplemental office options table for ASP, the call is allowed to complete.

**2.22** If a call is blocked to an ASP DN because no ASP indicator was received from the trunk, the call is routed to tone or announcement the same as today with interoffice calls to fully and semirestricted stations.

#### **Abnormal Operations**

**2.23** No validity checks are performed on the actual dialed digits other than to verify that the pattern of the dialed digits adheres to the current ASP dialing plan [refer to paragraph 2.05(b)]. If the dialed digits do not conform to the ASP dialing plan, the user receives reorder treatment. Otherwise, the user is connected to the ASP SSP and receives optional announcements or reorder treatment.

**2.24** Other abnormal interactions may occur as a result of standard 1A ESS Switch treatment (for example, unavailable resources, etc.).

#### **Interactions**

**2.25 Electronic Tandem Switching (ETS) - Message Detail Recording (MDR):** Centrex customers with ETS networks may wish to add ASP facilities to their ARS route lists. Normal ETS dialing procedures apply and if an ASP facility type is found (Facility Indicator of 3), then ASP logic completes the call.

**2.26** Private network customers on the NAP who use the Expanded Message Detail Recording (XMDR) or Station Message Detail Recording (SMDR) capabilities can also use this feature to record ASP calls. The exact message format to be used for the various types of ASP calls can be found in the SMDR feature document with the exception that the service feature code is set to 7. Refer to Part 6 A(11) for details.

**2.27** If SMDR is applicable, and the route list call completes over ASP facilities, the facility ID represents ASP.

**2.28** Centrex customers who have MDR capabilities via ETS or the unbundled ETS feature (9SSMDR) can elect to have MDR records generated for all their ASP dialed calls. The MDR ASP interactions are controlled by the centrex common block item XMDRASP.

**2.29 Flexible Route Selection (FRS):** FRS calls may overflow to ASP facilities when all private facilities in the FRS route list are busy. The overflow to ASP option must be used in lieu of overflow to DDD.

**2.30 Common Control Switching Arrangement (CCSA):** ASP is compatible with CCSA.

**2.31 Customer Dialed Account Recording (CDAR):** The CDAR feature is compatible with ASP with the following dialing sequence:

- CDAR access code + account codes + ASP access code + ASP digits

A standard CDAR AMA record is produced with the ASP access code and ASP dialed digits.

**2.32** If ASP AMA recording is turned on by the telephone company via the translations office options table item ASPOAMA, the NAP stores the account code in the AMA record. The account code is not forwarded to the ASP SSP.

**2.33** Customer dialed account recording is not supported on dedicated lines or direct connect lines because these lines automatically originate ASP calls (hence, no ASP access code is dialed).

**2.34 Call Forwarding:** The NAP allows call forwarding customers to forward calls to a remote station via ASP. To accomplish this, the user should first enter the call forwarding activation code, then the POTS/centrex ASP

activation code, and finally the dialed digits. If, upon call forwarding activation, the user is requested to enter an authorization code by the SCP/SSP, or if an authorization code is anticipated for some later time frame, the user should deactivate call forwarding.

**2.35** For POTS/centrex customers whose calls are forwarded over ASP facilities, the caller is informed that billing occurs whether or not the call is answered via pseudo route index 124. This is based on the existing Call Forwarding Over Private Facilities (CFPF) feature.

**2.36** Call forwarding is not supported on dedicated lines or direct connect lines because these lines automatically originate ASP calls (hence, no call forwarding activation code is allowed since this is not in the ASP dialing plan).

**2.37** Unlike call forwarding variable activation, ASP/NAP call forwarding is activated whether or not the call is answered at the terminating station.

**2.38 Speed Calling:** Advanced Services Platform customers with the speed calling capability can enter ASP numbers on their speed call lists. This is accomplished by dialing the "change speed call list" access code, the speed call entry number, followed by the ASP activation code, and then the desired dialed digits (conforming to the ASP dialing plan).

**2.39** Speed calling is not allowed on dedicated or direct connect lines because these lines automatically originate ASP calls (hence, the speed calling access code does not conform to the ASP dialing plan).

**2.40 Add-On Calls:** An ASP station with the add-on capability can add on an ASP call via normal ASP dialing arrangements.

**2.41** Centrex ASP customers with the direct connect and add-on capability can flash and originate a call to the centrex attendant. POTS ASP customers with the direct connect and add-on capability can flash and originate a normal POTS call. Dedicated ASP lines are only capable of adding on other ASP calls (no access code required).

**2.42 Automatic Identified Outward Dialing (AIOD):** For PBX originations, if AIOD is available and the AIAE feature is active, the station DN (when available) will be provided in

the ANI rather than the listed DN.

**2.43 ESSX-1 (Centrex Tariff Restructure):**

ESSX-1 changes the current centrex-CO concept of unlimited exchange access to one of measured service. The limiting function for network access is accomplished through the use of customer facility groups (CFGs). For this purpose, CFGs should **not** be applicable to ASP calls. However, calls terminating to ESSX-1 customers over nondedicated facilities cannot be determined to be ASP calls and will be subjected to CFG treatment.

**2.44 Centrex Station Rearrangement**

**(CSR):** Centrex customer line changes for the ASP/NAP feature are available via the CSR capability. ASP capabilities can be changed via the "LNCHG" message. ASP capabilities can be verified via the "LNDSP" message. ASP lines can be moved with the "LNMOV" message. ASP line speed call lists can be changed with the "DCNCHG" message.

### Operational Limitations

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- 2.45** The NAP will not be capable of receiving EAMF signaling from a PBX.
- (a) The 1A ESS Switch can not be an ASP SSP.
  - (b) All customer interactions which require dialing additional digits after a connection is established to the SSP require a dual-tone multifrequency telephone.

### Restriction Capability

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- 2.46** ASP DNs, as designated by the telephone company by way of switch translations, can also receive incoming ASP calls across dedicated ASP trunks or from CCS7 trunks which contain an ASP OLI value the same as in the supplemental office options table for ASP in the IAM.
- 2.47** To restrict a POTS/RSS line from accessing the ASP feature, it is necessary to assign that line an access code restriction group (ACRG) value that prohibits the line from using the ASP access code.

## 3. Engineering

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- 3.01** These guidelines are for planning purposes only. The Central Office Equipment Engineering System (COEES) Information System engineering document, Index 91, should be used to manually order and engineer the 1A ESS Switch. The standard recommended automated procedure is COEES-Mechanized Ordering (MO).

### Hardware

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- 3.02** No new hardware is needed for this feature.

### Software

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#### A. Base Generic Program

- 3.03** The ASP/NAP feature requires approximately 2500 decimal words of base generic program.

#### B. Optionally Loaded Feature Groups

- 3.04** Approximately 6,656 decimal words are required for the ASP/NAP feature package. The ASP/NAP feature is defined by the 9FPVNF feature package. The ASP/NAP feature requires the 9SPVNF (ASP/NAP) and the 9SCARI (carrier interconnect) feature groups. If modified CCS7 NI signaling is desired, the ASP/NAP feature requires the 9SBNI (network interconnect) feature group. In order for a centrex line to forward calls over ASP/NAP facilities, the 9SCFPF feature group is also required.

#### C. Call Store Areas

##### Unrestricted Duplicated Call Store

- 3.05** The B6PVN parameter word contains the beginning address of the ASP/NAP traffic counts block in the variable call store.
- 3.06** The B6PVN + 1 parameter word contains the size of the ASP/NAP traffic counts block.

### Restricted Duplicated Call Store

3.07 The AMA registers are used to collect AMA billing records for originating and terminating ASP/NAP calls. If AMA records are being generated for the ASP/NAP feature, an AMA register is seized when the call is initiated and held for the duration of the call. When the ASP/NAP call is terminated, the AMA register is released. If the multientry teleprocessing system (METS) feature package is active, the AMA register is released at answer.

3.08 The ASP/NAP feature increases the usage of AMA registers. Refer to Part 6 B(1) for more information on the AMA usage.

### D. Translations

#### Directory Number Translator

3.09 The ASP DN indicator, bit 23 of directory number class 3 (DNCL3) (Figure 2) in the directory number translator, is defined to allow fully and semirestricted centrex stations to receive incoming ASP calls. The DN still originates calls as normal. In order for the NAP office to provide this capability, the SSP office routes the call over an ASP terminating allowed trunk or a CCS7 trunk. If routing over a CCS7 trunk, the SSP office sends an IAM message containing an ASP OLI parameter equal to the OLI contained in the supplemental office options table for ASP calls. If the call is not routed over one of these trunks, the call is denied.

#### Line Equipment Number/Remote Equipment Number Translator

3.10 The ASP line restriction indicators, bits 13 and 14 of line equipment number class 4 (LENCL4) (Figure 3) in the line equipment number (LEN) translator, are used to assign the ASP/NAP feature to the line and determine if the line is a dedicated ASP line. If the line is a dedicated ASP line, then the line can only originate ASP calls. The line will not be able to originate any other type of call because every time the line originates, the call is assumed to be an ASP call. These dedicated ASP lines are still allowed to receive calls as normal; this restriction applies only to originations. If the line has ASP access, but is not dedicated, the line must dial an access code to make an ASP call.

3.11 Word 1 (type 1), bit 23 (Figure 4) of the LEN speed calling auxiliary block

indicates that an ASP route is used when completing a call to the DN specified in the auxiliary block.

#### Trunk Group Number Table Translator

3.12 The ASP dedicated terminations allowed indicator, word 1, bit 22 (Figure 5) of the trunk group auxiliary blocks for trunk group types 2, 10, and 15, determines if terminations to ASP dedicated stations are allowed to complete using this trunk group. Trunk group type 2 auxiliary blocks are noncentrex, nontandem, non-intertoll 2-way, and remote switching system (RSS) maintenance pseudo trunk network number (TNN) trunks. Trunk group type 10 auxiliary blocks are used for secondary-intertoll, intertoll, and direct distance dialing (DDD) access trunks. Trunk group type 15 auxiliary blocks are used for either tandem-incoming trunks or 2-way trunks.

#### Route Index Expansion Table

3.13 Two new pseudo route indexes (PRIs), 124 and 125, are defined for the ASP feature. The route index expansion words are shown in Figure 6.

3.14 PRI 124 provides an announcement to a caller that is being forwarded over ASP facilities. In some instances, the customer may be charged for a phone call that does not even complete. So before the SCP data base query is done, an announcement is played warning the caller that there may be a charge even if the call does not complete.

3.15 PRI 125 provides an announcement to an ASP customer who has dialed a number which does not conform to the ASP dialing plan while attempting to originate an ASP call.

#### Centrex Translator

3.16 The dedicated ASP indicator, word 2, bit 1 of the centrex common block (Figure 7), indicates that members of the centrex group are allowed to have ASP-dedicated originating and/or terminating capabilities assigned to them. If bit 1 is not set, no member of this centrex group is allowed to be ASP-dedicated originating, direct-connect originating, or ASP-dedicated terminating. Bit 1 also indicates CSRs can assign ASP/NAP dedicated attributes to a particular CSR station.

3.17 The XMDR ASP indicator, word 2, bit 0 of the centrex common block (Figure 7),

indicates that an XMDR record is created when the customer originates an ASP call and information pertaining to the call is stored in the XMDR record. Refer to Part 6 A(11).

**3.18** The type 5f entry in the centrex digit interpreter tables (Figure 8) is used to define the ASP access code. A subtype of 29 with a sub-subtype of 0 indicates ASP. The ASP access code is used by nondedicated centrex lines. When the ASP access code is entered before entering the called DN, the call uses ASP routing. Access to the ASP access code is permitted either through a centrex access treatment (CAT) value stored against the LEN or by using the new ASP bits in the LENCL4 word. (See LEN translator.) If CAT does not allow access to the ASP feature, then the LENCL4 bits are checked to see if the line is allowed to dial the ASP access code.

#### Route Sequence Number Translator

**3.19** Word 1, bit 23, for type 1 and type 4 entries of the route sequence number (RSN) translator (Figure 9), indicates that if the call cannot route over an FRS route, then the call can route over ASP. Type 1 entries contain four RSNs, and type 4 entries contain an auxiliary block address pointing to a block of RSNs.



#### **NOTE:**

The ASP item is mutually exclusive with the existing DDD item.

#### Prefixed Access Code Translator

**3.20** The type C entry in the prefixed access code translator (Figure 10) is used to define the ASP access code. A feature type of 29 with a feature subtype of 0 indicates ASP. The ASP access code is used by nondedicated POTS lines and central office trunks (COTs). When the ASP access code is entered before entering the called DN, the call uses ASP routing. Access to the ASP access code is permitted either through an ACRG value stored against the LEN or by using the new ASP bits in the LENCL4 word. (See LEN translator.) If the ACRG does not allow access to the ASP feature, then the LENCL4 bits are checked to see if the line is allowed to dial the ASP access code.

#### ETS Route List Translator

**3.21** In the type 1 entry, words 1 through n, bits 19 through 21, in the route list auxiliary block (Figure 11) are set to 3 for the ASP simulated facilities group.

#### Supplemental Office Options Table Translator

**3.22** Word 1, bits 0 through 7, in the supplemental office options table (Figure 12), defines the ASP ANI II digits. These digits are used in the ANI signaling sequence between the NAP and the SSP to identify the call as an ASP call. These digits are also used to determine whether or not the OLI parameter received on an incoming call over CCS7 trunks indicates ASP.

**3.23** Word 1, bits 8 through 18, in the supplemental office options table (Figure 12), defines the ASP RI used to route ASP calls to the SSP office.

**3.24** Word 1, bit 19, in the supplemental office options table (Figure 12), defines the ASP overlap outpulsing indicator. A value of 0 indicates the ASP call is routed to the SSP without EAMF overlap outpulsing. A value of 1 indicates the ASP call is routed to the SSP with EAMF overlap outpulsing. For an ASP RI that routes using CCS7, this indicator is not used.

#### Office Options Table Translator

**3.25** Word 0, bit 10, in the office options table (Figure 13) indicates whether AMA records are made for originating or terminating ASP calls. A value of 1 indicates ASP AMA records are not made. A value of 0 indicates ASP AMA records are made.

**3.26** Word 0, bit 11, in the office options table (Figure 13) determines the treatment of 911 calls when dialed from an ASP line. A value of 0 indicates the call is routed by the local telephone company. A value of 1 indicates the call is routed by the SSP SCP data base over an ASP route.

**3.27** Word 0, bit 12, in the office options table (Figure 13) determines how 800 calls are routed. A value of 0 indicates the call is routed using normal 800 processing. A value of 1 indicates the call is routed using ASP.

#### Call Forwarding Variable Customer Originated Recent Change (CORC) Block

**3.28** Word 0, bit 17, of the 2-word call forwarding variable CORC block (Figure

14) indicates that the call is forwarded over an ASP route.

## Real Time

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3.29 The real time impact of the ASP/NAP feature is minimal.

## 4. Implementation

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### Recorded Announcements

- 4.01 Create two new recorded announcements for ASP calls that route to an announcement. Refer to paragraphs 3.13 through 3.15 for the conditions involved that route ASP calls to announcements.
- 4.02 The following procedures are performed at the switch to implement the ASP/NAP feature.

### ASP Routing and Office Options

- 4.03 Using the RC:PSWD message, modify the supplemental office options table to contain the RI the ASP/NAP feature uses to route calls to the SSP office. Also using the RC:PSWD message, indicate if overlap signaling should be done.
- 4.04 Using the RC:PSWD message, modify the office options table to indicate if AMA records are made for originating ASP calls.
- 4.05 Using the RC:PSWD message, modify the office options table to indicate how the ASP/NAP office treats 911 calls dialed from an ASP station.
- 4.06 Using the RC:PSWD message, modify the office options table to indicate how the ASP/NAP office treats 800 calls dialed from an ASP station.
- 4.07 Using the RC:PSWD message, modify the supplemental office options table to contain the ASP II digits.
- 4.08 Using the RC:RI message, build the PRIs 124 and 125 to route to the recorded announcements created in paragraph 4.01.

### ASP Access for POTS/RSS/COT

- 4.09 Using the RC:GENT message, build a prefixed access code type C entry for

POTS access to ASP (feature type 29, subtype 0).

### ASP Access for Centrex

- 4.10 Using the RC:CTXDI message, build the new centrex digit interpreter table entry type 5f [data type 5, subtype 29 (keyword STYP 29), sub-subtype 0 (keyword SSTYPE 0)] for every ASP centrex customer requesting ASP access. Also, indicate if a second dial tone is to be returned (keyword MRSDT). Other than the second dial tone indicator, the type 5f is similar to the existing type 5c entry in the centrex digit interpreter tables.
- 4.11 Using the RC:CTXCB message, modify any centrex group that is to have dedicated ASP lines (both originating and terminating) (keyword ASPDED). This also indicates if CSR customers can designate lines in the centrex group as ASP dedicated originating or ASP dedicated terminating. Also indicate if ASP XMDR records are to be made (keyword ASPXMDR).

### ASP Line Access

- 4.12 Associated centrex CAT codes and POTS ACRG values may be needed to restrict access to ASP. Once the centrex access code is built in the digit interpreter table and the POTS access code is built in the PACT translator, those lines with ASP compatible CAT and ACRG values are able to access ASP.
- 4.13 Using the RC:LINE message, modify the LENS that will have access to ASP by using an access code (keyword ASPA) and those that are ASP dedicated (ASPO) (that is, able to originate only ASP calls). A line may also be marked as an ASP "hot line" (keyword ASPO) if the line has an originating major class of "manual" for POTS lines or "centrex manual" for centrex lines. The "hot line" capability is also available through CSR for centrex customers subscribing to CSR and ASP.
- 4.14 Using the RC:LINE message, modify the centrex fully and semirestricted DNs that will be able to receive ASP calls (keyword ASPPI). This capability is available only for DNs with a terminating major class of "centrex no DID" and "centrex semirestricted terminating". This capability is also available through CSR for centrex customers subscribing to both CSR and ASP.

4.15 Using the RC:TG message, modify the type 2 trunk groups (noncentrex, nontandem, non-intertoll 2-way, or RSS maintenance pseudo TNNs), type 10 trunk groups (secondary intertoll, intertoll, or DDD access trunks), and type 15 trunk groups (tandem-incoming or 2-way trunks). Modify these trunk groups to indicate if calls are allowed to complete to ASP dedicated stations using a trunk in the trunk group (keyword ASPDTA).

#### ASP Feature Assignments

4.16 Using the RC:FLXRS message, indicate that if an FRS route is not available that an ASP route may be used to route the call (keyword ASPOV). This is only necessary for type 1 (used for route sequence RSNs) and type 4 (used for RSN auxiliary blocks, more than four RSN entries) entries. This capability is mutually exclusive with the DDD capability.

4.17 Using the RC:RLST message, build a new facility indicator for the ASP in the route list translator route list auxiliary block (keyword FAC 3).

4.18 Using the RC:SCLIST message, indicate if a speed calling entry is routed via ASP (keyword ASP). This is only necessary for type 3 (7-digit interoffice, 10-digit, and IDDD) speed calling entries.

⇒ **NOTE 1:**  
ASP 7-digit speed calling entries require a type 3 entry whereas non-ASP 7-digit speed calling entries use a type 2 entry.

⇒ **NOTE 2:**  
The RC:SCLIST message is only required for "direct connect" lines; speed call entries can also be customer originated recent changeable.

4.19 Using the RC:CFV message, modify the call forwarding CORC block (2-word CORC only) to indicate if an ASP route should be used when forwarding calls to the remote DN (keyword ASP).

⇒ **NOTE 1:**  
Even a remote DN that appears to be an intraoffice call will be built in the interoffice format with a 2-word CORC block.

⇒ **NOTE 2:**  
Call forwarding entries can also be customer originated recent changeable.

4.20 Using the RC:TRAF message, assign the ASP dialing success traffic count (TMC 171, EGO 0).

#### Set Cards

4.21 The set cards listed below must be input or otherwise updated for ASP/NAP implementation. Refer to Part 6 B(4) and 6 B(5) for comprehensive set card information.

- 9SPVNF defines the feature group for ASP/NAP. Feature group 9SPVNF requires feature group 9SCARI, 9SBNI for CCS7 NI signaling, and feature package 9FPVNF. Set card 9F250 contains the code for the ASP/NAP feature and is included in the 9SPVNF feature group.
- 9FPVNF defines the feature package for ASP/NAP. The 9FPVNF feature package number is 250.
- 9SBNI is a set card for the 1AE11.01 generic program and it defines the feature group for Network Interconnect.
- 9SCARI is an existing set card and defines the feature group for carrier interconnect.
- 9SCFPF is an existing set card and defines the feature group for call forwarding over private facilities.

#### Translation Forms

4.22 The following translation forms are applicable to the ASP/NAP feature. Refer to Part 6 B(6) for details.

- ESS 1101 – Directory Number Record
- ESS 1107A – Supplementary Information Record

- ESS 1109 – Centrex Group Record
- ESS 1202 – Trunk Group Record
- ESS 1103 – Route Index Record
  
- ESS 1308A – Flexible Route Selection Index Record
- ESS 1308B – Flexible Route Selection Index Record
- ESS 1317 – Prefixed Access Code Record
- ESS 1324 – Route List Record
- ESS 1400 – Traffic Register Assignment Record
- ESS 1500D – Office Option Record
- ESS 1502A – Originating Abbreviated Class Code Record
- ESS 1502B – Terminating Abbreviated Class Code Record
- ESS 1503 – Supplementary Abbreviated Class Code Record.

RC:SCLIST

RC:TG

RC:CTXDI

Keyword ASPA1 allows a LEN to access ASP by dialing an access code. Using this keyword on a line having an originating class code of "Manual" causes the line to be an ASP hot line. A 1-digit speed calling list with entry 2 populated must exist for this type of hot line to provide the ASP called number. This keyword is mutually exclusive with the ASPO keyword.

The ASP keyword indicates that the digits in the speed call entry are routed to ASP.

The ASPDTA keyword marks the trunk group to allow incoming calls to terminate to ASP DNs over this trunk group. This keyword is only valid for trunk group types 2, 10, and 15.

The RC:CTXDI message is used to build a type 5f entry with a subtype of 29 for miscellaneous features with a sub-subtype of 0 for ASP. The MRSDDT keyword builds a "return second dial tone" indicator.

**Recent Change Messages**

4.23 The following recent change messages are applicable to the ASP/NAP feature.

**Message**

**Function**

RC:LINE

This message requires three keywords:

Keyword ASPO designates a LEN to originate only ASP calls. Any digits dialed are interpreted as ASP digits. Using this keyword on a line having an originating major class of service of "manual" causes the line to be an ASP hot line. No speed calling list can exist for this type of hot line and the direct connect called number cannot be changed in 1A translations. This keyword is mutually exclusive with the ASPA keyword.

Keyword ASPI designates that a DN may also receive ASP calls (ASP incoming).

RC:CTXCB

RC:CFV

The ASPDED keyword indicates that the centrex group has subscribed to the ASP feature and may have dedicated origination and termination ASP lines. If this keyword is not input, the centrex group may only gain access to ASP by dialing the ASP access code. This indicator also determines if CSR customers have access to the ASP keywords ASPO and ASPI. The ASPXMDR keyword is input in order to implement the XMDR feature with ASP.

The ASP keyword indicates the remote DN is an ASP number. This keyword causes a 2-word CORC block to be built.

RC:FLXRS	The ASPOV keyword indicates if an FRS route is not available; the call can overflow to an ASP route.
RC:RLST	The FAC keyword with a value of 3 indicates that this is an ASP simulated facilities group entry.
RC:TRAF	The TMC keyword with a value of 171 and the EGO keyword with a value of 0 assigns the ASP dialing success traffic count.

4.27 The VF:DNSVY:FEATRS message used with the ASI keyword searches a range of DNs for those DNs that are also allowed to receive ASP incoming calls. A TR75 output message is printed containing those DNs.

4.28 The VF:OESVY:FEATRS message used with the ASPLR keyword searches for the office equipment (OE) numbers that are classified as ASP hot lines, OEs with ASP access via the use of access codes, and OEs that are ASP dedicated whereby all originations are assumed to be ASP. A VF03 output message is printed for each OE found.

### CSR Messages

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4.24 The following messages are applicable to CSR only:

Message	Function
LNCHG	This message has three ASP keywords: ASPA, ASPO, and ASPI.  Keyword ASPA allows a LEN to access ASP by dialing an access code. Keyword ASPO designates a LEN to originate only ASP calls. Keyword ASPI designates a DN to receive only ASP calls.
DCNCHG	This message has one ASP keyword. Keyword ASP allows the first speed call list entry for hot lines to be marked and routed as ASP calls.



**NOTE:**

This message does not identify those LENs that have ASP access via ACRG or CAT codes.

4.29 The VFY-DN message is used to print out the DN translations for a particular DN or a group of up to 1000 DNs. A TR01 output message is printed containing the DN translation information including an ASP indicator.

4.30 The VFY-TKGN message is used to print out the translation data for a trunk group. The printout contains the trunk class code and the number of trunks in the group. A TR10 output message is printed containing the translation data including an Advanced Services Platform Dedicated Terminations Allowed (ASPDTA) indicator.

4.31 The VFY-CSTG-35 message requests the centrex common block information of the requested centrex group. A TR17 output message is printed containing the centrex common block information. Specifically for ASP is the ASPXMDR and DEDASP indicators. The ASPXMDR indicates if the group has the XMDR feature. The DEDASP indicates if members of a particular centrex group are allowed or prohibited to assign ASP dedicated attributes on a per line basis. The DEDASP also designates whether CSR attendants can assign ASP/NAP dedicated capabilities to various centrex CSR stations.

4.32 The VFY-FRS message requests private routes that apply to the flexible route selection call specified. A TR37 output message is printed in response to the VFY-FRS message.

### Verification

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4.25 The translation data for the ASP/NAP feature can be verified using the following messages. Refer to Part A(26), B(2), and B(3) for details.

4.26 The VF:DNSVY: message used with the ACFV keyword searches a range of DNs for those DNs that have call forwarding variable. A TR43 output message is printed containing those DNs with ACFV. If the line is forwarded via ASP, the ASP keyword is printed in the TR43 output message.

4.33 The VFY-XDGNT message requests centrex digit interpreter table information associated with a specified centrex. A TR18 output message is printed that includes a miscellaneous return second dial tone (MRSDT) indicator.

4.34 The VFY-LEN message requests LEN translation data for one or more lines. The data includes the DN, originating line class code, features, etc. A TR03 output message is printed containing the LEN translation data including the ASP line restrictions (ASPLR) indicators for ASP. The ASPLR indicates if the line has ASP access, ASP access using access codes, or is ASP dedicated.

4.35 The V-REN message requests a line number or the starting line number for a group of lines in a RSS. A TR03 output message is printed containing the REN translation data including the ASPLR indicators for ASP. The ASPLR indicates if the line has ASP access, ASP access using access codes, or is ASP dedicated.

4.36 The V-RTLST message requests the route list information for one route list, a range of route lists, or all route lists. A TR83 output message is printed in response to the V-RTLST message.

4.37 The CSR LNDSP output message indicates the ASP attributes associated with a centrex station within a CSR group. The CSR attendant can identify those stations that are restricted to only receiving ASP incoming calls, stations allowed outgoing access to the ASP via the use of access codes, stations dedicated to ASP originations, and stations designated as ASP "hot lines". Refer to Part 6 A(26) for details.

## 5. Administration

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### Measurements

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5.01 The TMC 171 traffic measurement contains the measurement for ASP for use on the hourly (H and C), selected quarter hour (DA15), and special studies (S1 and S2) traffic schedules.

### EGO

000

### Function

Counts the originating ASP/NAP attempts completed per count. This counts the number of ASP/NAP originating call attempts that have successfully completed dialing and are attempting to outpulse.

001-003

These counts are not yet defined.

## Automatic Message Accounting

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5.02 The AMA subsystem generates AMA billing records for originating and terminating ASP/NAP calls from billing information collected during call progress. As each billable call completes, AMA data is sent to the AMA buffer. AMA also generates billing records for CSR messages. If the telephone company is recording automatic message accounting standard entry (AMASE) records, then the AMA buffer is sent to the attached processor system to be formatted and sent to the revenue accounting office. The revenue accounting office generates billing statements to collect revenue from the telephone company customers. If the telephone company is recording old format AMA records, the AMA buffer is formatted on the 1A ESS Switch and output to the AMA tape unit.

5.03 When an ASP/NAP call is made, the call is routed to an ASP SSP for handling. At the originating NAP, the telephone company can suppress AMA records for ASP calls. This option of whether to create AMA records applies to originating and terminating ASP calls only and can be turned on/off for the entire office only.

5.04 Table B outlines the AMA changes for the ASP/NAP feature. Refer to Part 6A (25) for details.

## 6. Supplementary Information

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### References

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6.01 The following documentation contains information related to or affected by the ASP/NAP feature.

**A. AT&T Practices**

- (1) 231-090-061 – *Prefixed Access Code Translator Feature*
- (2) 231-090-074 – *Call Forwarding Variable Feature*
- (3) 231-090-142 – *Flexible Route Selection Feature*
- (4) 231-090-145 – *Full ESSX-1 Feature*
- (5) 231-090-147 – *Identified Outward Dialing Feature*
- (6) 231-090-154 – *Electronic Tandem Switching Feature*
- (7) 231-090-155 – *Call Forwarding Variable Via Private Facilities (CFPF) and CFPF Electronic Tandem Switching Compatibility Feature*
- (8) 231-090-158 – *Distinctive Ringing/Distinctive Call Waiting Tone Feature*
- (9) 231-090-162 – *Deluxe Queueing Electronic Tandem Switching Feature*
- (10) 231-090-165 – *Account Codes Electronic Tandem Switching Feature*
- (11) 231-090-166 – *Station Message Detail Recording to Customer Premises Electronic Tandem Switching Feature*
- (12) 231-090-167 – *Basic Queueing for Trunks and Lines Feature*
- (13) 231-090-173 – *Manual Line Service Feature*
- (14) 231-090-229 – *Simulated Facilities Feature*
- (15) 231-090-256 – *Tie Trunk and Foreign Exchange Service Feature*
- (16) 231-090-287 – *Universal Emergency Service Number 911 Basic 911 Service Feature*
- (17) 231-090-288 – *Universal Emergency Service Number 911 Enhanced 911 Service Feature*
- (18) 231-090-401 – *Speed Calling Feature.*
- (19) 231-318-319 – *GENT, PSBLK, PSWD, and SUBTRAN (1AE8A.05 and Later Generic Programs)*
- (20) 231-318-325 – *ACT, CFV, DNRNGE, LINE, MLHG, MOVE, MPTY, SCLIST, SEL, TWOPTY, VEND Line Recent*

*Change Formats (1AE8A.05 and Later Generic Programs)*

- (21) 231-318-334 – *CAMA, CCIS, CFTRK, POINTC, SCGA, TG, TGBVT, TGMEM, TKCNV7, TKCONV, TMBCGA, and TRK T runk Translation Recent Change Formats (1AE8A.05 Through 1AE10 Generic Programs)*
- (22) 231-318-336 – *ARS, CCOL, CHRGX, DIGTRN, DITABS, DNHT, IDDD, IWSA, NOCNOG, NOGRAC, RATPAT, RI, RLST, TDxD, and TNDM Rate and Route Recent Change Formats (1AE8A.05 and Later Generic Programs)*
- (23) 231-318-355 – *CTXCB, CTXDI, CTXEXR, CXDICH, DITABS, Centrex-CO/ESSX-1 Recent Change Formats (1AE8A.05 and Later Generic Programs)*
- (24) 231-318-356 – *DLG, FLXDG, FLXRD, and FLXRS Centrex-CO/ESSX-1 Recent Change Formats (1AE8A.05 and Later Generic Programs)*
- (25) 231-390-063 – *AMA Feature Document*
- (26) 231-390-521 – *Network Interconnect Feature Document*
- (27) 231-395-100 – *Centrex Station Rearrangement (CSR) User's Manual*
- (28) 231-901-100 – *93A Customer Premises System Descriptive Information*
- (29) 5D5-190-125 – *Advanced Services Platform 5ESS<sup>®</sup> Switch.*

**B. Other Documentation**

- (1) *COEES Information System Engineering Document Index 91*
- (2) *Input Message Manual IM-6A001*
- (3) *Output Message Manual OM-6A001*
- (4) *Office Parameter Specification PA-6A001*
- (5) *Parameter Guide PG-1A*
- (6) *Translation Guide TG-1A*
- (7) *Translation Output Configuration PA-6A002.*

## 7. Abbreviations and Acronyms

### A

#### ACM

Address Complete Message

#### ACRG

Access Code Restriction Group

#### AIAE

AIOD IC ANI Enhancement

#### AIOD

Automatic Identified Outward Dialing

#### AMA

Automatic Message Accounting

#### AMASE

Automatic Message Accounting Standard Entries

#### ANI

Automatic Number Identification

#### ARS

Automatic Route Selection

#### ASP

Advanced Services Platform

### C

#### CAT

Centrex Access Treatment

#### CCS7

Common Channel Signaling System 7

#### CCSA

Common Control Switching Arrangement

#### CDAR

Customer Dialed Account Recording

#### CFG

Customer Facility Group

#### CFPF

Call Forwarding Over Private Facilities

#### COEES

Central Office Equipment Engineering System

#### COEES-MO

Central Office Equipment Engineering System-Mechanized Ordering

#### CORC

Customer Originated Recent Change

#### COT

Central Office Trunks

#### CSR

Centrex Station Rearrangements

#### CTX

Centrex

### D

#### DDD

Direct Distance Dialing

#### DN

Directory Number

### E

#### EA

Equal Access

#### EAMF

Equal Access Multifrequency

#### ESSX-1

Centrex Tariff Restructure

#### ETS

Electronic Tandem Switching

#### EXM

Exit Message

**F**

**FRS**  
Flexible Route Selection

**I**

**IAM**  
Initial Address Message

**IBDN**  
Individual Billing Directory Number

**IC**  
Inter-LATA Carrier

**ISDN-UP**  
Integrated Services Digital Network-User  
Part

**L**

**LEC**  
Local Exchange Carrier

**LEN**  
Line Equipment Number

**M**

**MDR**  
Message Detail Recording

**METS**  
Multientry Teleprocessing System

**N**

**NAP**  
Network Access Point

**NI**  
Network Interconnect

**O**

**OLI**  
Originating Line Information

**P**

**PBX**  
Private Branch Exchange

**POTS**  
Plain Old Telephone Service

**PPU**  
Periodic Partial Update

**R**

**REN**  
Remote Equipment Number

**RI**  
Route Index

**RSN**  
Remote Sequence Number

**RSS**  
Remote Switching System

**S**

**SAC**  
Service Access Code

**SCP**  
Service Control Point

**SMDR**  
Station Message Detail Recording

**SSP**  
Service Switching Point

**T**

**TCM**

Traveling Class Mark

**TNN**

Trunk Network Number

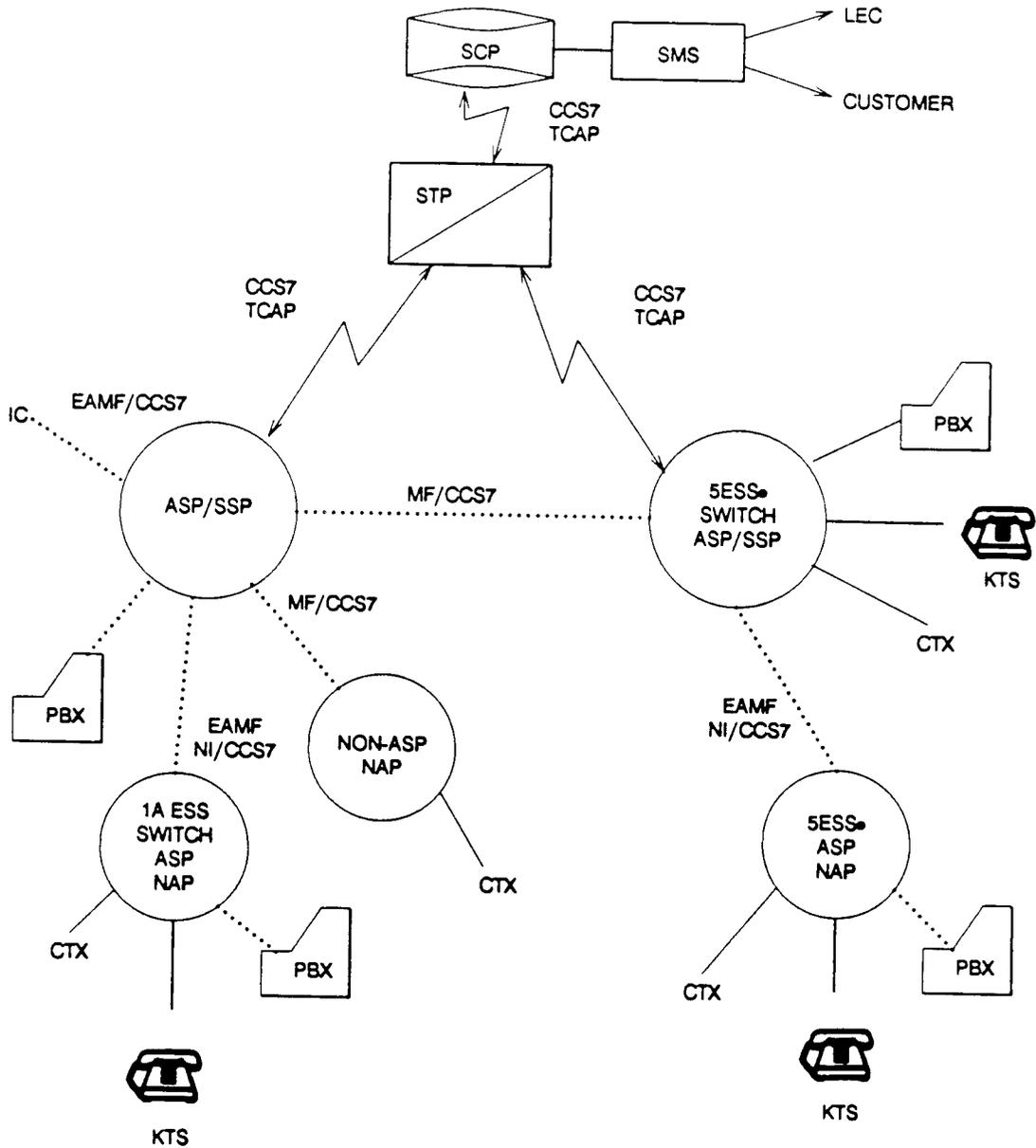
**TNS**

Transit Network Selection

**X**

**XMDR**

Expanded Station Message Detail  
Recording



LEGEND:

ASP - ADVANCED SERVICES PLATFORM  
 CCS7 - COMMON CHANNEL SIGNALING SYSTEM 7  
 CTX - CENTREX  
 EA - EQUAL ACCESS  
 IC - INTER-LATA CARRIER  
 KTS - KEY TELEPHONE SET  
 LEC - LOCAL EXCHANGE CARRIER  
 MF - MULTIFREQUENCY

NAP - NETWORK ACCESS POINT  
 PBX - PRIVATE BRANCH EXCHANGE  
 SCP - SERVICE CONTROL POINT  
 SMS - SERVICE MANAGEMENT SYSTEM  
 SSP - SERVICE SWITCHING POINT  
 STP - SIGNAL TRANSFER POINT  
 TCAP - TRANSACTION CAPABILITIES

Figure 1. Overview of ASP Architecture

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23	0
DNCL3 *	UNCHANGED

---

## LEGEND:

ASPDN - ASP DN INDICATOR. SET TO 1 TO INDICATE THAT THE DN IS ALLOWED TO RECEIVE INCOMING ASP CALLS. SET TO 0 TO INDICATE THAT THE DN IS NOT ALLOWED TO RECEIVE INCOMING ASP CALLS. THIS INDICATOR IS VALID ONLY FOR TMAJs 16 (CENTREX NO DIRECT INWARD DIALING) AND 30 (CENTREX SEMIRESTRICTED TERMINATING).

## NOTES:

1. The new DNCL3 bit can be used in the abbreviated or nonabbreviated DN translation format.

\* ASPDN

**Figure 2. DNCL3 of Directory Number Translator**

23	15 14 13 12	0
LENCL4	UNCHANGED * UNCHANGED	

NOTES:

1. These new LENCL4 bits can be used in the abbreviated or nonabbreviated LEN translation format.
2. To indicate an ASP dedicated hotline, an OMAJ of 1 for POTS manual lines will be used in conjunction with the LENCL4 ASP bits being set to 10 or 01. In the case of a centrex ASP dedicated hotline, an OMAJ of 26 will be used in conjunction with the LENCL4 ASP bits being set to 10 or 01.

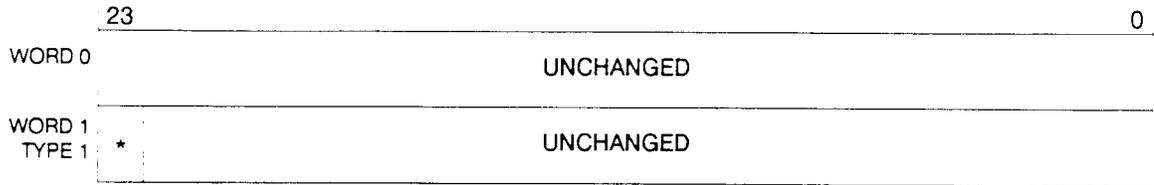
LEGEND:

ASPLR - ASP LINE RESTRICTIONS INDICATOR. THESE BITS ARE ONLY VALID FOR OMAJs 1, 4, 18, 19, 26, AND 27 (POTS MANUAL, INDIVIDUAL, CENTREX NONGROUP, CENTREX ATTENDANT, CENTREX MANUALS, AND CENTRAL OFFICE TRUNK, RESPECTIVELY). FOLLOWING ARE THE VALID VALUES FOR THE ASPLR FIELD:

- 00 - LINE DOES NOT HAVE ACCESS.
- 01 - LINE HAS ASP ACCESS CAPABILITIES.  
(TO ACCESS ASP, THE ASP ACCESS CODE MUST BE DIALED.)
- 10 - LINE IS ASP DEDICATED.  
(ALL ORIGINATIONS ARE ASSUMED TO BE ASP.)
- 11 - UNUSED AT THIS TIME.

\* ASPLR

**Figure 3. LENCL4 of LEN/REN Translator**

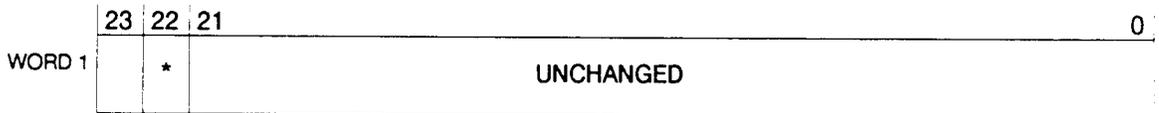


LEGEND:

ASPSC - ASP SPEED CALLING INDICATOR. SET TO 1 IF THE SPEED CALL SHOULD BE COMPLETED OVER AN ASP ROUTE.

\* ASPSC

**Figure 4. Word 1 of LEN Speed Calling Auxiliary Block**



LEGEND:

ASPDTA - ASP DEDICATED TERMINATIONS ALLOWED INDICATOR. SET TO 1 TO INDICATE THAT CALLS COMPLETING TO ASP DEDICATED STATIONS OVER THIS TRUNK WILL BE ALLOWED TO COMPLETE. SET TO 0 TO INDICATE THAT TERMINATIONS TO ASP DEDICATED STATIONS OVER THIS TRUNK WILL NOT BE ALLOWED TO COMPLETE.

\* ASPDTA

**Figure 5. Word 1 of Trunk Group Number Table Translator**

	23	22	21	20	19	18	17	16	15	14	13		10	9	8	7	6	5	4		0		
WORD 0	0	*																					
							NXTRID																
WORD 1	0	0	1	0	0	0	0	0	0	0	0		0		0	0	0					OPT	

LEGEND:

- WORD 0 TYPE - TYPE OF RI EXPANSION TABLE ENTRY  
"01" FOR NO OUTPULSING FOR NONPREFIXED DIGITS
- NXTRID - NEXT ROUTE INDEX: ALL 1'S FOR STOP
- TGN - TRUNK GROUP NUMBER
- WORD 1 OPT - OPTIONS: 4 FOR ANNOUNCEMENT SERVICE CIRCUIT

\* TYPE

Figure 6. Route Index Expansion Table Words

		2	1	0
23			*	†
WORD 2	UNCHANGED			

## LEGEND:

- DEDASP - DEDICATED ASP INDICATOR. SET TO 1 TO INDICATE THAT MEMBERS OF THE CENTREX GROUP ARE ALLOWED ASP DEDICATED ORIGINATING AND TERMINATING ACCESS. ALSO INDICATES THAT CSR ATTENDANTS MAY ASSIGN ASP DEDICATED ATTRIBUTES TO CSR STATIONS. SET TO 0 TO INDICATE THAT NO MEMBER OF THE CENTREX GROUP MAY BE ASP DEDICATED (ORIGINATING OR TERMINATING).
- XMDRASP - XMDR ASP INDICATOR. SET TO 1 TO INDICATE THAT AN XMDR RECORD WILL BE MADE UPON ORIGINATION OF AN ASP DIALED ACCESS CALL. SET TO 0 TO INDICATE THAT NO XMDR WILL BE MADE UPON ORIGINATION OF AN ASP CALL.

- \* DED ASP  
† XMDR ASP

**Figure 7. Word 2 of Centrex Common Block**



	23	22	21	20	19		12	11	10	9		5	4		0
TYPE C	0	1				RESTR		*			FEAT SUBTYPE				FEAT TYPE

LEGEND:

- RESTR - RESTRICTIONS. CHANGE THE DEFINITION OF THIS FIELD TO MAKE IT VALID FOR THE NEW FEATURE TYPE 29.
- FEAT SUBTYPE INDEX - FEATURE SUBTYPE INDEX. THIS FIELD APPLIES TO TYPE 31 ONLY.
- FEAT SUBTYPE - FEATURE SUBTYPE. FOLLOWING ARE THE VALID VALUES FOR FEATURE TYPE 29:  
0 - INDICATES ASP ACCESS CODE
- FEAT TYPE - FEATURE TYPE. A VALUE OF 29 WILL BE USED TO INDICATE THAT THIS WORD MAY BE USED FOR MISCELLANEOUS FEATURES. THE FEATURE MAY BE DETERMINED BY THE FEATURE SUBTYPE FIELD

\* FEAT SUBTYPE INDEX

Figure 10. Type C Entry of Prefixed Access Code Translator



	23		13	12	11	10	9		0
WORD 0:		UNCHANGED		*1	*2	*3			UNCHANGED

\*1 - ASP800 \*2 - ASP911 \*3 - ASPOAMA

LEGEND:

- ASP800 - ASP 800 TREATMENT INDICATOR. SET TO 1 TO INDICATE THAT 800 CALLS FROM ASP STATIONS WILL BE ROUTED VIA ASP. SET TO 0 TO INDICATE THAT 800 CALLS FROM ASP STATIONS WILL BE ROUTED VIA NORMAL 800 PROCESSING.
- ASP911 - ASP 911 TREATMENT INDICATOR. SET TO 1 TO INDICATE THE SSP OFFICE WILL DETERMINE THE ROUTE FOR 911 CALLS FROM ASP STATIONS. SET TO 0 TO INDICATE THE LOCAL TELEPHONE COMPANY WILL ROUTE 911 CALLS FROM ASP STATIONS.
- ASPOAMA - NO AMA INDICATOR. SET TO 1 TO INDICATE THAT NO ASP ORIGINATING OR TERMINATING AMA RECORDS WILL BE MADE. SET TO 0 TO INDICATE THAT ASP ORIGINATING AND TERMINATING RECORDS WILL BE MADE.

Figure 13. Word 0 of Office Options Table

	23	18	17	16	0
WORD 0	UNCHANGED	*			UNCHANGED

LEGEND:

ASP - SET TO A 1 TO INDICATE THAT AN ASP ROUTE SHOULD BE USED WHEN COMPLETING THE CALL TO THE REMOTE DN.

NOTES:

1. This change is only necessary in the 2-word CFV CORC blocks for the following reasons:
  - (a) 3-word CORCs contain a carrier code, and ASP calls cannot specify a carrier over which to route the call since the SCP data base will choose the route for the call.
  - (b) 4- and 6-word CORCs are used for CFPF (Call Forwarding over Private Facilities), and ASP is not valid with the CFPF feature.

\* ASP

**Figure 14. Word 0 of Call Forwarding Variable CORC Block**

**Table A. ASP Triggers/ASP Access**

<b>ASP Trigger</b>	<b>1A ESS Switch Access</b>
Immediate Off-Hook	Direct Connect Lines
Delayed Off-Hook	Dedicated POTS/RSS/CTX Lines
Trunk Seizure	Dedicated Trunks Non-Dedicated Trunks
Office Dialing Plan Access Code	Non-Dedicated POTS/RSS Lines
Individual Dialing Plan	Non-Dedicated CTX Lines Non-Dedicated CTX Tie Trunks
Automatic Route Selection	ETS-ARS Feature

Table B. ASP – Automatic Message Accounting

Old Format Charge Type	Old Format Entry Type	AMASE Charge Type	Call Code	Description	Service Feature Code
57	V79	57	173	Originating Inter-LATA	Basic Call - 0 Add On Call - 3 CFV Call - 5
31	V64	42	119	Terminating Inter-LATA	1
21	V86	27	77	CSR Extension Change	-

# FEEDBACK FORM

Document Title: 1A ESS™ Switch  
Advanced Services Platform/Network Access Point Feature  
Feature Document

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Issue Number: 4

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