1A ESS™ Switch
Selective Call Forwarding
Local Area Signaling Services
Feature Document

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1. Introduction

1.01 The **Selective Call Forwarding (SCF)** feature is a Local Area Signaling Services (LASS) feature that allows a customer to preselect calls that should be forwarded based on the identity attribute of the calling party. An identity attribute may be the calling line directory number (CLDN) or the centrex extension of the calling line. The customer creates a screening list that contains the identity attribute for each calling party whose calls are to be forwarded. A call from a station that has its identity attribute on the customer's screening list is forwarded. All other calls receive standard terminating treatment.

1.02 This practice is being reissued to include information for the Advanced Intelligent Network (AIN) Release 0.1 Termination Attempt Trigger (TAT) features impacting Selective Call Forwarding.

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1.06 This practice is issued by:

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1.07 With the Call Forwarding Variable (CFV) or Call Forwarding Usage Sensitive (CFUP) POTS feature, the forwarding of all calls to the remote station can be disadvantageous. The SCF feature avoids this. Terminating calls are screened based on a customer's preselected list of identity attributes. The identity attributes on the screening list determine which calls are

forwarded.

1.08 The Single Activation SCF feature allows the customer to activate SCF with one activation request. Before the Single Activation SCF feature, the customer had to activate CFV/CFUP and then activate SCF. This enhancement allows the customer to avoid the 2-step activation procedure. Further, with the Single Activation enhancement, the customer does not have to subscribe to CFV and the office does not require CFUP.

Availability

1.09 The SCF feature is a LASS feature and is generally available with the 1AE9 generic program.

1.10 The Single Activation SCF feature is available in the 1AE10 generic program. It is the standard version of SCF.

1.11 The Total Separation of SCF (TSCF) optional feature is available in the 1AE10 generic program. The Single Activation SCF feature does not allow CFV and SCF to be active at the same time. The TSCF feature offers complete separation of CFV and SCF, thus, allowing the two features to be active concurrently. Refer to Part 6 A(12).

1.12 The Inter-Local Access and Transport Area (LATA) Calling Party Number/ Billing Number Delivery and Related Services (CPNBND) feature is available with the 1AE11 and later generic programs.

1.13 The Shared/Split NXX (S/SNXX) enhancement is available with the 1AE10 and later generic programs.

1.14 The LASS Office Option Feature (LOOF) is available with the 1AE10 and later generic programs.

1.15 Please contact your Lucent Technologies representative for feature licensing information.

Feature Groups

1.16 The SCF feature requires LASS optional feature groups 9SCF or 9SLASA for intraoffice only applications. For interoffice applications, 9SCF [which requires common channel signaling (CCS) for interoffice applications] or 9SLASS is required. Refer to Part 6 A(8) for a general description of the LASS features.

1.17 The 9SBNI feature group is required to deliver the Calling Party Number (CPN) across LATA boundaries. The Network Interconnect (NI) feature provides the 1A ESS switch system with the ability to interface with Interexchange Carriers using the CCS7 Integrated Services User Part Protocol. Refer to Part 6 A(10) for NI information.

Feature Assignment

1.18 The SCF feature is provided on a single office (intraoffice) basis or on a multiple office (interoffice) basis. When applied on an interoffice basis, the end offices must be within the LASS boundary area.

1.19 The LASS boundary area is a geographical area within which the telephone company offices are connected by a Common Channel Signaling System 7 (CCS7) network. Refer to Part 6 A(7).

1.20 For inter-LATA delivery of the CPN, the signaling network must be a CCS7 network. If the LASS boundary area extends beyond a LATA, NI protocol is required in all offices within the network. Refer to Part 6 A(10).

1.21 The SCF feature may be usage sensitive and available to all lines in a LASS office/boundary area that have a unique line equipment number (LEN). The SCF feature can also be provided on a subscription basis.

2. User Perspective

User Profile

2.01 The SCF feature is provided to POTS users and, in the 1AE10 and later generic programs, to centrex groups on a usage-sensitive or subscription basis. In the 1AE9 generic program, the SCF is provided to centrex groups on a subscription basis only. In the 1AE9 generic program, the SCF feature applies only to users that have access to either CFV or CFUP.

Customer Premises Equipment

2.02 The SCF feature requires only a telephone station set at the customer premises. Either dial pulse (DP) or dual tone multifrequency (DTMF) telephones may be used. The SCF feature is optimized for DTMF customers; extensive use is made of the star (*) and number sign (#). Refer to paragraph 2.39. A DP customer must dial 11 for * and 12 for #. (A DTMF customer may also dial 11 and 12 instead of * and #.)

Feature Description

A. Selective Call Forwarding Screen List Editing

2.03 When a user dials the SCF access code, a check is made to determine if the line is restricted from using LASS or SCF. The access code is translated via the prefixed access code translator (PACT) for POTS lines or via the centrex translator (digit interpreter tables) for centrex lines. If the access code is unassigned for the office or centrex group, the line receives reorder treatment. This translation also checks the line prohibit indicators. The line prohibit indicators are located in the line equipment number class 2 (LENCL2) word. The LENCL2 word contains either the access code restriction group (ACRG) field (POTS lines) or the centrex access treatment (CAT) code field (centrex lines). These fields can be used to deny a line services that are associated with an access code. If access is not allowed, the line receives reorder treatment.

2.04 If the access code is assigned, the restriction field (RESTR) of the primary translation word (PTW) from the PACT or the data word from the centrex digit interpreter table is used to evaluate the ACRG or CAT code for the requesting line.

2.05 If the ACRG/CAT evaluation indicates that the customer is allowed access, the class of service prohibit indicators in the PTW of the class of service information (CLSI) translator are checked. This check determines whether the line should be denied access to the SCF feature because of its service class. The classes of service which should be denied access are listed in paragraph 4.02.

2.06 If the class of service of the user is allowed access to SCF, option word L of the LEN supplementary auxiliary block is checked. If this word is not assigned and the LASS Office Option Feature (LOOF) is not loaded, no restrictions apply, and the user is allowed access. If this word is not assigned and LOOF is loaded, word 19 of the office options table is used as the default option word L. If the LEN option word L exists or the default option word L is used, it is checked to see if the user is denied access to SCF. If SCF is not denied, processing continues. If access to SCF is not allowed, the line receives LASS denial announcements.

2.07 Further checking is done for restrictions that apply specifically to the LASS screening features. In particular, certain multiline group (MLG) members are restricted from using SCF (paragraph 4.03).

2.08 For offices with Single Activation SCF, a check is made to verify that the customer does not have CFV active. For offices without Single Activation SCF, a check is made to ensure that the line has CFV or CFUP.

2.09 If the line is denied access to SCF for failure to satisfy the preceding conditions, the call is routed to announcement. For the 1AE9 generic program, if the line is allowed access to SCF, control is passed to the screen list editing (SLE) primitive. For Single Activation SCF, the customer is prompted for the remote directory number (RDN) before control is passed to the SLE primitive. Refer to Part 6 A(8) for further details concerning the LASS primitives. The LASS primitives include: SLE, retrieval of distant line status (RDLS), retrieval of calling line DN (RCLDN), and line history (LH).

2.10 If resources are available, an ATI (announcement service circuit [ASC] trunk interface) is seized and replaces the customer digit receiver (CDR). A SLE register (SLR) replaces the originating register (OR). A SLE buffer (SLEB) is initialized with the current copy of the screening list. At the end of the editing session, the contents of the SLEB are used to update the screening list.

2.11 If the Single Activation SCF feature is in the office, the RDN editing routine edits and validates (paragraph 4.06) the RDN before beginning the screening list editing session. If the RDN is valid, a confirmation

announcement is played.

2.12 When RDN editing is done, if no previous RDN exists, a temporary recent change (TRC) register for SCF is seized. If an existing RDN is changed, the existing TRC is deleted and a new TRC is seized. If an existing RDN is just confirmed (that is, not changed), the existing TRC remains unchanged. If the new or changed RDN is in another office (interoffice), a 2- or 3-word customer originated recent change (CORC) block is seized. If the office has the CLOG feature package, the CORC02 message is output on the maintenance TTY.

2.13 Refer to paragraphs 2.51 through 2.53 for system response when the recent change (RC) area is full or the office is in the inhibit RC/CFV mode.

2.14 The SLE primitive returns control to SCF to verify the validity of an identity attribute which is to be added to the SCF screening list. The SCF feature uses the RDLS primitive to verify an identity attribute. The RDLS primitive requires as input the identity attribute to be verified, the client ID, a return address, and the call register address (CRA). The SCF client ID indicates to RDLS that originating characteristics are requested. If the attribute is a centrex extension, the extension is converted to a 10-digit DN.

2.15 The CPNBND feature provides an inter-LATA SLE blocking option to block the sending of Transaction Capability Application Part (TCAP) query messages for status information of inter-LATA numbers. The RDLS primitive determines if the DN to be added to the screening list is intraoffice, interoffice, intra-LATA, or inter-LATA. If RDLS identifies the number as inter-LATA, and the CPNBND feature group is loaded, control returns to SCF and the SLE blocking option is checked.

2.16 The Inter-LATA SLE blocking option is an office option that blocks or allows a TCAP query message for originating information of an inter-LATA number. This office option is implemented as a bit in the office options table translator (refer to paragraph 3.39). The option, when set to "block", prevents the inter-LATA DN from being placed on the end user's screening list. If the SLE blocking option is set to "block", no return is made to RDLS to send the TCAP query. Instead, SCF returns long-term denial indication to the SLE primitive. If the blocking option is set to "allow", control returns to RDLS to send a TCAP query message.

2.17 If the CPNBND feature group is not loaded, control does not return to SCF from the RDLS primitive. Instead, the TCAP query message is sent. Refer to paragraph 2.27 for additional information.

2.18 The S/SNXX enhancement optionally allows a TCAP query message to be sent for a number that has a shared or split NXX. A shared NXX is when all ten thousand DNs for that NXX are shared between switches. A split NXX is when thousand's blocks of numbers are assigned to different switches. Without this option, a 1A ESS Switch can not add a DN having a shared or split NXX to a screening list. The RDLS primitive identifies these numbers as intraoffice, and terminating DN translations used to get the status information for intraoffice DNs, indicate that these numbers point to a route index. As a result, the customer receives long-term denial treatment. With the S/SNXX option active, if terminating DN translations indicate an outpulsing trunk with a terminating major class of trunk group without ringing, the DN is treated as interoffice and a TCAP query message is sent to the distant switch to retrieve line status information. This office option is implemented as a bit in the office options table translator (refer to paragraph 3.40).

2.19 If RDLS is successful, the following status information is returned to SCF:

(a) Valid DN (that is, assigned).

(b) Input DN matches calling line DN.

(c) Originating major class code.

(d) Multistatus indicator (1AE9 generic program).

(e) Temporarily-out-of-service indicator (1AE10 and later generic programs).

If the number is added to the list, an announcement is played.

2.20 A failure to verify the identity attribute is returned to SLE by SCF if any of the following conditions exist:

(a) Resources required by RDLS are unavailable.

(b) RDLS request times out.

(c) DN or centrex extension input by user does not match the DN or centrex

extension that would be retrieved by RCLDN.

(d) DN is a multiparty line (1AE9 generic program only).

(e) DN or centrex extension (centrex only) is denied origination.

(f) DN is temporarily out-of-service - this information is available only for a DN in another office that is not a 1A ESS Switch.

If the number cannot be validated, an announcement is played.

2.21 When SLE processing is done, SLE returns control to the SCF feature. The SLR contains required automatic message accounting (AMA) data. The AMA routine processes the data and writes an AMA record. A new and modified list indicator is added to the AMA record. The following SLR information is formatted and passed to the AMA routine:

(a) Start and end times of the editing session

(b) Number of entries on the screening list

(c) Status of the screening list

(d) Customer billing DN

(e) Client ID.

After the necessary information is copied from the SLR, the register is released and return is made to the main program.

B. Terminations to Selective Call Forwarding Lines

2.22 Initially, on any call terminating in an office with the LASS SCF feature, the identity attribute of the calling party is received from the originating office. As mentioned previously, the identity attribute may be the CLDN or centrex extension. Call processing proceeds in one of two directions depending upon whether the switch has Single Activation SCF or not.

2.23 The criteria for forwarding calls terminating to Single Activation SCF (1AE10 and later) lines follow. (Refer to Figure 1.)

(a) The terminating line has the SCF feature.

(b) The SCF feature is active.

(c) The calling party identity is obtainable (that is, there is CCS connectivity between the originating and terminating offices).

(d) A match exists between the calling party identity attributes on the SCF screening list.

Calls that meet all of the preceding conditions are forwarded to the RDN. Calls that are not forwarded receive standard terminating treatment.

2.24 In case of SCF without single activation (1AE9 generic program), it is determined whether CFV is active. Refer to Figure 2. If CFV is not active, standard termination continues. If CFV is active, a check is made to determine if SCF is also active. If SCF is not active, the call forwards unconditionally. If SCF is active, the identity attribute of the calling party is compared to the screening list. If the identity attribute of the calling party is specified on the list, the call is forwarded to the remote station specified for CFV. If not, standard termination is continued (that is, termination to the called base station).

2.25 For forwarded calls (with or without Single Activation), ring reminder (RNGR) may be provided at the base station depending on the RNGR option of the base station.

2.26 The remote station may also have a LASS screening feature active. If so, the CLDN of the originating party, not the CLDN of the base station, is used for screening at the remote station.

Special Planning Considerations

2.27 Currently, there are no specifications available which provide instructions on how to route inter-LATA TCAP messages for LASS (neither the query messages nor the response messages). If CPNBND is not loaded or if CPNBND is loaded with the blocking option set to "allow", a TCAP message is sent from the originating end office but it may not be possible to deliver it to its destination; or for the destination to correctly deliver the response back to the originating office. The

inter-LATA application of the TCAP issue currently has not been resolved. Therefore, if the SLE blocking option is not set to "block", it is the responsibility of the operating telephone companies to make the necessary routing translations in their signal transfer points (STPs). These translation changes should allow TCAP messages to be routed across LATA boundaries to assure that TCAP messages are appropriately delivered.

Activation

A. Screen List Editing

2.28 The SCF activation includes the following two processes:

(a) Defining/modifying the RDN. [Refer to Figure 3 for 1AE10 and later generic programs; refer to Part 6 A(1) and A(6) for prior generic programs.]

(b) Creating/editing the SCF screening list (Figure 4).

Edit the Remote Directory Number

2.29 The SCF feature is activated by dialing the SCF activation code. Single Activation SCF allows a customer to specify the DN to which calls are forwarded during the SLE process. Without the Single Activation enhancement, the CFV or CFUP feature must be activated prior to SLE.

2.30 With Single Activation SCF, the user goes off-hook and dials the SCF activation code. If the RDN exists, it is voiced back to the user. The user may retain or change the RDN. If Single Activation is not yet active, and no RDN exists, the user must enter the RDN before proceeding with the SLE process.

2.31 The RDN can be in any of the following formats:

(a) [10XXX] + [1] + 7/10-digit DN [#]. (The base station is not carrier restricted.)

(b) [10XXX] + 1/2-digit speed call (SC) access code + [#] (end of dialing sign). (The SC access code must be defined previously with a valid DN.)

(c) [101XXXX] + [1] + 7/10 digit DN [#]. (The base station is not carrier restricted. 4-digit carrier access code dialing allowed in 1AE12 and later.)

(d) [101XXXX] + 1/2-digit speed call (SC) access code + [#] (end of dialing sign). (The SC access code must be defined previously with a valid DN. 4-digit carrier access code dialing allowed in 1AE12 and later.

(e) Centrex extension (centrex intragroup forwarding).

(f) Centrex Extension Trigger (data type 8, subtype 1 or 2). Refer to Part 6 A(9) for information about the ASP/SSP Feature.

(g) Centrex extension (data type 2), Centrex attendant (data type 6) or Centrex Extension Trigger (data type 8, subtype 1 or 2) when the line is assigned the ASP/SSP Off-Hook Delay (OHD) capability. For information about the ASP/SSP Feature, refer to Part 6 A(9).

Brackets symbolize optional information within.

2.32 If an RDN is entered, it is validated and voiced back to the user for confirmation. In the case of an invalid RDN (paragraph 4.06), the user is informed and given three additional chances to reenter the DN. The RDN is stored in the switch as long as Single Activation SCF is active.

2.33 The POTS user can use special characters "*" and "#" during the LASS SCF RDN entering sequence. These characters may be used when entering an RDN (to nullify the timing interval) as in the SLE session (paragraph 2.39). The centrex common block translations have been modified to allow centrex customers to use the "*" and "#" during an RDN entering sequence. Refer to paragraph 3.31. This modification is required because these characters are already used in some centrex dialing patterns (for example, *9).

Edit the SCF Screening List

2.34 After dialing the access code (or in the case of SCF Single Activation, after entering/modifying the RDN), the user is told that the SCF service is on and informed of the number of entries on the SCF screening list. This includes the number of private entries.

2.35 An SCF screening list is activated when it is initially created during SCF

activation. In 1AE9, a deactivated SCF screening list is also activated by dialing the SCF activation code. For Single Activation SCF, the user must also specify an RDN in order to activate a deactivated screening list. When the screening list is active and has at least one identity attribute on it, the SCF feature is ON.

2.36 The SLE primitive allows SCF users to build and manipulate a list of numbers (typically DNs) that SCF utilizes during call processing. The user is guided by SLE. The SLE interactive procedure allows users to tailor a screening list to their satisfaction. Refer to Part 6 A(8) for more information concerning the SLE primitive.

2.37 Although the SLE primitive interfaces with individual users, it is transparent to the user who perceives only the interaction with the SCF feature. When editing a screening list (Figure 4), SLE allows a user to accomplish the following:

(a) Create a list.

(b) Add entries.

(c) Delete entries.

(d) Hear the list.

(e) Obtain instructions.

2.38 The SLE primitive is activated when a user dials the SCF activation code. The user also controls SLE operation by dialing valid digit strings. A DP or DTMF telephone may be used, however, a DTMF telephone is more efficient. The following defines valid types of character strings that may be dialed (input) for use with SLE.

(a) A **command** is an input string that causes immediate system action (that is, play instructions, read list, delete entry, add entry, delete list).

(b) A **subcode** is a 2-digit string that implies further input is required (for example, subcode 02 is used to prefix centrex extensions).

(c) An **identity attribute** is an entry on the screening list (that is, DN, centrex extension). An identity attribute may be added from the incoming line history block (ILHB) by dialing 01.

2.39 When collecting digits in a LASS SLE session, a timing interval is defined to determine the amount of time that should elapse between the collection of digits. If this timing interval is exceeded, time-out occurs and digit collection ceases. Also, when entering a DN, the user waits for the timing interval to elapse before the DN can be processed. To nullify this timing interval, the special character # can be used to indicate end-of-dialing, and an entered DN will be processed immediately. In case of misdialing a DN, the special character * nullifies the timing interval and cancels the processing of the entered digits; at this point, the user may redial the desired DN.

2.40 The user can terminate the activation session at any time by simply going back on-hook. In 1AE9, a SCF activation session is considered successful if the screening list contains at least one identity attribute. For 1AE10 and later, a SCF activation session is considered successful if the RDN exists and the screening list contains at least one identity attribute.

B. Selective Call Forwarding Terminations

2.41 The SCF feature, in the 1AE9 generic program, is an enhancement of the CFV feature. The CFV feature functions independently of SCF, however, CFV must be active if the SCF screening list is to be used (Figure 2).

2.42 In reference to the preceding, the user is responsible for ensuring that the CFV and SCF configuration is correct to obtain the desired terminating treatment. (An announcement is provided during SLE initial announcements to inform the user of the CFV dependency.) For example, if a user has SCF and CFV active and deactivates CFV, the SCF list will remain active but will not be applied to terminating calls. Unless the user specifically deletes or deactivates the screening list, subsequent activation of CFV results in the selective forwarding of calls from the parties on the screening list. When call forwarding and SCF are active, only those calls that originate from a party specified on the screening list are forwarded.

2.43 With Single Activation SCF, call forwarding is activated when the RDN is entered prior to editing the SCF screening list. Subsequent calls terminating to the line when SCF is active are forwarded if the calling party

number is specified on the SCF screening list. Forwarding will terminate to the destination dictated by the RDN unless the remote number is treated as an ASP/SSP trigger, in which case the Service Control Point (SCP) is queried for routing instructions. For information about ASP/SSP, refer to Part 6 A(9).

2.44 For all generic programs, on forwarded calls, RNGR is provided at the base station if the line has the RNGR option; the call proceeds with the call forwarding function. For calls that are not forwarded, standard terminating treatment is provided (that is, termination to the base station).

Deactivation

2.45 When the user deactivates the SCF feature (Figure 5), the screening list can be saved or removed. To deactivate SCF, the user goes off-hook and dials a unique deactivation code for SCF. The user is told the number of entries, including private entries, on the screening list. The customer may terminate the deactivation session by going back on-hook.

2.46 During the deactivation session, the user may choose one of the following actions:

- Delete all entries on the list.
- Delete only the private entries.

If the user simply goes back on-hook, the existing screening list entries are saved and put in an inactive mode.

2.47 With the Single Activation SCF feature, the RDN is deleted upon termination of the deactivation session.

Abnormal Operations

2.48 If the activation or deactivation access code dialed is unassigned, standard error treatment is provided. If the user is not permitted access to the SCF feature, reorder/"denied LASS" 13A/14A recorded announcement is provided when the access code is dialed.

2.49 If after dialing the activation/deactivation access code, there is a lack of system resources before an ASC is connected, reorder is returned (for example, no ASC circuits available or a SLR is not available).

2.50 If the connection to the ASC has been established, but a SLEB is unavailable, the customer receives a denial announcement via the ASC and dial tone is returned. If a SCF activation is attempted, a "no resources" announcement is provided. If a SCF deactivation (1AE9 generic program) is attempted, a "no resources" announcement is provided. For 1AE10 and later, if a SCF deactivation is attempted, the user is told that their SCF service is now off, then a "no resources" announcement is provided.

2.51 The following occurs during an SCF activation attempt when the office is in the CFV/SLE INH:RCSOURCE mode. In the 1AE9 generic program, a two-step activation/deactivation process is required; the SCF and CFV features must be activated/deactivated separately.

(a) When an office is in the inhibit CFV mode, CFV cannot be activated (that is, the RDN cannot be added or changed). However, CFV may be deactivated (the RDN may be removed). Activation/deactivation of SCF is not affected.

(b) When the office is in the inhibit SLE mode, SCF cannot be activated or deactivated. Activation/deactivation of CFV is not affected.

2.52 For 1AE10 and later, the following occurs during an SCF activation attempt when the office is in the CFV/SLE INH:RCSOURCE mode. If both CFV and SLE are inhibited, the results are the same as when only CFV is inhibited.

(a) When the office is in the inhibit CFV mode, reorder/"denied LASS" 13A/14A recorded announcement is provided and dial tone is returned.

(b) When the office is in the inhibit SLE mode, a "no resources" denial announcement is provided via the ASC and dial tone is returned.

For each of these cases, the resulting treatment is the same whether the screening list exists or not. If a screening list exists, its status remains unchanged.

2.53 The following occurs during an SCF deactivation attempt when the office is in the CFV/SLE INH:RCSOURCE mode. If both CFV and SLE are inhibited, the results are the same as when only SLE is inhibited.

(a) If the office is in the inhibit CFV mode and a screening list does not exist on this line, a "no list" error announcement is provided via the ASC and dial tone is returned.

(b) If the office is in the inhibit CFV mode and a screening list does exist on this line, the deactivation is allowed. The SCF RDN TRC is also removed if one exists.

(c) If the office is in the inhibit SLE mode on the 1AE9 generic program, a "no resources" denial announcement is provided via the ASC and dial tone is returned.

(d) If the office is in the inhibit SLE mode with 1AE10 or later, the user is told that their SCF service is now off, then a "no resources" denial announcement is provided via the ASC and dial tone is returned.

For cases (c) and (d), the resulting treatment is the same whether or not a screening list exists for the line at the time of the deactivation attempt. If an SCF RDN TRC exists, it is removed.

2.54 For system failures not related to the ASC, the "no resources" announcement is played via the ASC before ending the editing session. If the ASC is unavailable, the screening list editing session is terminated.

2.55 Incorrect dialing by the user results in error announcements. Generally, after dialing incorrectly, a user may continue with the SLE procedure; the call is not terminated. The system responds with an error announcement when either of the following occurs:

(a) Invalid subcode/command

(b) Incomplete dialing (not enough digits)

(c) Entry of extra digits.

2.56 There are two cases when time-out occurs during SLE: interdigital time-out and time-out between user actions. The system responds with an error announcement indicating a dialing error in the case of interdigital time-out. In the case of time-out between user actions, the user is prompted for more input. This occurs whether the action is successful or unsuccessful. If the user does not dial within a specified timing interval after the prompt, the instructions are played. If the user fails to dial after four consecutive prompts, the call is dropped.

2.57 For Single Activation SCF, if an invalid RDN is entered, an error announcement is returned through the ASC. If the maximum error count is not exceeded, the user is prompted to reenter the RDN. After entering four consecutive invalid RDNs, the user receives an error announcement and is disconnected.

2.58 Abandon can be an abnormal termination of SLE. If abandon occurs before actions requested by the user are executed, the last action requested by the user is ignored and the SLE procedure is terminated. All previous successful actions are preserved (successful actions are indicated via announcements). If a user goes on-hook before an entered identity attribute is verified (a real-time break is taken to verify an interoffice identity attribute), SLE treats the call as abandoned. Note that the time delay involved in the real-time break is office settable, 1 to 6 seconds (paragraph 3.37). An announcement is provided to indicate success or failure of the verification attempt.

2.59 If a user attempts to add the last calling line directory number (CLDN) from the ILHB to the SCF screening list, and the CLDN is not available, an announcement is given. The CLDN may not be available if, for example, the last incoming call originated outside the LASS area. Since line history blocks (LHBs) are not maintained in duplicated call store on the 1AE12 and later generics, the CLDN may be temporarily unavailable when switch resource limitations prevent retrieval of the ILHB. An announcement is also given for this situation. Refer to Part 6 A(8) for details about LHB structures available on each generic.

2.60 An abnormality related to SCF occurs when the identity of a calling party, previously specified on the screening list, is not available. This may be caused by lack of CCS7 connectivity for the interoffice call, CCS7 failure or major far-end overload/outage. When this happens, determination of whether the call should be forwarded cannot be made.

As a result, the calls are not forwarded regardless of the specification of the calling party identity in the SCF screening list.

Interactions

2.61 The SCF feature (1AE9 generic program) screening list is applicable only to the existing CFV features which allow a customer to change the RDN without a service order (that is, CFV and CFUP). Refer to Part 6 A(1) and A(6), respectively, for information concerning the CFV and the CFUP features.

2.62 For 1AE10 and later only, customers may subscribe to Single Activation SCF and/or CFV. However, these two features may not be active at the same time.

2.63 In a centrex environment, centrex call forwarding outside (CTX-CFO) must be allowed in order to designate an RDN that is outside the centrex group.

2.64 The ASP/SSP feature impacts SCF as follows (refer to Part 6 A(9) for detailed information about the ASP/SSP feature):

(a) For a POTS or Centrex line, call forwarding processing of the RDN may detect a Dialed Number Trigger. When this happens, an ASP/SSP query message will be sent to the SCP database and the call will forward using the routing information returned from the SCP. Dialed Number Trigger processing is provided in the 9FASP2 feature package.

(b) For a Centrex line, the RDN could be an extension built as a Centrex Extension Trigger. If this is the case, an ASP/SSP query message will be sent to the SCP database during call forwarding processing and the call will forward using the routing information returned from the SCP. Centrex Extension Trigger processing is provided in the 9FASP1 feature package.

(c) If the POTS or Centrex line is assigned the OHD capability, an ASP/SSP query will always be sent to the SCP database during call forwarding processing unless "No Query" indication is specified for the RDN digits. If "No Query" is indicated, then an ASP/SSP query will be sent to the SCP only if a Dialed Number or Centrex Extension Trigger is detected for the RDN digits. If the SCP is not queried, then forwarding will be to the destination dictated by switch-based translations of the RDN. OHD trigger processing is provided in the 9FASP3 feature package.

(d) When a Centrex customer enters a Centrex extension as the RDN, the dialed digits (1 to 7 digits) are stored in the CORC block if the extension is built as a Centrex Extension Trigger. If the Centrex customer's line is assigned OHD, then an extension entered for the RDN is always stored in its dialed format in the CORC block regardless of whether the extension is a Centrex Extension Trigger. Note that storing the RDN in its dialed digits format differs from storage of an extension when neither OHD nor Centrex Extension Triggers apply. In this case, the extension is stored as its corresponding 7-digit number with an indicator set to inform SCF to voice back only the extension digits during subsequent activations.

(e) When the RDN is a Centrex extension and an OHD or Centrex Extension Trigger ASP/SSP query is sent to the SCP database, forwarding is considered intragroup even if the routing information forwards the call outside the Centrex group (that is, CTX-CFO is not applicable).

2.65 AIN Release 0.1 triggers that result in terminations to SCF subscribers may have received new Calling Party ID information from the SCP. SCF screening is performed on the latest Calling Party ID information. If the information has not been changed, the latest pre-query Calling Party ID is used when available. For more information about AIN Release 0.1 Protocol and Capabilities, refer to Part 6 A(11).

Restriction Capability

2.66 Each of the LASS features can be denied to certain classes of lines (paragraph 4.02). The telephone company

determines the features that are included in each service class. On a class of service basis, the RC:CCOL recent change message can be used to restrict access to all SLE features.

2.67 The LASS features can also be denied to a specific line. On a per line basis, the ACRG/CAT code field in the LENCL2 word is used to determine if a LASS feature can be accessed. The RC:LINE recent change message is used to change the ACRG/CAT code to allow or deny access to SCF for a specific line. Refer to Part 6 A(2) and A(3) for the keywords associated with RC:CCOL and RC:LINE.

2.68 In addition to the ACRG/CAT code mechanism of feature denial, each line has an option word L in the LEN supplementary auxiliary block to deny SCF on a per line basis. This allows for greater flexibility than can be achieved via the ACRG/CAT code mechanism. The word contains an indicator for each feature that is used to allow/disallow access to a requested feature. If allowed, this indicator also specifies whether the customer is subscription or usage sensitive. Refer to Part 6 A(3).

2.69 An alternative mechanism to restricting all lines access to LASS features is to implement the LASS Office Option Feature (LOOF). LOOF eliminates the need for ACRG/CAT codes in offices implementing the LASS features on a subscription only basis by allowing all lines to dial the LASS feature access codes. After the access code is dialed, normal ACRG/CAT screening still applies but is not required. The second level of screening is performed on a class of service basis. The final level of restriction is the option word L check. LOOF, if loaded, will provide all lines without an option word L a default option word L from word 19 of the office options table. Word 19 of the office options table is the recent change default and, if LOOF is loaded, will also be the call processing default for all lines without an option word L. If a line has been assigned LASS features and has an LEN option word L, then the individual LEN option word L is used instead of the office default option word L. LOOF is controlled by fast feature 069.

3. Engineering

3.01 These guidelines are for planning purposes only. The Central Office Equipment Engineering System (COEES) Information System Document, Index 38, should be used to manually order and engineer the 1A ESS Switch. The standard recommended automated procedure is COEES-Mechanized Ordering (MO).

Hardware

3.02 The SCF feature requires the following hardware:

- CDR
- Tone or recorded announcement circuit (SD-1A218-01)
- ASC (SD-6A003-01) and ATI (TM 504).

3.03 For interoffice applications, the SCF feature requires the hardware necessary to allow the switch to communicate over a CCS7 network. Refer to Part 6 A(7).

Software

A. Base Generic Program

3.04 The SCF feature uses some base program store memory. For further information concerning memory usage, refer to Part 6 B(1).

3.05 The Single Activation SCF feature is available in the 1AE10 and later generic programs.

B. Optionally Loaded Feature Groups

3.06 The SCF feature code is provided in the optionally loaded LASS feature package required by the LASS or LASA feature group. Refer to Part 6 B(1) for information about other feature packages needed for SCF. Refer to Part 6 B(4) for feature package word size information.

C. Parameters/Call Store Areas

3.07 Refer to Part 6 B(3) and B(4) for comprehensive parameter information.

Parameters

3.08 Parameter L9SCF_SIZE (set card LASCFE) is required specifically for SCF. It defines the size of the SCF list (that is, the maximum number of entries) per customer in an office.

3.09 The following parameters are related to the SCF feature:

(a) Parameter L9EDIT_BUF_ADMIN contains the starting address of the SLEB busy/idle head cell.

(b) Parameter L9EDIT_BUF_NSIZE contains the number of SLEBs provided and the size of an SLEB.

(c) Parameter L9EDIT_BUF_PTR contains the starting address of the SLEB block.

(d) Parameter R2SLEDB contains the address and length of the call store table (RSLEKMDB) used by SLE to build keyword message data block (KMDB) information.

3.10 Parameter B6LASS is the Compool defined address and size of the LASS traffic count block. The LASS traffic count block is 50 words in length.

3.11 Parameter B6SLE contains the Compool defined address and size of the SLE traffic count block. The SLE traffic count block is six words in length.

3.12 Parameter C7BATBTA contains the starting address of the buffer administration timing block (BATB) table. This group of call store blocks provides the means for applications to store data over the real-time breaks involved in interoffice information exchange. The BATB table is allocated in unprotected variable DCS. Parameter word C7BATBTA + 1 contains the number of 6-word BATBs in the table. Parameter C7BATBTA + 2 contains two parameter values. The MAXTIME field contains the maximum timer value that a BATB may have. The MAXNOTIFY field contains the maximum number of clients that may be notified of time-out in a real-time segment.

3.13 The SCF feature requires ILHBs to store the last CLDN. Refer to Part 6 A(8) for the parameters needed on each generic to implement LHBs.

Call Store

3.14 Refer to Part 6 B(2) for call store data layout information.

3.15 If CCS7 is used, the BATB table is required to provide timing on interoffice RDLS TCAP queries. If the Message Interface Processor (MIP) is loaded, and set card BATBS (paragraph 4.17) is nonzero, the size of the BATB table is equal to six times set card BATBS plus six. Otherwise, no BATB table is built.

3.16 The SCF feature requires ILHBs to store the last CLDN. Refer to Part 6 A(8) for LHB call store options on each generic.

3.17 The SLEB table (set card LASLEB) in UDCS is a contiguous block of memory allocated for the total number of SLEBs. When SLE changes screen list information for a line, it seizes an SLEB. The SLE links the SLEB to a TRC register and loads new screen list data in the SLEB. Upon termination of the editing session, a request is queued to the RC system to process the change. After processing, the TRC register is removed and the SLEB is restored to the idle link list. Administration (seize and release) of the SLEBs uses a busy/idle head cell with one bit allocated per SLEB.

3.18 Table RSLEKMDB (SLE service order keyword message data block), located in UDCS, is required for SLE customer-originated messages.

3.19 The size of the Originating Registers (&OR), Cathode Ray Tube Originating Register (&CRTOR) and SXS Foreign Exchange SR Registers (&SOR) is defined in the Parameter Guide PG-1A.

3.20 The SLR is a senior call register in restricted duplicated call store (RDCS) used for storing screen list editor information. The length of the SLR is 28 words. The number of SLRs is equal to set card NSLR.

3.21 The SLE requires the use of TRC registers (set card TRCR) to process changes to the screening lists. A TRC register is required for linking the SLEBs for the duration of an editing session. The number of additional TRC registers required is equal to the number of SLEBs (set card LASLEB).

3.22 Two types of AMA records are written for SCF. These are event records and continuation records. An event record is

generated whenever a customer accesses or edits the SCF screening list. A continuation record is written on a daily basis for each customer that has an SCF list active. In many cases, existing AMA registers will suffice.

Additional System Resources for Single Activation SCF

3.23 System resources related to call forwarding must be engineered to handle the SCF usage. Such system resources include CORC blocks, TRC registers, and temporary transfer (TPT) registers.

3.24 Two-word CORC blocks (set card CORCO2) are used to specify the RDN when no 10XXX/101XXXX access code is dialed. The additional 2-word blocks required are only for those SCF lines that will not have CFV active at any time.

3.25 Three-word CORC blocks (set card CORCO3) are used to specify the RDN when a 10XXX/101XXXX access code is dialed. The additional 3-word blocks are only required for those SCF lines that will not have CFV active at any time.

3.26 Additional TRC registers are required for Single Activation SCF lines that will not have CFV activated at any time.

3.27 Additional TPT call forwarding registers are required for Single Activation SCF lines that do not use CFV but will use SCF.

D. Translations

3.28 The following translations are required or are affected by the SCF feature. Refer to Part 6 A(3) for further details concerning SCF translations. Refer to Part 6 B(5) and B(6) for comprehensive translation information.

3.29 The ASC trunk translations include the following:

(a) One 9-word trunk network number to peripheral equipment number (TNN-PEN) miscellaneous trunk frame circuit auxiliary block per ATI circuit.

(b) One 3-word TNN-PEN supplementary auxiliary block per ATI circuit.

(c) A 4-word trunk class code (TCC) expansion block for the ATI circuit.

(d) One word per ATI circuit trunk group for the trunk group number (TGN) translator.

3.30 The following translations are affected by the ATI circuits:

(a) Pseudo route index (PRI)

(b) Route index (RI)

(c) Master scanner number to trunk network number (MSN-TNN)

(d) Trunk network number to trunk group number (TNN-TGN).

3.31 A 2-bit field is defined in the centrex common block. This 2-bit field in word 23, bits 9 and 10, allows the centrex customer four possible options for using special characters (that is, # and *) when entering an RDN. Refer to Table A.

3.32 Each LEN supplementary auxiliary block requires an option word L that contains two bits indicating the individual line access mode: usage sensitive, subscription, or denied access. This word is required only if the customer chooses to subscribe to or be denied access to one or more of the LASS features.

3.33 Each LEN supplementary auxiliary block requires an option word F that contains the address of the screen list head table (SLHT) when a line has a screening list.

3.34 The SLHT is required for each customer with one or more screen lists. Each SLHT requires one word for each screen list that is built plus one word. The SLHT contains the addresses of the screen list auxiliary blocks (SLABs).

3.35 A SLAB is required for each SCF screen list in the office. The SLAB may be built in higher unduplicated call store (HUCS) or lower unduplicated call store (LUCS).

3.36 A 3-word or 4-word CLSI auxiliary block is required for every class of service that is denied one or more of the usage-sensitive LASS features.

3.37 With the 1AE10 and later generic programs, the office options table translator defines the timing interval in the originating switch to wait for the response to the query message in word 0, bits 7 through 9. The range of value in this bit field is 1 to 6. If set to all 0's, the timing interval is 3-seconds. If set to all 1's, the timing interval is 6-seconds.

3.38 Interoffice RDLS TCAP signaling requires word 1, bit 17 in the office options table be set to 1. If TCAP is loaded, and bit 17 is set to 0, the office will not send interoffice RDLS TCAP signaling messages.

3.39 Word 10, bit 8, of the office options table translator defines the inter-LATA SLE blocking option. The blocking option allows a 1A ESS Switch to prevent sending the TCAP query message for status information of inter-LATA numbers. The default is "0" which blocks the TCAP query message.

3.40 Word 10, bit 10, of the office options table translator defines the shared/split NXX office option. This office option allows a 1A ESS Switch to send a TCAP query message for status information of a number having a shared/split NXX. The default is "0" which prevents the TCAP query message.

3.41 Word 18 in the office options table translator contains the office AMA mode indicators for the SCF feature. The indicator is used to specify when AMA records should be written. The options per feature are:

(a) Never write AMA records.

(b) Always write AMA records.

(c) Write AMA records for usage-sensitive customers only.

3.42 Word 19 of the office options table contains the office default option word L. This value represents the office default handling for the type of access this feature is given (that is, usage sensitive, subscription, denied access, or unused). The default option word L is consulted by RC when building a customer's LEN supplementary auxiliary block option word L for the first time. When a LASS feature is added to a line for the first time, the default option word L is used by RC to build out the remaining fields of the customer's option word L. If the default option word L is set to deny all LASS features, RC builds all unspecified feature fields the same as the default option word L which, in this case, is denied access. If the LASS Office Option Feature (LOOF) is loaded, word 19 of the office options table is used as the default option word L by call processing if the LEN supplementary auxiliary block option word L does not exist.

3.43 The SCF access codes are assigned in the PACT and the centrex translator (centrex common block and centrex digit interpreter tables). Adding the assignments in the PACT and centrex translators is done by the standard RC procedure for those translators.

Real Time

3.44 For the real-time penalty due to LASS, refer to COEES Information System Document, Indexes 38 (LASS), 60 (1AE10 CCS7), and 47 (1AE9 base). For the impact of the Intelligent Simplex Peripheral Interface (ISPI) feature, refer to COEES Information System Document, Index 43.

3.45 During call processing, resources are consumed when comparing a calling party identity attribute to the screening list. This has minimal impact on resources used by standard CFV treatment. In many cases, when calls are not forwarded, there is a savings of resources.

4. Implementation

4.01 The SCF feature is installed with or without other LASS features. For detailed LASS installation procedures, refer to Part 6 A(3).

Assignment Restriction

4.02 Customers with the following types of lines are denied access to the SCF feature:

(a) Two-party/multiparty.

(b) Manual (POTS and centrex). These lines may be allowed access via recent change message RC:SLE.

(c) Private branch exchange (PBX).

(d) Remote Switching System (RSS).

(e) Centrex attendant with console.

Customers with the following types of lines should be denied access to the SCF feature:

(a) Coin lines.

(b) Coinless public lines.

(c) Denied terminating treatment lines.

(d) Hotel/Motel lines.

4.03 One SCF screening list is allowed per multiline hunt group (MLHG) and is built and controlled by terminal 1 [the listed DN (LDN)] of the MLHG. Calls terminating to the LDN or to any hunting DN within the MLHG are screened against the screening list for terminal 1. Calls to any non-hunt DN within the MLHG are not screened. In addition, a non-hunt DN within the MLHG cannot have its own screening list. If terminal 1 of the MLHG is an ESS Switch line and the MLHG contains both ESS Switch and RSS lines, these types of lines (ESS switch and RSS) are provided SCF treatment. An RSS line cannot have screening lists. If terminal 1 is an RSS line, SCF treatment is denied to the group.

4.04 In a MLG with no hunting members, every member of the MLG can have a screening list. In this case, calls to a member of the MLG will only be screened against the member's own screening list.

4.05 Additionally, there are restrictions on the types of lines that can be specified on an SCF screening list. A line is invalid if:

(a) The line is unassigned.

(b) The line cannot originate a call to the owner of the SCF list.

(c) The line is not associated with a unique identity attribute.

4.06 The Single Activation SCF RDN must conform to the formats in paragraph 2.31. Additionally, the RDN is invalid if it is:

(a) A free number

(b) Unassigned

(c) An intercept number

(d) The base station DN

(e) A 950-1XXX number.

If the call type of the RDN indicates interoffice, the TROK item in the RI expansion table is checked to determine if call forwarding is allowed over the outgoing trunk.

Set Cards

4.07 The following set cards are required by or affect the SCF feature. Refer to Part 6 A(3) and A(8) for additional SCF and LASS set card information. Refer to Part 6 B(3) and B(4) for comprehensive set card information.

A. LASS Feature Groups

4.08 The following feature group set cards apply to LASS.

- **9SLASA** defines the intraoffice only feature group for LASS. Feature groups 9SDRNG and 9SSLE and feature packages 9FACRB and 9FLASS are required for 9SLASA.
- **9SLASS** defines the intra/interoffice feature group for LASS. In 1AE9, 9SLASS requires feature groups 9SCILC (or FF024), 9SDRNG, and 9SSLE and feature packages 9FACRB and 9FLASS. In 1AE10 and later, 9SLASS requires feature groups 9STCAP and 9SISUP for CCS7 signaling in place of 9SCILC (or FF024).
- **9SSLE** defines the feature group for SLE. Feature groups 9SISPI and 9SVMI1 and feature package 9FSLE are required for 9SSLE.

4.09 If all the LASS features are loaded, 9SLASS (interoffice) or 9SLASA (intraoffice) is set to 1. If only some of the features are to be provided, LASS Unbundling is required. The SCF feature is loaded by setting 9SCF to 1 and setting 9SLASS and 9SLASA to 0. Feature group 9SCF requires 9SSLE and feature package 9FLASS.

4.10 Set card 9SCNBN provides the SLE features, including SCF, with the ability to block inter-LATA TCAP query messages. 9SCNBN contains feature package 9FCNBN and requires that 9STCAP and 9SSLE be loaded for the Inter-LATA SLE blocking option. It is recommended that 9SCNBN be loaded in multiswitch SLE configurations. Refer to paragraph 2.27.

B. General LASS Set Cards

4.11 The following feature package set cards apply to LASS:

- **9FLASS** defines the feature package for LASS.

- **9FISPI** defines the feature package for ISPI.
- **9FSLE** defines the feature package for SLE.
- **9FCNBN** defines the feature package for CPNBND.

4.12 The LH primitive requires the presence of certain set cards. Refer to Part 6 A(8) for specific information.

4.13 Set card **FF050** defines the SLE Privacy (SLEPR) optional feature (1AE10 and later). If FF050 is set to 1, an identity attribute (DN) on a customer's screening list from an ILHB is marked as private only if the privacy bit for the entry is set in the ILHB. If the privacy bit is not set, the entry is public. If FF050 is set to 0, all entries from the ILHB are marked as private. Set card 9SSLE must be set to 1 for SLEPR.

4.14 Set card **FF069** defines the LOOF optional feature available in 1AE10 and later generic programs. If FF069 is set to 1, then all lines without an individual option word L in the supplemental auxiliary block will use the office default option word L. The office options table word 19 defines the call processing/recent change default option word L. LOOF eliminates the need to restrict nonsubscribers access to LASS features by using the ACRG/CAT codes in the PACT/CTXDIT translators thus simplifying recent change procedures required to implement the LASS features. If set card FF069 is set to 0, LASS feature access defaults to usage sensitive access if no option word L exists in the LEN supplementary auxiliary block.

4.15 The SLE primitive requires the following set cards:

- **LASCFE** specifies the maximum number of entries a customer can have on an SCF screen list. The default value is 3.
- **LASLEB** specifies the number of SLEBs. The value of this set card is equal to NSLR + NRCSBQ.
- **NSLR** defines the number of SLRs. The value of NSLR in 1AE9 is equal to the number of ATI circuits dedicated for LASS plus 1. For 1AE10 and later generic programs, the value of NSLR is calculated based on office traffic. Refer to Part 6 B(1).
- **NRCSBQ** defines the number of RC batch queue entries required for SLE customer originated RC messages. The value of this set card is equal to NSLR.
- **NRCBQ** is an existing set card which defines the number of RC batch queue entries.

4.16 The following set cards must be modified for Single Activation SCF:

- **CORC02** and **CORC03** define the number of 2- and 3-word CORC blocks.
- **NTR** defines the number of TPT call forwarding registers.
- **TRCR** defines the number of TRC registers.

4.17 The following set cards are required by SCF for RDLS CCS7 TCAP signaling messages. (Refer to COEES Information System Document, Index 60 for all the set cards required by CCS7 and to Part 6 A(7) for a general description of CCS7.)

- **9SMIP** defines the feature group for the CCS7 Message Interface Processor (MIP).
- **9STCAP** defines the feature group for Transaction Capability Application Part (TCAP). The CCS7 feature requires TCAP protocol for interoffice LASS; 9SMIP is required for 9STCAP.
- **SNLASS** defines the Signaling Connection Control Part (SCCP) SSN (subsystem number) used for LASS features when CCS7 signaling is used.
- **STLASS** defines the global title translation type value to be used by the LASS features when using global title routing to send messages.
- **BATBS** defines the number of buffer administration timing blocks (BATBs) (used with 9STCAP). The minimum value is 0 and the maximum value is 150.
- **9SBNI** defines the feature group for the NI feature. The NI feature allows the use of an inter-LATA CCS7 network.

Library Subsystem

4.18 Library package APT47 (List 47) may be required to update from 1AE9 to 1AE10. Library package APT51 (List 51) may be required to update from 1AE10 to 1AE11. See J6A002AC-1 for further information.

Translation Forms

4.19 The following translation forms, detailed in Part 6 B(5), are applicable to the SCF feature:

- ESS 1101 - Directory Number Record
- ESS 1107A/B - Supplementary Information Record/Centrex Group Supplementary Information Record
- ESS 1109 - Centrex Group Record
- ESS 1115 - Multiline Group Record
- ESS 1303 - Trunk and Service Circuit Route Index Record
- ESS 1304 - Rate and Route Chart
- ESS 1500E - Recent Change Limits Record.

Recent Change Messages

4.20 Refer to Part 6 A(3) for comprehensive information concerning installation of all LASS features (including SCF).

Verification

4.21 The TRCID item in the message provided by the Customer Originated Recent Change Log (CLOG) feature indicates whether the CORC is for SCF or CFV. If the message includes the keyword "EXTG", then the RDN digits for the "TO" keyword are the stored dialed extension digits for a potential OHD or Centrex Extension Trigger (see paragraph 2.64).

5. Administration

Measurements

5.01 The following type measurement code (TMC) 148 traffic counts apply specifically to the SCF feature:

EGO	Definition
26	SCF Screen List Access Peg Count
27	SCF Calls Forwarded Peg Count.

5.02 The following TMC 149 traffic counts apply to the SLE primitive:

EGO	Definition
0	Screen List Edit Buffer Peg Count
1	Screen List Edit Buffer Overflow Count
2	Screen List Edit Buffer Usage Count
3	Screen List Edit Call Register Usage Count.

Automatic Message Accounting

5.03 Refer to Part 6 A(8) for further SCF AMA information. Refer to Part 6 A(5) and B(7) for comprehensive AMA information.

5.04 Two types of records can be generated for the SCF feature based on the office AMA options and the individual line billing options.

(a) An event record can be made each time the SCF access code is entered by a customer to access/edit the screening list. Charges can be made based on activities and/or resources used during the editing session or as a single event.

(b) A daily record can be generated for each customer who has an SCF list whether currently active or not. This allows billing for use of memory to store the list.

5.05 For POTS and centrex (1AE10 and 1AE11 generic programs), billing is based on the use of the SLE functions and the existence of an SCF screening list. In the 1AE9 generic program, centrex customers are billed on a subscription basis. Centrex and POTS AMA records are generated similarly.

5.06 The AMA record for LASS has a unique service feature code for the Single Activation SCF feature. The feature status code field in the AMA record is updated accordingly. Refer to Part 6 A(5) and B(7). All forwarded calls are billed as in the CFV feature.

6. Supplementary Information

References

A. LT Practices

(1) 231-090-074 – *Call Forwarding Variable Feature*

(2) 231-318-325 – *ACT, CFV, DNRNGE, LINE, MLHG, MOVE, SCLIST, SLE, TWOPTY, VEND Line Recent Change Format*

(3) 231-318-340 – *Local Area Signaling Services (LASS) Recent Change Implementation Procedures*

(4) 231-365-005 – *Intelligent Simplex Peripheral Interface Description, Implementation, and Maintenance*

(5) 231-390-063 – *Automatic Message Accounting Feature*

(6) 231-390-292 – *Call Forwarding Usage Sensitive Feature*

(7) 231-390-500 – *Common Channel Signaling System 7 Feature General Description*

(8) 231-390-515 – *Local Area Signaling Services (LASS) CCS7 Feature*

(9) 231-390-519 – *Advanced Services Platform/Service Switching Point (ASP/SSP) Feature Document*

(10) 231-390-521 – *Network Interconnect*

(11) 231-390-522 – *Advanced Intelligent Network (AIN) Release 0.1 Protocol and Capabilities Feature Document*

(12) 231-390-523 – *Total Separation of Selective Call Forwarding Feature*

B. Other Documentation

(1) *COEES Information System Engineering Document Index 38*

(2) *Data Layout Document PK-6A006*

(3) *Office Parameter Specification PA-6A001*

(4) *Parameter Guide PG-1A*

(5) *Translation Guide TG-1A*

(6) *Translation Output Configuration PA-6A002.*

(7) *TR-TSY-000508 LSS-GR-AMA Section 8.1.*

7. Abbreviations and Acronyms

A

ACRG
Access Code Restriction Group

AIN
Advanced Intelligent Network

AMA
Automatic Message Accounting

ASC
Announcement Service Circuit

ASP
Advanced Services Platform

ATI
ASC Trunk Interface

B

BATB
Buffer Administration Timing Block

C

CAT
Centrex Access Treatment

CCS
Common Channel Signaling

CCS7
Common Channel Signaling System 7

CDR
Customer Digit Receiver

CFUP
Call Forwarding Usage Sensitive

CFV
Call Forwarding Variable

CICE
Carrier Identification Code Expansion

CLDN
Calling Line Directory Number

CLOG
Customer Originated Recent Change Log

CLSI
Class Of Service Information

COEES
Central Office Equipment Engineering System

CORC
Customer Originated Recent Change

CPN
Calling Party Number

CPNBND
Inter-LATA Calling Party Number/Billing Number Delivery and Related Services

CRA
Call Register Address

D

DN
Directory Number

DP
Dial Pulse

DTMF
Dual Tone Multifrequency

H

HUCS
Higher Unduplicated Call Store

I

ILHB
Incoming LHB

ISPI
Intelligent Simplex Peripheral Interface

K

KMDB
Keyword Message Data Block

L

LASS
Local Area Signaling Services

LATA
Local Access and Transport Area

LDN
Listed DN

LEC
Local Exchange Carrier

LEN
Line Equipment Number

LH
Line History

LHB
Line History Block

LOOF
LASS Office Option Feature

LUCS
Lower Unduplicated Call Store

M

MIP
Message Interface Processor

MLG
Multiline Group

MLHG
Multiline Hunt Group

MSN-TNN
Master Scanner Number to Trunk Network Number

N

NI
Network Interconnect

O

OHD
Off-Hook Delay

OR
Originating Register

P

PACT
Prefixed Access Code Translator

PBX
Private branch exchange

POTS
Plain Old Telephone Service

PPU
Periodic Partial Update

PTW
Primary Translation Word

R

RC
Recent Change

RCLDN
Retrieval of Calling Line DN

RDLS
Retrieval of Distant Line Status

RDN
Remote Directory Number

RESTR
Restriction Field

RI
Route index

RNGR
Ring Reminder

RSS
Remote Switching System

S

S/SNXX
Shared/Split NXX

SC
Speed Call

SCCP
Signaling Connection Control Part

SCF
Selective Call Forwarding

SCP
Service Control Point

SLAB
Screen List Auxiliary Block

SLE
Screen List Editing

SLEB
SLE Buffer

SLHT
Screen List Head Table

SLR
SLE Register

SSN
Subsystem Number

SSP
Service Switching Point

STP
Signal Transfer Point

T

TAT
Termination Attempt Trigger

TCAP
Transaction Capability Application Part

TIRM
Technical Information Resource Management

TMC
Type Measurement Code

TNN-TGN
Trunk Network Number to Trunk Group Number

TPT
Temporary Transfer

TRC
Temporary Recent Change

TSCF
Total Separation of SCF

U

UDCS
Unrestricted Duplicated Call Store

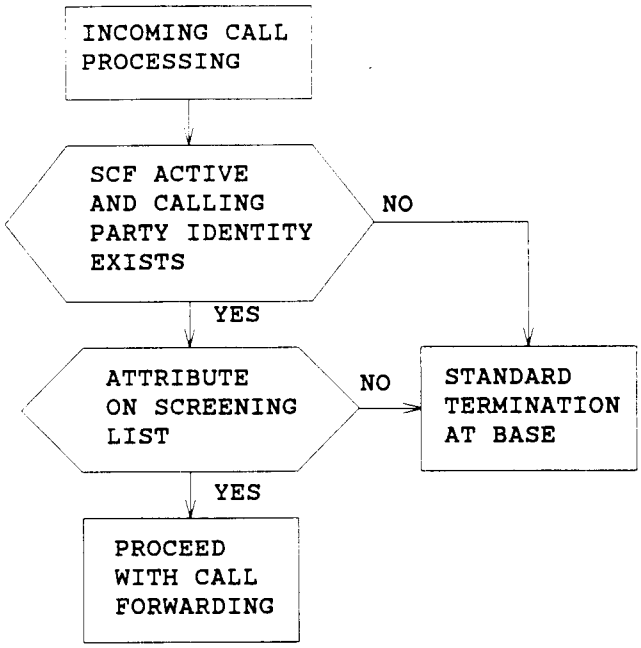


Figure 1. Single Activation Selective Call Forwarding Termination Treatment

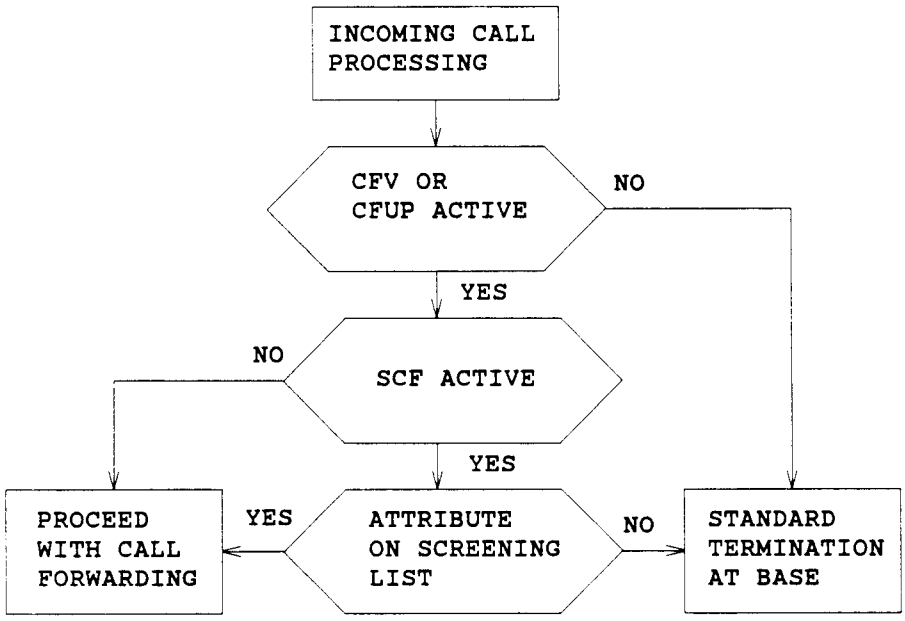
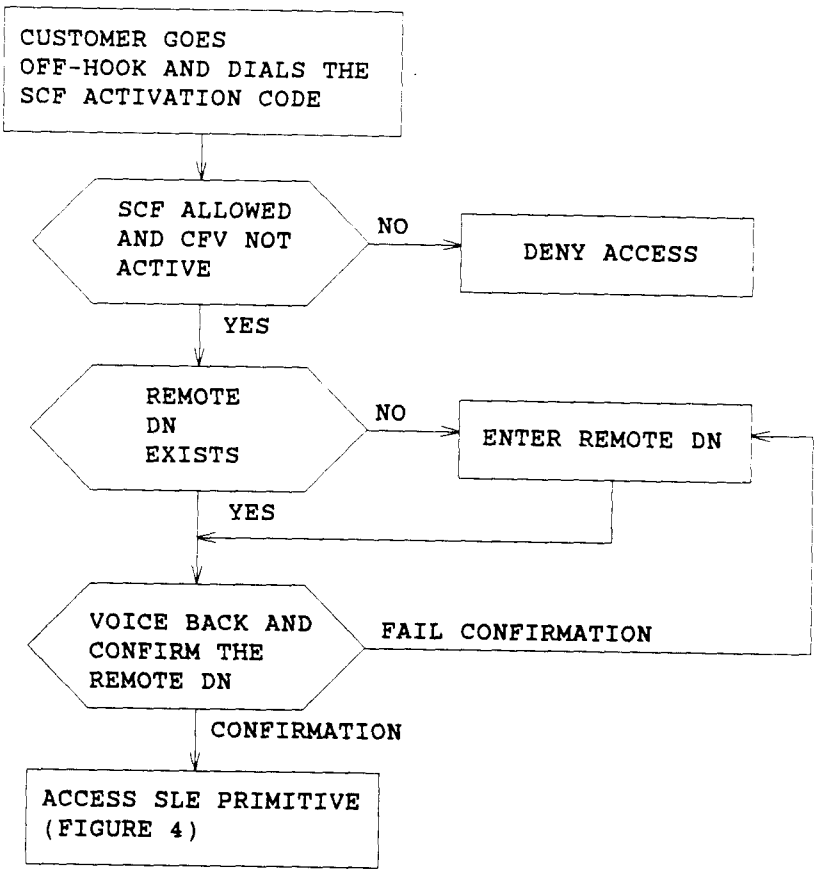
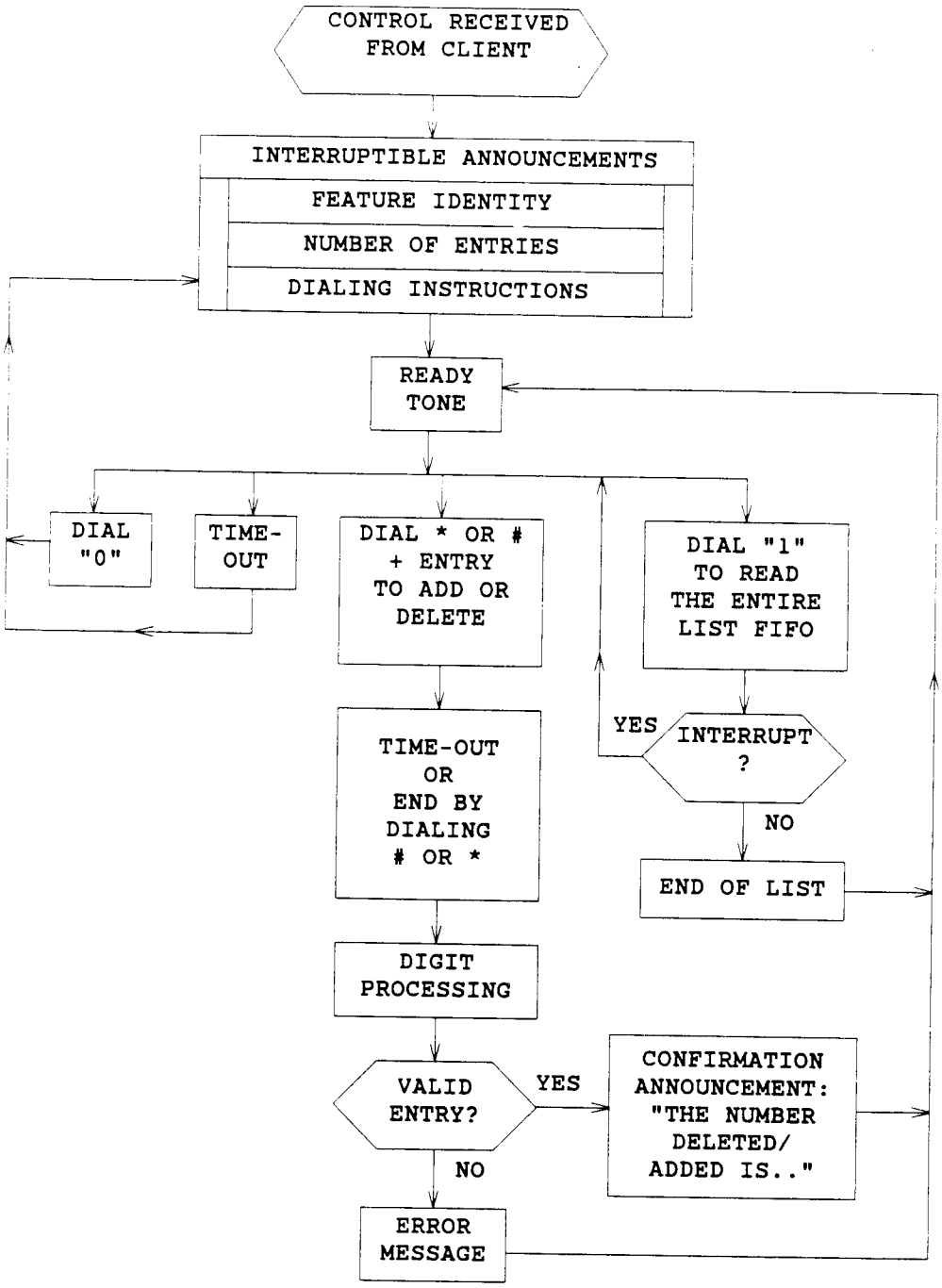


Figure 2. Selective Call Forwarding (1AE9 Generic Program) Termination Treatment



NOTE: All announcements during remote DN editing session are interruptible.

Figure 3. Enter Remote Directory Number for Single Activation Selective Call Forwarding



LEGEND:

FIFO - FIRST IN, FIRST-OUT

Figure 4. Screen List Editing Activation Sequence

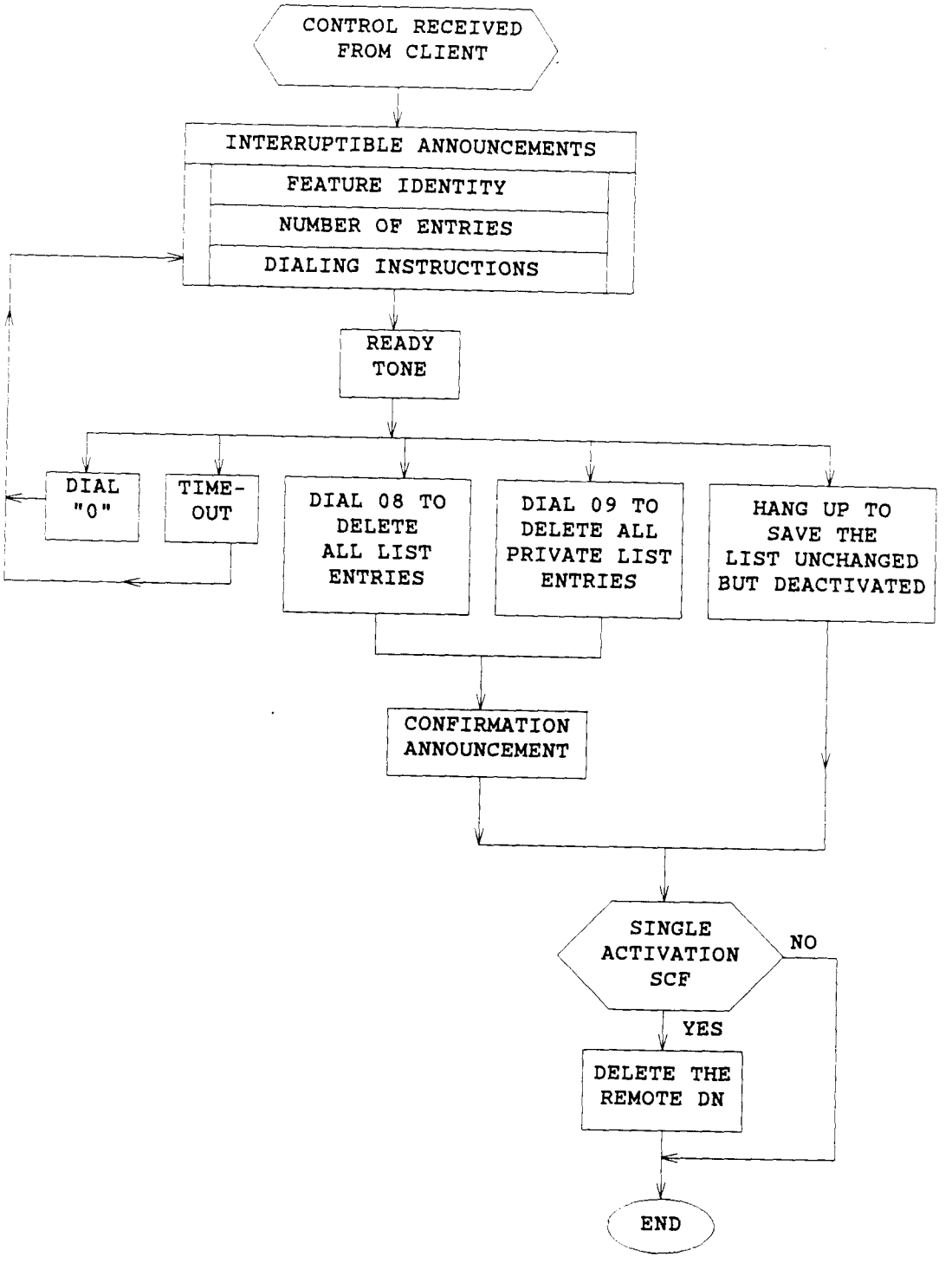


Figure 5. Screen List Editing Deactivation Sequence

Table A. Special Dialing Characters for Remote Directory Number Editing

Bits 9 and 10	Special Chars (Notes)	Definition
00	* And #	Not treated as special characters during the remote DN entering sequence (Default). In this case, time-out occurs even when an * or # is entered.
01	* Only	Treated as special characters during the remote DN entering sequence. In this case, delayed time-out does not occur after the * is entered.
10	# Only	Treated as special characters during the remote DN entering sequence. In this case, delayed time-out does not occur after the # is entered.
11	* And #	Both treated as special characters during the remote DN entering sequence. In this case, delayed time-out does not occur after the * or # is entered.

Notes:

1. These options do not affect how the # and * are currently used in SCF screen list editing.
2. If the * and # are used as LASS remote DN editing characters, they cannot be part of the remote DN entering process (for example, *9 for outside dialing).

FEEDBACK FORM

Document Title: 1A ESS™ Switch
Selective Call Forwarding
Local Area Signaling Services
Feature Document

Document Number: 231-390-236

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