NEC

NEAX® 2400 IPX

CCIS Features and Specifications

OCTOBER, 2000

NEC America, Inc.

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CCIS Features and Specifications

Revision Sheet 3/3

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NEAX2400 IPX
CCIS Features and Specifications
Feature List

Feature List (Continued)

This page is for your notes.

NEAX2400 IPX CCIS Features

LEGEND		
X	–	**Available**
—	–	**Not Applicable**
N	–	**Not Available**
E	–	**Enhanced Or Changed**
→	–	**Feature carried over to next software series**

INDEX	FEATURE DESCRIPTION	NON-NETWORK	FCCS	NEAX2400 IPX-NEAX2000 IVS^2
A-44	Asynchronous Data Switching - CCIS	X	X	N
A-45	Attendant Camp-On with Tone Indication - CCIS	X	X	X*
A-46	Attendant-Controlled Conference - CCIS	X	X	X
A-71	Automatic Recall - CCIS	X	X	X
A-87	Automatic Number Identification (ANI) - CCIS	X	X	X
A-126	ANI-CCIS (16 Digit)	X	X	X
B-9	Busy Verification - CCIS	X	X	X*
B-10	Brokerage Hotline - CCIS	X	X	X
C-44	Call Back - CCIS	X	X	X*
C-45	Call Forwarding - All Calls - CCIS	X	X	X
C-46	Call Forwarding - Busy Line - CCIS	X	X	X
C-47	Call Forwarding - Don't Answer - CCIS	X	X	X
C-48	Call Forwarding - Intercept - CCIS	X	X	X
C-49	Call Forwarding - Override - CCIS	X	X	X
C-50	Call Transfer - All Calls - CCIS	X	X	X
C-51	Called Station Status Display - CCIS	X	X	X
C-52	Calling/Called Number Display - CCIS	X	X	X
C-53	Call Processing Indication - CCIS	X	X	X
C-54	Call Transfer - Attendant - CCIS	X	X	X*
C-55	Centralized Billing - CCIS	X	X	X*
C-56	Centralized Day/Night Mode Change - CCIS	X	X	X
C-57	Centralized System Management Report - CCIS	X	X	X
C-58	Consultation Hold - All Calls - CCIS	X	X	X
C-94	Call Forwarding Assignment - Attendant - CCIS	X	X	N
C-163	CCIS Networking via IP	X	X	X
C-167	Centralized Maintenance - CCIS	X	X	X

NEAX2400 IPX CCIS Features (Continued)

LEGEND
X – **Available**
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E – **Enhanced Or Changed**
→ – **Feature carried over to next software series**

INDEX	FEATURE DESCRIPTION	NON-NETWORK	FCCS	NEAX2400 IPX-NEAX2000 IVS^2
D-41	Data Communication - CCIS	X	N	N
D-65	Data Interface - Automatic Answer - CCIS	X	N	N
D-66	Data Line Security - CCIS	X	N	N
D-67	Data Line Privacy - CCIS	X	N	N
D-68	Data Privacy on Demand - CCIS	X	N	N
D-69	Data Transparency - CCIS	X	N	N
D-70	Deluxe Traveling Class Mark - CCIS	X	X	X
D-71	Dial Access to Attendant - CCIS	X	X	X*
D-72	Digital Display - Station - CCIS	X	X	N
D-73	Digital Display - Trunk - CCIS	X	X	X
D-74	Direct-In Termination - CCIS	X	X	X
D-75	Distinctive Ringing - CCIS	X	X	X
D-76D	Do Not Disturb - D^{term} - CCIS	X	X	X
D-86	Data Hotline - CCIS	X	N	N
D-91	Dialed Number Display - Recall - CCIS	X	X	X
D-93D	Dual Hold D^{term} - CCIS	X	—	X
E-8	Executive Right-of-Way - CCIS	X	—	X
E-9	Elapsed Time Display - CCIS	X	—	X
E-20	E911 - ANI Unified Number of Digits - CCIS	X	X	X
F-12	Flexible Numbering of Stations - CCIS	X	X	X
H-10D	Hands-free Answerback - D^{term} - CCIS	X	—	X
H-11	House Phone - CCIS	X	X	X
H-12	Hotline - CCIS	X	X	X
I-16	Incoming Call Identification - CCIS	X	X	X
I-17	Individual Attendant Access - CCIS	X	X	X*

NEAX2400 IPX CCIS Features (Continued)

LEGEND		
X – **Available**		
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→ – **Feature carried over to next software series**		

INDEX	FEATURE DESCRIPTION	NON-NETWORK	FCCS	NEAX2400 IPX-NEAX2000 IVS^2
I-18	Inter-Position Transfer - CCIS	X	—	—
L-25	Look Ahead Routing - CCIS	X	X	X
L-29	LDN Night Connection - CCIS	X	X	X
M-34	Message Reminder - CCIS	X	X	N
M-34D	Message Reminder - D^{term} - CCIS	X	X	N
M-35	Message Waiting Lamp Setting - Attendant - CCIS	X	X	X
M-36	Message Waiting Lamp Setting - Station - CCIS	X	X	X
M-37	Miscellaneous Trunk Access - CCIS	X	—	X
M-38	Miscellaneous Trunk Restriction - CCIS	X	—	N
M-39	Modem Pooling - CCIS	X	N	N
M-40	Multiple Call Forwarding - All Calls - CCIS	X	X	X
M-41	Multiple Call Forwarding - Busy Line - CCIS	X	X	X
M-42	Multiple Call Forwarding - Don't Answer - CCIS	X	X	X
M-43	Multiple Console Operation - CCIS	X	X	X
M-67	Message Center Interface - CCIS	X	X	X
N-15	Night Connection - Fixed - CCIS	X	X	X
N-16	Night Connection - Flexible - CCIS	X	X	X
N-37	Name Display - System - CCIS	X	X	X
N-46	Number Portability - CCIS	X	X	X
O-11	Off-Hook Queuing - CCIS	X	X	X
O-12	Outgoing Trunk Queuing - CCIS	X	X	N
P-28	Paging Access - CCIS	X	X	X
R-22	Restriction from Outgoing Calls - CCIS	X	X	X

NEAX2400 IPX CCIS Features (Continued)

LEGEND				
X – **Available**				
— – **Not Applicable**				
N – **Not Available**				
E – **Enhanced Or Changed**				
→ – **Feature carried over to next software series**				

INDEX	FEATURE DESCRIPTION	NON-NETWORK	FCCS	NEAX2400 IPX-NEAX2000 IVS^2
S-52	Serial Call - CCIS	X	X	N
S-53D	Service Display - D^{term} - CCIS	X	—	N
S-54	Simultaneous Voice and Data Transmission - CCIS	X	X	N
S-55	Single-Digit Station Calling - CCIS	X	X	X
S-56	Station-Controlled Conference - CCIS	X	X	X
S-57	Station-to-Station Calling - CCIS	X	X	X
S-58	Station-to-Station Calling - Operator Assistance - CCIS	X	X	X
S-59	Step Call - CCIS	X	—	X
S-60	Synchronous Data Switching - CCIS	X	X	X
S-73	Supervisory Call - CCIS	X	X	N
T-26	Toll Restriction - 3/6-Digit - CCIS	X	X	X
T-27	Trunk Answer from Any Station - CCIS	X	X	X
U-5	Uniform Numbering Plan - CCIS	X	X	X
V-7	Voice Call - CCIS	X	X	X

Note 1: ** This feature is available on the condition that the NEAX2000 IVS^2 is the satellite office.*

Note 2: *** Only 2 modes of Day/Night are available for NEAX2000 IVS^2.*

Note 3: *Telephone numbers should be used for activating CCIS services through FCCS groups and a NEAX2000 IVS^2.*

Networking with NEAX2400 IPX and NEAX2000 IVS^2

General Description

The following explains connectivity issues between a NEAX2400 IPX and a NEAX2000 IVS^2. An FCCS Group consists of a network where multiple NEAX2400 IPXs are connected via FCCS link.

Note: *NEAX2400 IPX - NEAX2000 IVS^2 connection is available only if the NEAX2000 IVS^2 is the satellite office (requires NEAX2000 IVS^2 Series 2000 or later software).*

Service Conditions

Network Configuration

1. The following table shows the summary of network configurations:

TYPE	CONNECTION TYPE		MAXIMUM TELEPHONE NUMBERS	SERVICE		CENTRALIZED FUNCTION		
	NEAX2400 IPX - NEAX2400 IPX	NEAX2000 IVS^2 - NEAX2400 IPX		NEAX2400 IPX - NEAX2400 IPX	NEAX2000 IVS^2 - NEAX2400 IPX	MAINTENANCE	BILLING **Note**	MCI **Note**
1	FCCS	CCIS	120,000	FCCS service	CCIS service	Available	Available	Available
2	CCIS	CCIS	120,000	CCIS service	CCIS service	Available	Available	Available

Note: *For details, refer to the following services:*
Maintenance - Centralized System Management Report - CCIS [C-57]
Billing - Centralized Billing - CCIS [C-55]
MCI - Message Center Interface - CCIS [M-67]

2. There are two connection types for the network:
    a.) NEAX2000 IVS^2 - NEAX2400 IPX connection
    b.) NEAX2400 IPX - NEAX2400 IPX connection

Network Establishment

*   NEAX2000 IVS^2 - NEAX2400 IPX
1. Additional NEAX2000 IVS^{2}s cannot be connected to a NEAX2000 IVS^2 that has already been connected with NEAX2400 IPX. Only one SPAN is allowed for NEAX2400 IPX - NEAX2000 IVS^2 connection.
2. The maximum number of routes and nodes for the NEAX2000 IVS^2 are given by subtracting the number of routes (LGRT) used for the NEAX2400 IPX from 899 (maximum number of routes in an FCCS group).

Note: *This condition is applied to the NEAX2400 IPX side. The NEAX2000 IVS^2 system may accommodate up to 255 nodes (including NEAX2400 IPX), because the maximum number of Point Codes (PCs) assigned at NEAX2000 IVS^2 system is 255, including the nodes in the network.*

3. When the signal route is deleted, the voice route is used per route, but the signal route can be shared with multiple routes. However, when the network is established using EVENT BASED-CCIS, the signal route must be used per route.

*   NEAX2400 IPX - NEAX2400 IPX
1. The maximum number of NIDs per FCCS group is 253.
2. The maximum number of routes assigned in each FCCS group is 899.
3. An NCN and NDM exist in each FCCS group.

Service Conditions

FCCS Network Group

1. Since multiple FCCS networks are connected in the network, an FCCS network group number is required to distinguish each FCCS network from others. An FCCS network group is called an FCCS group, and a maximum of four FCCS groups can be connected in the network.

2. A center FCCS group should be specified from among multiple FCCS groups in the network. It is the only node allowed to assign and delete telephone numbers within the self FCCS group and the others.

3. The network consists of FCCS groups and NEAX2000 IVS^2 systems within the range of 2 SPANs from the center FCCS group, and within the range of 4 SPANs from end to end.

Interactions

1. PS Roaming and Hand-over services cannot be activated in the network. To execute Roaming service, the Q.931a line should be connected exclusively.

2. The OAI/ACD service in the network is executed with the same conditions in the normal CCIS network.

A-44   Asynchronous Data Switching - CCIS

General Description

The NEAX2400 IPX supports up to 19.2 Kbps asynchronous switched modem-less data communication, from node to node, in a CCIS network. An asynchronous Data Adapter is required for the D^{term}, and an asynchronous Data Module is used for non-voice applications.

Operating Procedure

To initiate a data call from a D^{term} equipped with a Data Adapter

1. Press the DATA key on the D^{term}; the DATA lamp will light steadily.
2. Dial the DTE telephone number (in another office); the DATA lamp will flash.
3. When the called DTE answers, the DATA lamp will light steadily.

To receive a data call at a D^{term} equipped with a Data Adapter

1. When a data call is received, the DATA lamp will flash and Ringing Tone will be heard.
2. Press the DATA key to answer the call.
3. The DATA lamp will light steadily.

Note: *If the Data Adapter is equipped with DATA INTERFACE-AUTOMATIC ANSWER - CCIS [D-65], no manual operation is required.*

To initiate a data call from a DTE equipped with a Data Module

1. Enter the origination command DM CALL from the DTE keyboard. Press the RETURN key. The monitor will display DM CALL and READY.
2. Enter the DTE telephone number by entering DIAL-XXXXX. Press the RETURN key. The monitor will display DIAL-XXXXX.
3. The monitor will then display CALLING.
4. When the called party answers, the monitor will display OPEN.

To receive a data call at a DTE equipped with a Data Module

1. The Data Module will provide ringing.
2. Enter READY and press the RETURN key. The DTE can then communicate through the switch.

To initiate a Data Call from a D^{term}/Data Adapter via keyboard dialing

1. Enter the origination command DM CALL from the DTE keyboard. Press the RETURN key. The monitor will display DM CALL and READY.
2. Enter the DTE telephone number by entering DIAL-XXXXX. Press the RETURN key. The monitor will display DIAL-XXXXX.
3. The monitor will then display CALLING.
4. When the called party answers, the monitor will display OPEN.

To release from a Data connection when using keyboard dialing

1. Enter the release request command ESC - DM from the keyboard of the DTE. Press the RETURN key. The monitor will display ACK.
2. Enter the release command RLS from the keyboard of the DTE. Press the RETURN key. The monitor will display RLS and RELEASED.
3. The data connection is released.

Operating Procedure (cont'd)

When the opposite end DTE disconnects when using keyboard dialing

1. When the opposite end DTE releases, the Data Adapter buzzer will sound three times.
2. Enter release command RLS and press the RETURN key. The monitor will display RLS and RELEASED.
3. The data connection is released.

Service Conditions

1. Data terminals up to 19.2 Kbps can be connected.

Note: *Additional hardware is required for 19.2 Kbps.*

2. A data terminal can be a member of a Pilot Hunt group or a Circular Hunt group.
3. The calling and called DTEs must be code and speed compatible.
4. Keyboard dialing can only be utilized by a D^{term}/Data Adapter or asynchronous Data Module.
5. Additional hardware is required to activate KEYBOARD DIALING - DATA ADAPTER [K-1].
6. If keyboard dialing is used to establish a data connection, keypad dialing for a data connection is ineffective until the data connection releases. If data communication is established by keypad dialing, it is possible to release by keyboard dialing.
7. The display of the DTE will be blank when data communication is established by keypad dialing. The display of the D^{term} will be blank when data communication is established via keyboard dialing.
8. The DSPY/AUTO key on the D^{term} is ineffective when keyboard dialing is used to establish a data call.
9. When an incoming data call is received, the displays of the DTE and the D^{term} will show the number of the calling data station or the incoming trunk type and number.

Interactions

When assigned, the DATA feature key acts as the telephone number of the data station for the Data Adapter. The telephone number of the data station will only appear on one D^{term} set. The telephone number of the data station may be used as a DID number.

A-45 Attendant Camp-On with Tone Indication - CCIS

General Description

This service feature allows Inter-Office Attendant Camp-On for when the Attendant and the called party belong to a different PBX in the CCIS network.

Operating Procedure
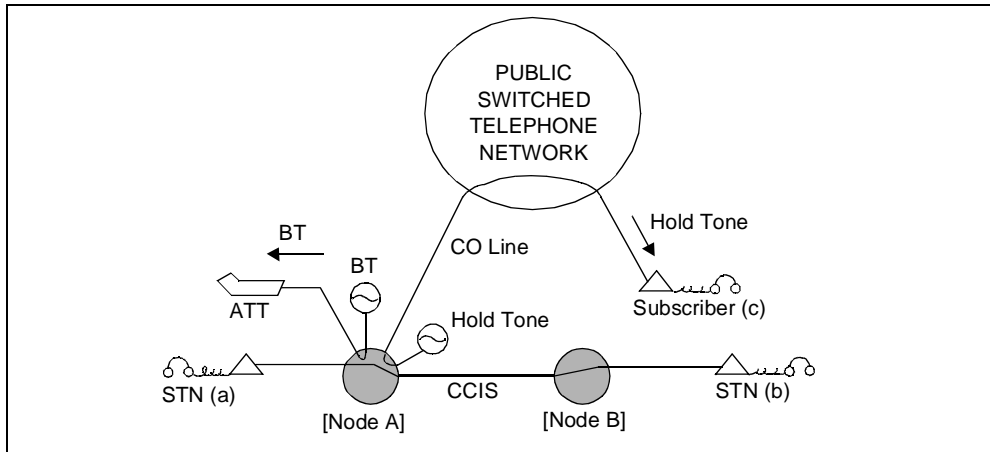
1. Stations (a) and (b) are talking through a CCIS line.
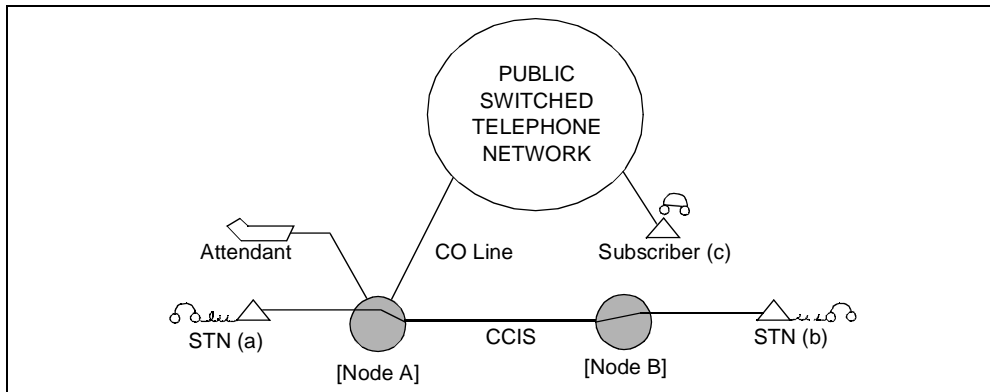
2. Subscriber (c) places a call to Node A through a CO line. An Attendant in Node A answers the call.
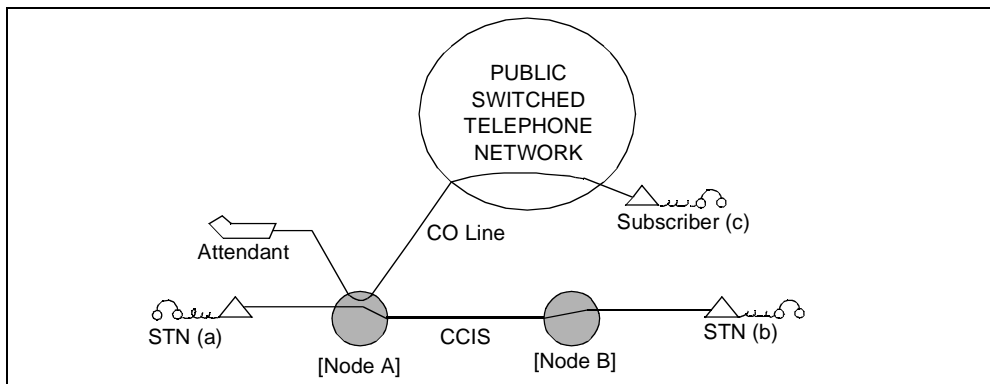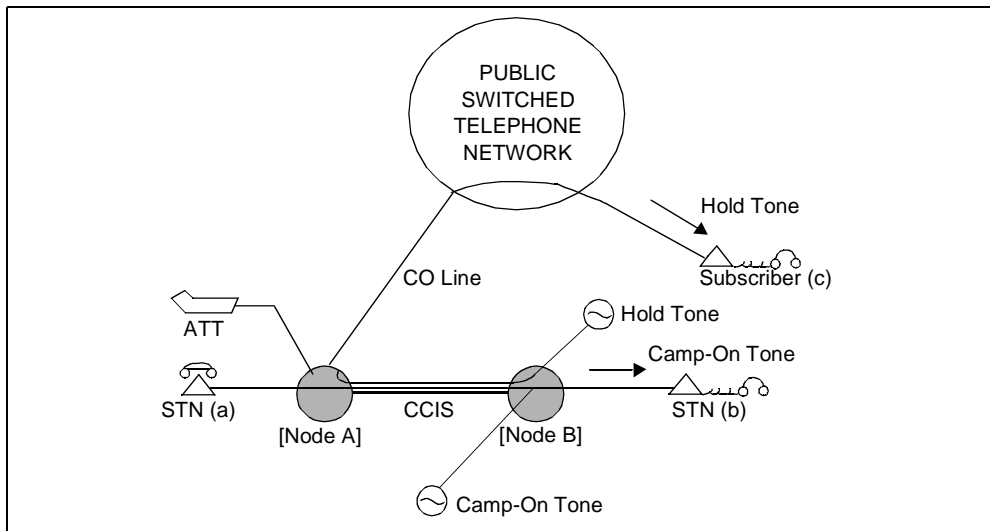
Operating Procedure (cont'd)

3. The Attendant dials the number for Station (b); Subscriber (c) receives Hold Tone; the Attendant receives busy tone.

4. The Attendant presses the RELEASE key (Attendant Camp-On service setting) **Note 1**. While talking with Station (a), Station (b) receives Camp-On Tone, and the Attendant can now handle other calls.

Operating Procedure (cont'd)

5.   Stations (a) and (b) both go on-hook **Note 2**; (b) is rung, and (c) receives ringback tone.
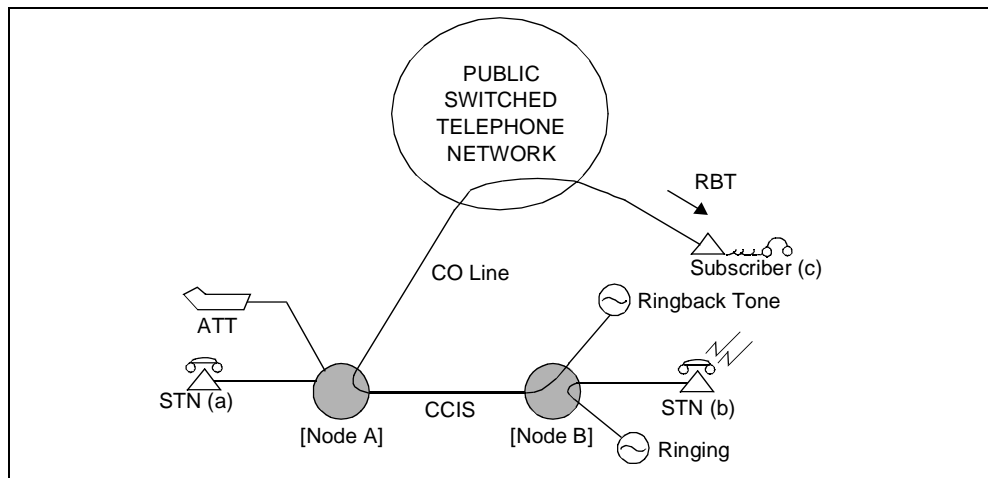
6.   Station (b) answers; Station (b) and Subscriber (c) are connected with each other.
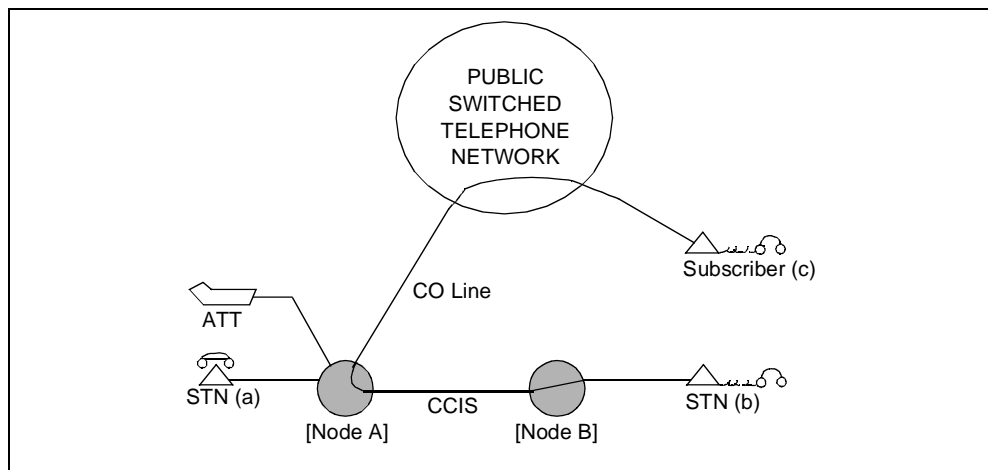
Note 1: *If the Attendant presses the BV key instead of the RELEASE key, the Attendant bridges into the Station (b) side and, as a result, a three-way connection is set up. In this case, both (a) and (b) are bridged into the connection. The Attendant sets Camp-On by pressing the RELEASE key.*

Note 2: *Instead of on-hook by Stations (a) and (b), if (b) switch hook flashes and dials the Call Hold Access Code, (b) can answer Subscriber (c) (C.O.line party), and (a) is held on the line.*
If (b) switch hook flashes and dials the Call Hold Access Code once again, (b) can return to the connection with (a). In this case, Subscriber (c) is held on the C.O.line.

Service Conditions

1.   Only one incoming call can be camped on to a particular station at any given time. Multiple CAMP-ON is not allowed.

2.   Calls that remain camped-on for longer than the predetermined time will initiate AUTOMATIC RECALL - CCIS [A-71].

Service Conditions (cont'd)

3.   CAMP-ON may be denied if the busy station is:

   a.) Dialing or in the LINE LOCKOUT [L-3] mode.

   b.) Listening to a tone.

   c.) Being rung.

   d.) The TIE Line is idle at the time the operator has pressed RELEASE key.

   e.) Already camped-on by a previous call.

   f.) Protected from CAMP-ON by CLASS OF SERVICE-INDIVIDUAL [C-15].

   g.) Protected by DATA LINE SECURITY [D-12].

   h.) Being connected to an A.C Loop.

   i.) Activating any conflicting feature, such as:

CALL BACK - CCIS	[C-44]
CALL HOLD	[C-6][C-6D]
CALL TRANSFER - CCIS	[C-50][C-50D][C-54]
BUSY VERIFICATION - CCIS	[B-9]
BOSS-SECRETARY OVERRIDE-D^{term}	[B-6]
CALL WAITING - TERMINATING	[C-12]
CONSULTATION HOLD - ALL CALLS - CCIS	[C-58][C-58D]
DIAL ACCESS TO ATTENDANT - CCIS	[D-71]
DATA LINE SECURITY - CCIS	[D-66]
DATA PRIVACY ON DEMAND - CCIS	[D-68]
EXECUTIVE RIGHT-OF-WAY - CCIS	[E-8][E-8D]
NON-EXCLUSIVE HOLD - D^{term}	[N-7D]
OUTGOING TRUNK QUEUING - CCIS	[O-12][O-12D]
OFF-HOOK QUEUING - CCIS	[O-11]
VOICE CALL-D^{term} - CCIS	[V-7D]
PRIVACY RELEASE	[P-18]

In each of the above instances, the ATTENDANT will receive a reorder tone.

A-46 Attendant-Controlled Conference - CCIS

General Description

This feature allows the Attendant to establish a conference among as many as eight parties. The conference group can consist of any combination of stations and/or trunks in a CCIS network.

Operating Procedure

To activate ATTENDANT-CONTROLLED CONFERENCE - CCIS

1. A station calls the Attendant to request a conference.
2. The Attendant connects the calling station to the conference leader by dialing the circuit number of the conference leader connected to the Conference Unit.
3. The Attendant sequentially calls all desired parties and connects by pressing START, dialing the pilot number of the conference, and pressing RELEASE.

Using the MMCB

4. When all parties are connected, the conference leader with a push-button telephone can dial digit "0" to prevent additional stations from entering the conference group, thereby assuring privacy. If the leader presses "0" again, more parties can be added.
5. If the conference leader dials digit "#", all conferees will be disconnected. Otherwise, the conference is terminated only after all parties have hung up.

Using the PA-CFTB

6. When all parties are connected, the conference leader with a push-button telephone can dial digit "0" to prevent additional stations from entering the conference group, thereby assuring privacy. If the leader presses "0" again, more parties can be added.
7. If the conference leader dials digit "#", all conferees will be disconnected. Otherwise, the conference is terminated only after all parties have hung up.

For either

8. To release from a conference circuit individually, a user hangs up. The remaining conferees can continue without interruption.

Service Conditions

1. Conference Units are designed to provide adequate amplification, but the condition of the Central Office connections will affect transmission.
2. Conference Unit extension numbers should be placed in a STATION HUNTING-TERMINAL [S-9] group. Only the Pilot number of this group should be published.
3. Each Conference Unit can provide up to an eight-party conference.
4. Override services, such as BUSY VERIFICATION [B-3] [B-9], ATTENDANT OVERRIDE [A-7] or EXECUTIVE RIGHT-OF-WAY [E-1] [E-8], are denied to stations engaged in a conference call.
5. The following additional hardware is required:
   a.) External Conference Unit MMCB, Model No.37008
   b.) PA-16LCBE Circuit Card
6. The PA-CFTB circuit card may be used rather than the external Conference Unit MMCB. The MMCB also requires a PA-16LC that is not required by the PA-CFTB.

Interactions

1. The Attendant Console must first be provided.
2. NEC provides a PA-16LCBE circuit card that provides momentary-open for all 16 circuits. This is required to provide a release signal when line circuits are connected to external equipment such as conference and page units. This keeps reorder tone from being sent to the Conference Unit.
3. The last port of a PA-16LCBJ/PA-16LCBL provides battery reversal upon release. Therefore, when a station disconnects, reorder tone is not returned to the external Conference Unit.

A-71   Automatic Recall - CCIS

General Description

This service feature works as a time reminder. When an attendant-handled call through CCIS remains on hold, camped-on or ringing unanswered for a fixed interval, the attendant is automatically alerted.

Operating Procedure

No manual operation is required.

Service Conditions

1. AUTOMATIC RECALL timing is preset in system data at 30 seconds. See the VARIABLE TIMING PARAMETER [V-1] for other selectable timing choices.
2. If the attendant re-enters a held or camped-on trunk, timing is reset when the trunk is returned to the previous condition.
3. In addition to the standard visual indication for incoming calls, the ATTENDANT CONSOLE [A-3] buzzer will sound to signal RECALL, provided no calls are being processed.
4. This feature is denied on INCOMING CENTRAL OFFICE CALL TO TIE-LINE CONNECTION [I-3], except in the following conditions:
5. When the incoming signaling is a loop-start.
6. When ATTENDANT LOOP RELEASE [A-6] is activated.
7. When an Attendant answers AUTOMATIC RECALL - CCIS [A-71], the dialed number of the calling station/trunk number can be displayed (as programmed in system data).
8. The indication on the Attendant Console follows DIGITAL DISPLAY-STATION [D-5]. When the dialed number is displayed, the display is as follows:
    a.) Tenant Number: Blank Space
    b.) Trunk Route Restriction Class: Blank Space
    c.) Telephone Number: Dialed Number (Last Digits).
9. AUTOMATIC RECALL - CCIS will appear on the attendant's HOLD key.

Interactions

1. This feature is available on calls extended to a branch PBX via a CENTRALIZED ATTENDANT SERVICE (CAS) [C-20] position.
2. System Data 2, Index 6, Bit 7. On a per-tenant basis, allow this Bit for CALL FORWARDING-DON'T ANSWER [C-47] via the Attendant Console. During this operation, the call will ring at the called station for the time interval set in System Data 1, Index 141. The call is then forwarded and rings at the forwarded station for the time interval set in Index 145. If the call is still not answered, it will be recalled to the Attendant Console via AUTOMATIC RECALL [A-8].
3. System Data 1, Index 70, Bit 0 (Called Number Display). This Bit does not affect the display on the Attendant Console for recalled calls. It is used for DID's that have call forwarded to the Attendant, or should the Attendant re-enter the loop on an extended call before AUTOMATIC RECALL [A-8] has taken place.
4. When a trunk call recalls back to the Attendant Console, the destination telephone number will display and the Source (SRC) LED will be lit. By pressing the SRC key, the display will change to the originating route and trunk number. By pressing the Destination (DEST) key, the display will change to the destination station.

Interactions (cont'd)

5. The station will continue to ring, even as the call recalls to the Attendant Console. When conference is allowed and a conference card is programmed and installed, if the station should answer at the same time the Attendant answers the recalling call, a three-way conversation will then take place. The Attendant can press the SRC, DEST, or TALK keys to achieve the desired conversation, or press the RELEASE key to get out of the conversation.

6. Station calls extended by the Attendant to another station within the same system (node) will recall to the Attendant. Station calls extended by the Attendant over CCIS will not recall. Trunk calls will recall in both instances.

A-87   Automatic Number Identification (ANI) - CCIS

General Description

This service is an enhancement from AUTOMATIC NUMBER IDENTIFICATION (ANI), which can be executed only within the self office. This enhanced service allows ANI at the primary office, with respect to an EMERGENCY CALL terminated from the secondary office via the CCIS line.

Operating Procedure

No manual operation is necessary.

Service Conditions

1. The ANI function for Enhanced 911 outgoing connections is applied to:
    a.) Least-Cost Route (LCR) call from a station by MF signalling.
    b.) LCR call from an Attendant by MF signalling.
    c.) LCR call by MF signalling from a station or Attendant Console called via CCIS.
2. ANI sending number by E991-ANI - CCIS is NXX-XXXX, which is the same as that of the previous Enhanced 911-ANI service.
3. Method of obtaining ANI sending number (example):
    Caller's station number: 12345 (closed numbering)

    ANI assigned data:
    RT: XX
    AT: 0 (0 = STA/ATT)
    (1 = not assigned special ATT number)
    CC: 1(0 = Main Central)
    (1 = Satellite Central)
    COC: 826 (Remote Office Code)
    Skip: 4 (Number of digits to be skipped from the top of the STN)
    Add: 3 (Number of digits to be added to ANI information)
    DG: 789 (ANI information)
    a.) Number of skip digits deleted from STN:
        8 2 6 1 <u>2 3 4 5</u>
    b.) The number created by combining the ANI information and the above number becomes the ANI sending number:
        <u>7 8 9</u> 2 3 4 5
    c.) Sending ANI information:
        KP-0-<u>789-2345</u>-ST
4. Sending digit patterns in Enhanced 911 ANI - CCIS:
    a.) Outgoing call from station/ATTCON of Main Office.
        •   If OG call is from a station and ANI data is assigned:
        KP-<u>0</u>-<u>N**-****</u>-ST
        <u> | |_____</u>ANI sending number
        <u> |_____</u>Information digit

        •   If OG call is from a station and ANI data is unassigned:
        KP-<u>2</u>-ST
        <u> |_____</u>Information digit

Service Conditions (cont'd)

- If OG call is from an ATTCON and Individual ATT Access Code is assigned, and also ANI data is assigned:

  KP - <u>0</u> - <u>N**-****</u>- ST

                    └────ANI sending number

           └────────────Information digit

- If OG call is from an ATTCON and Individual ATT Access Code is unassigned, and ANI data is assigned:

  KP - <u>0</u> - <u>N**-****</u>- ST

                    └────ANI sending number

           └────────────Information digit

- If OG call is from an ATTCON and ANI data is unassigned:

  KP - <u>1</u> - ST

           └────────────Information digit

b.) Outgoing call from station/Attendant of Remote office, and call termination via CCIS of Main Office.

- If the outgoing call is from a station and ANI data is assigned:

  KP - <u>0</u> - <u>N**-****</u>- ST

                    └────ANI sending number

           └────────────Information digit

- If the outgoing call is from a station and ANI data is unassigned:

  KP - <u>2</u> - ST

           └────────────Information digit

- If the outgoing call is from an Attendant and ANI data is assigned:

  KP - <u>0</u> - <u>N**-****</u>- ST

                    └────ANI sending number

           └────────────Information digit

- If the outgoing call is from an Attendant and ANI data is unassigned:

  KP - <u>1</u> - ST

           └────────────Information digit

c.) Outgoing call from station/Attendant of Remote office, and call termination to a TIE Line of Main Office.

  KP - <u>2</u> - ST

           └────────────Information digit

5. An independent route is required for Enhanced 911 interface.

6. After caller's number is sent out to the remote office by Enhanced 911-ANI, it takes some time before a speech path is established.

7. Enhanced 911-ANI - CCIS service data are assigned only at Main Office; no specific data are assigned at the remote office

8. Both ANI service and Enhanced 911-ANI UNIFIED NUMBER OF DIGITS [E-18] service must have been assigned.

9. The Central Office Code (COC) consists of 1-5 digits. If office number and station number are used, the maximum total number of digits is still 5.

   Example 1:

   Office number: 82

Service Conditions (cont'd)

   Station number: 2xxx, 3xxx
   The COC digits are 822 or 823; then assign ANI information.
   Example 2:
   Office number: 82, 826
   Station number: 34xxx, 4xxx
   The COC digits are 823 or 826; then assign ANI information.

10. After digits have been sent out, DDD seizure tone is not sent.

11. Other interactions are the same as those of outgoing call by MF signalling.

12. An 8RST-K circuit card is used for this service.

13. When a D^{term} uses this feature, the calling number transmitted is that of the Prime Line.

Interactions

If "911" is to be exclusively used as an emergency number, then dial "9" access codes cannot be used solely for LCR access. If "9-911" is used exclusively for an emergency call, then no numbering conflict will exist.

A-126   ANI-CCIS (16 Digit)

General Description

This feature allows an office receiving ANI information from Central Office through an analog trunk (Caller ID or MF) to extend to another office through CCIS when the tandem connection is established.

Operating Procedure

No manual operation is required.

Service Conditions

1. The maximum digits of ANI information sent to another office through CCIS are 16.
2. When the tandem connection is established through CCIS, the maximum digits of ANI information which the connected office may output to the SMDR port or MCI are 16.
3. In regard to other conditions, refer to the Service Conditions of CALL TRANSFER - ALL CALLS - CCIS [C-50].

B-9   Busy Verification - CCIS

General Description

This service feature allows Inter-Office Attendant BUSY VERIFICATION when the Attendant and the called party respectively belong to a different PBX in the CCIS network.

Operating Procedure

1. Station (a) and (b) are in connection on a station-to-station call.
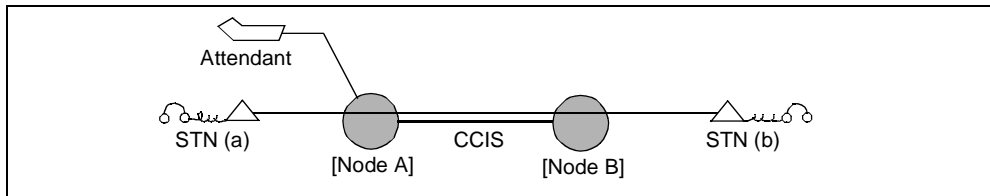
2. The Attendant in Node A presses the loop key; the loop lamp and DEST lamp on the Attendant Console illuminate.
3. The Attendant dials the number for Station (b); receives busy tone.
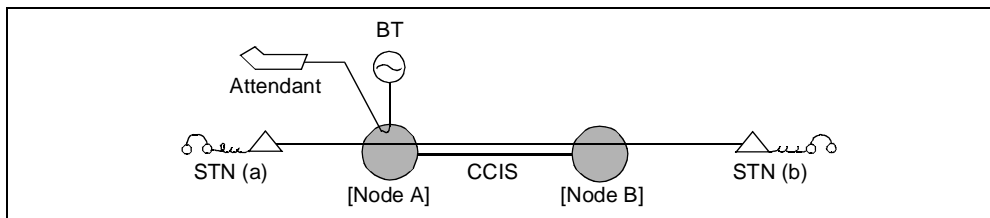
4. The Attendant presses the BUSY VERIFICATION key; the Attendant and both STN (a) and STN (b) receive Warning Tone. STN (a), STN (b) and the Attendant are connected in a 3-Way Connection.
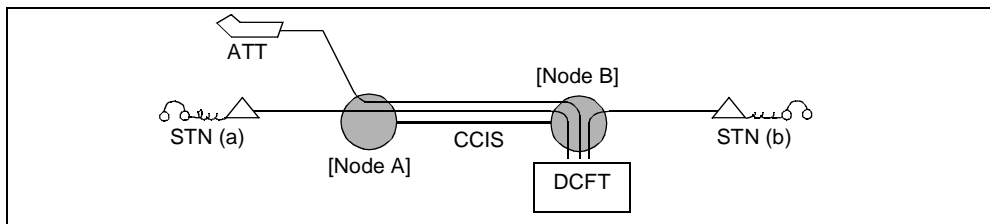
5. The Attendant presses the CANCEL key and can now handle other calls.

Service Conditions

1. This service may be used during Station-to-Station Calls and Station-to-Trunk Calls. (COT, FX, WATS, CCSA, or TIE Lines)
2. BUSY VERIFICATION is performed in the office to which the called station belongs.

Service Conditions (cont'd)

3. In a 3-way call in the mode where the conference button is pressed, the Attendant cannot perform BUSY VERIFICATION.

4. BUSY VERIFICATION cannot be established to a BUSY station when the station is:
   a.) Dialing
   b.) Listening to a tone
   c.) Being rung
   d.) Protected by DATA LINE SECURITY [D-12] [D-66]
   e.) Being connected to an BUSY VERIFICATION Loop
   f.) Activating a conflicting feature, such as:

ATTENDANT CAMP-ON WITH TONE INDICATION	[A-1][A-45]
BOSS-SECRETARY OVERRIDE-D^{term}	[B-5D]
CALL HOLD	[C-6][C-6D]
CALL TRANSFER	[C-50][C-54][C-11][C-11D]
CALL WAITING-TERMINATING	[C-12]
CONSULTATION HOLD-ALL CALLS	[C-58] [C-58D][C-17]
DATA LINE SECURITY	[D-12]
DATA PRIVACY ON DEMAND	[D-68][D-17]
DIAL ACCESS TO ATTENDANT	[D-71][D-2]
EXECUTIVE RIGHT-OF-WAY	[E-8][E-8D][E-1]
NON-EXCLUSIVE HOLD-D^{term}	[N-7D]
PRIVACY RELEASE	[P-18]
THREE-WAY CALLING	[T-2] in the mode where the conference button is pressed.
VOICE CALL-D^{term}	[V-7D][V-2]

   g.) In a Modem Pooling connection,
   h.) In a Data Call through a Data Adapter,
   i.) In a Data Call through a Data Module.
   In each of the above instances, the Attendant will receive reorder tone.

5. Before the Attendant is added to an existing connection, a tone burst (.08 seconds) is applied to alert the calling parties of the attendant's presence.

6. BUSY VERIFICATION - CCIS and ATTENDANT LOCKOUT [A-5] are mutually exclusive features.

7. BUSY VERIFICATION - CCIS can only be activated by the Attendant Console.

8. It is possible to disable the continuous sending of warning tone during a BUSY VERIFICATION - CCIS connection, via system data. Normally, the two-burst Warning Tone is repeated approximately every 15 seconds.

Interactions

1. This feature is allowed whenever the destination telephone set is engaged in any state other than:
   a.) A three-way connection
   b.) An activated PRIVACY feature
   c.) Connected to a route programmed to have Line/Trunk, Privacy, CDN 44:PRV
   d.) Listening to a tone (dial tone, reorder tone, service set tone, busy tone, ringback tone).

2. With ATTENDANT OVERRIDE [A-7], the following trunk types may be verified (busy or idle status):
   a.) One-way incoming trunks,
   b.) One-way outgoing trunk,
   c.) Bothway trunk.

Interactions (cont'd)

3. Trunks in a station-to-trunk, TRUNK-TO-TRUNK CONNECTION [T-10], and ATTENDANT-CONTROLLED CONFERENCE [A-2] connection may be verified when busy.

4. ATTENDANT LOCKOUT [A-5]: The Attendant is prevented from verifying a busy station line that is connected to a loop held at the Attendant Console. Since the LOCKOUT feature applies only to calls held on an Attendant Console loop, BUSY VERIFICATION - CCIS of those station lines will be denied, and the Attendant will hear reorder tone.

5. CALL FORWARDING - CCIS (ALL CALLS [C-45], BUSY LINE [C-46] or DON'T ANSWER [C-47]): If an Attendant attempts to busy-verify an idle or busy station line that has activated the CALL FORWARDING - CCIS feature, BUSY VERIFICATION - CCIS of the forwarded-to station will occur. If an Attendant attempts to busy-verify an idle or busy station that is CALL FORWARDED to the Attendant Console, BUSY VERIFICATION - CCIS will not be allowed.

6. CALL HOLD [C-6]: When two stations have established a connection and one of the stations has a third party on hold, the two talking parties can be busy-verified, but the party on hold cannot be busy-verified.

7. CALL WAITING [C-12] [C-31]: If an Attendant attempts to busy-verify a station line that already has a waiting call, BUSY VERIFICATION will be denied. Also, if an Attendant attempts to busy-verify a station line that is waiting for another station line, BUSY VERIFICATION will be denied.

8. DATA LINE SECURITY - CCIS [D-66]: An Attendant cannot busy-verify a busy station line that has a DATA LINE SECURITY [D-12] Class of Service. If BUSY VERIFICATION - CCIS is attempted, the Attendant will hear reorder tone.

9. DATA PRIVACY ON DEMAND - CCIS [D-68]: An ATTENDANT cannot busy-verify a busy station line that has PRIVACY ON DEMAND - CCIS [D-68] set. If BUSY VERIFICATION - CCIS is attempted, the Attendant will hear reorder tone.

10. DICTATION ACCESS [D-3]: BUSY VERIFICATION - CCIS will be denied to a station that is connected to a dictation trunk, and the Attendant will hear reorder tone.

11. PAGING ACCESS - CCIS [P-28]: BUSY VERIFICATION - CCIS is denied when a station is connected to a Paging trunk.

12. DATA PRIVACY ON DEMAND [D-17]: When this feature is activated by a user, the Attendant Console is denied BUSY VERIFICATION toward that station. This prevents disturbance of any ongoing data transmission.

13. STATION HUNTING (CIRCULAR [S-7], SECRETARIAL [S-8] or TERMINAL [S-9]): If an Attendant attempts to busy-verify a busy station in a Hunt Group, station hunting will take precedence over BUSY VERIFICATION - CCIS and the call will hunt. If all stations in the Hunt group are busy, the called station will be busy-verified.

14. UNIFORM CALL DISTRIBUTION (UCD) [U-1]: An Attendant can busy-verify any station in a UCD group, other than the Pilot, without causing a hunt. However, if BUSY VERIFICATION - CCIS is attempted to the Pilot station, UCD hunting will take precedence over BUSY VERIFICATION - CCIS.

B-10 Brokerage Hotline - CCIS

General Description

This feature provides a hotline function between two stations at different nodes in the CCIS network, using a line/feature key of a D^{term}.

Operating Procedure

To access from a D^{term}

1. Lift the handset or press the SPEAKER button.
2. Press the line/feature key associated with a predetermined station in another office. The destination station is automatically dialed; ringback tone is heard; the destination station answers.
3. After conversation is completed, hang up or press the RELEASE key.
4. To immediately make another BROKERAGE HOTLINE - CCIS call, press another line/feature key associated with another station without going off-hook.

Service Conditions

1. A 16-button D^{term} with a 24-button Add-On Module attached is used for applications requiring at least 15 but fewer than 39 destinations. In this case, one of the 16-line buttons of the D^{term} must be assigned as the MY-Line. The RELEASE button on the 24-button Add-On Module can be used as the RELEASE key. Therefore, a maximum of 39 BROKERAGE HOTLINES - CCIS can be used to access distant destinations.
2. Two 16-button D^{term}s connected via a 24-button Add-On Module are used if between 40 and 52 destinations are required. One of the 16 buttons on each D^{term} must be assigned as a MY-Line. One of the remaining 15 buttons on the D^{term}s must be assigned as a RELEASE key. Therefore, a total of 52 BROKERAGE HOTLINES - CCIS can be used to access distant destinations.
3. An AC Adapter is required for the 24-button Add-On Module.
4. A BROKERAGE HOTLINE cannot be assigned to a Hunt group or UNIFORM CALL DISTRIBUTION [U-1] group.
5. When a BROKERAGE HOTLINE - CCIS call is made, the D^{term} display shows the destination telephone number but does not show the SERVICE DISPLAY - CCIS [S-53] of the BROKERAGE HOTLINE.
6. The MY-Line of a D^{term} cannot be assigned as a BROKERAGE HOTLINE - CCIS.
7. The destination, by definition, must be a station or an Attendant Console at a different node in the CCIS network.
8. When the destination is an Attendant Console, the BROKERAGE HOTLINE - CCIS call terminates at an ATND key.
9. ATTENDANT CAMP-ON WITH TONE INDICATION [A-1] [A-45], CALL BACK [C-1] [C-44], and EXECUTIVE RIGHT-OF-WAY [E-1] [E-8] can be prohibited to the BROKERAGE HOTLINE - CCIS connection through CLASS OF SERVICE-INDIVIDUAL [C-15].
10. When a destination station is busy, CALL BACK - CCIS [C-44], CALL WAITING-ORIGINATING [C-31], EXECUTIVE RIGHT-OF-WAY - CCIS [E-8], and MESSAGE REMINDER - CCIS [M-34] [M-34D] can be activated.
11. If the destination station is busy and is a member of a Hunt Group, the appropriate station hunting feature ([S-7] [S-8] [S-9]) will be activated.

Service Conditions (cont'd)

12. If the destination station is busy and is a pilot member of a UCD group, the UCD function will be activated. If all stations in the UCD group are busy, ringback tone will be heard, or if programmed, DELAY ANNOUNCEMENT-UCD [D-31] or OVERFLOW-UCD [O-13] will be invoked.

13. CALL FORWARDING-ALL CALLS [C-5] [C-45], CALL FORWARDING-BUSY LINE [C-2] [C-46], and CALL FORWARDING-DON'T ANSWER [C-3] [C-47] will take place if the destination station has set call forwarding.

C-44   Call Back - CCIS

General Description

This service feature allows an Inter-office Call Back when the calling station and the called station respectively belong to a different PBX in the CCIS network.

Operating Procedure

To set from a Single-Line Telephone

1. Dial the desired telephone number; receive busy tone.
2. Switch hook flash; receive special dial tone.
3. Dial the CALL BACK - CCIS code; receive service set tone.
4. Hang up.
5. When the called station becomes idle, the calling and called stations will ring simultaneously.

To cancel from a Single-Line Telephone

1. Lift the handset; receive dial tone.
2. Dial the CALL BACK - CCIS cancellation code; receive service set tone.

To set from an 8-button or 16-button D^{term}, or a D^{term} Executive Terminal

1. Dial the desired telephone number; receive busy tone.
2. Press the CALL BACK line/feature key; receive service set tone. The LCD will display:

<div align="right">Called Station</div>

```
┌─────────────────────────────────────┐
│  CALL BACK  SET              XXXX    │
│        (Time Display)                │
│                                      │
└─────────────────────────────────────┘
```

3. Hang up.
4. When the called station becomes idle, the calling and called stations will ring simultaneously. The LCD of the calling station will display:

<div align="right">Called Station</div>

```
┌─────────────────────────────────────┐
│  CALL BACK                   XXXX    │
│        (Time Display)                │
│                                      │
└─────────────────────────────────────┘
```

5. The called station's LCD will display:

<div align="right">Called Station</div>

```
┌─────────────────────────────────────┐
│  CALL BACK                   XXXX    │
│        (Time Display)                │
│                                      │
└─────────────────────────────────────┘
```

To cancel from an 8-button or 16-button D^{term}, or a D^{term} Executive Terminal

1. Lift the handset or press the SPEAKER key; receive dial tone.
2. Press the CALL BACK line/feature key; receive dial tone. CALL BACK - CCIS is then cancelled.

Operating Procedure (cont'd)

3. The LCD will display:

```
CALL BACK                    CANCEL
          (Time Display)
```

Service Conditions

1. If CALL BACK is not answered within 30 seconds, or the timer interval in ASYD index 139, ringing will stop and the CALL BACK will automatically be cancelled.
2. CALL BACK to a busy station cannot be established if the station is in the LINE LOCKOUT [L-3] mode.
3. There is no time limit for CALL BACK once activated. It will remain in status memory until it is manually cancelled or it ends normally.
4. CALL BACK can be set only to one station at a time.
5. A station cannot set CALL BACK and OUTGOING QUEUING [O-2] at the same time.
6. When the calling station is called back, STATION HUNTING [S-7, S-8, S-9] and CALL PICKUP [O-7] programming will be ignored.
7. CALL BACK activation is denied if a call is waiting at the calling or called station line (CALL WAITING FEATURE [C-12, C-31]).
8. CALL BACK [C-1] is assigned via CLASS OF SERVICE [C-15].
9. There is no limit to the number of stations that can access this feature simultaneously.
10. A station that has set CALL BACK - CCIS can originate and receive calls while this feature is active.
11. Reorder tone will be returned to a station attempting to set CALL BACK - CCIS if:
    a.) The calling or called station has set CALL BACK - CCIS, OUTGOING TRUNK QUEUING [O-2, O-12], or has a call waiting or camped-on.
    b.) The calling or called station is activating CALL HOLD [C-6].
12. If the calling party waits off-hook after setting CALL BACK - CCIS, service set tone will be heard until the called party becomes idle. Ringback tone will then be heard until the called party answers.
13. If the called party goes on-hook while the calling station is busy, both parties will be rung simultaneously when the calling station becomes idle.
14. If the calling party goes on-hook while the called station is busy, both parties will be rung simultaneously when the calling station becomes idle.
15. If any of the following features has been activated by the calling or called party, CALL BACK - CCIS is denied:

CALL BACK	[C-1][C-44]
ATTENDANT CAMP-ON WITH TONE INDICATION	[A-1][A-45]
CALL HOLD	[C-6][C-6D]
CALL WAITING-TERMINATING	[C-12]
BUSY VERIFICATION	[B-3][B-9]
BOSS-SECRETARY OVERRIDE	[B-5]
DATA LINE SECURITY	[D-12][D-66]
DATA PRIVACY ON DEMAND	[D-17][D-67]
EXECUTIVE RIGHT-OF-WAY	[E-1][E-8]
OFF-HOOK QUEUING	[O-7][O-11]
OUTGOING TRUNK QUEUING	[O-2][O-12]

Interactions

1. OUTGOING TRUNK QUEUING [O-2] and CALL BACK - CCIS cannot be accessed simultaneously.
2. System Data 1, Index 139. No Answer Timer is also used for station-to-station call, DID, or TIE Line call for CALL FORWARDING-DON'T ANSWER [C-47] and CALL HOLD [C-6].
3. CALL WAITING-ORIGINATE [C-31] automatic setting and CALL BACK - CCIS are mutually exclusive.
4. CALL BACK - CCIS cannot be activated toward the Attendant Console.
5. CALL BACK - CCIS cannot be activated when using CONSULTATION HOLD [C-17].
6. CALL HOLD [C-6]: Activation of CALL BACK - CCIS is not allowed if the calling or called station has a party on CALL HOLD [C-6]. CALL BACK - CCIS can be activated to a D^{term} that is holding a call or is being held via EXCLUSIVE HOLD [E-4D] or NON-EXCLUSIVE HOLD [N-7D].

C-45   Call Forwarding - All Calls - CCIS

General Description

This service feature allows Inter-Office CALL FORWARDING-ALL CALLS when the transferring station and the transferred station, respectively, belong to a different PBX in the CCIS network.

Operating Procedure

When setting Call Forwarding-All Calls Service

1.   Station A goes off-hook; receives dial tone.
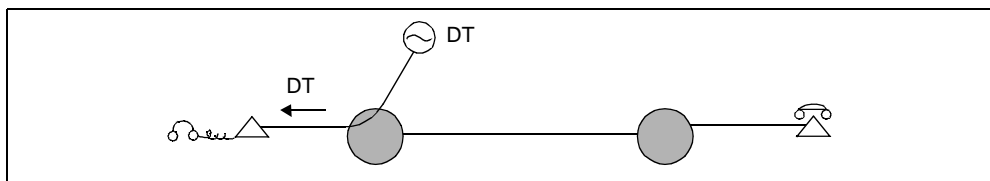
2.   Station A dials the Access Code for CALL FORWARDING-ALL CALLS; receives special dial tone.
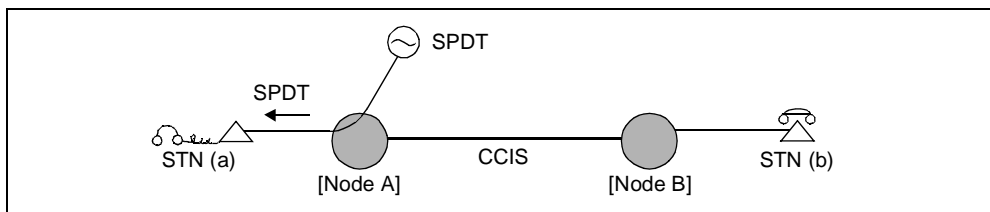
3.   Station A dials the number for the designated Station B; receives service set tone.
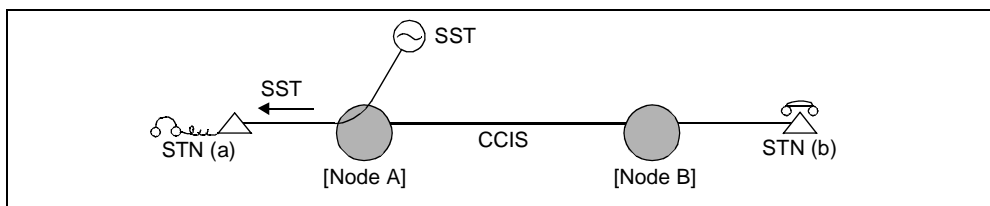
4.   Station A hangs up.

Operating Procedure (cont'd)

5. Station A is called from Station C. The call is automatically transferred to Station B, which Station A has designated as the call destination. Station C receives ringback tone; Station B is rung.
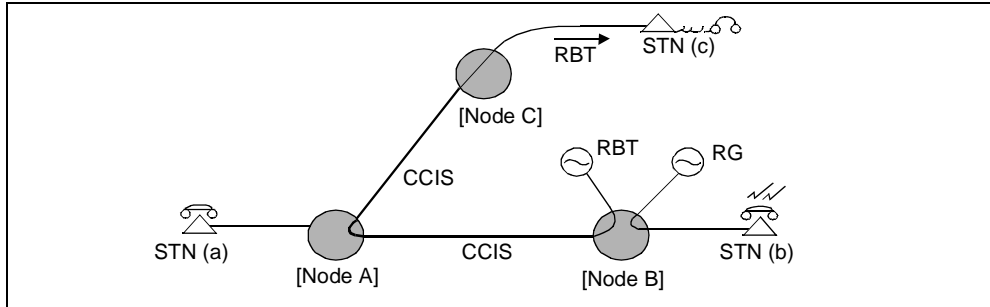
6. Station B answers; Stations B and C are connected with each other.
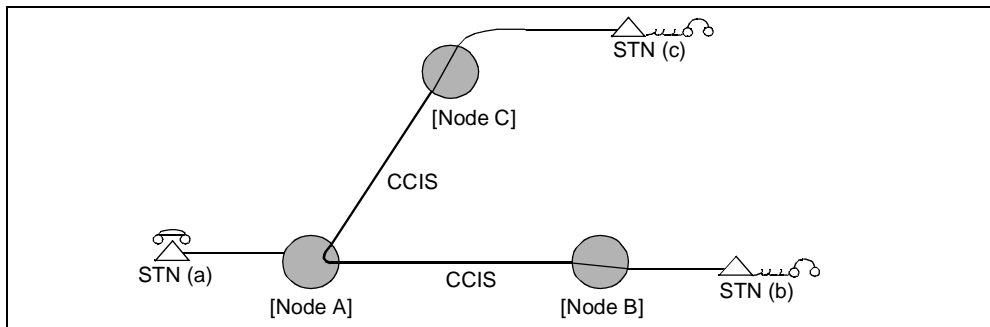
When cancelling Call Forwarding-All Calls Service

1. Station A goes off-hook; receives dial tone.
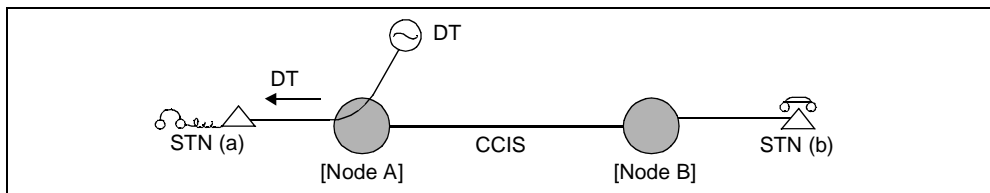
2. Station A dials the Cancel Code of Call Forwarding-All Calls; receives service set tone.
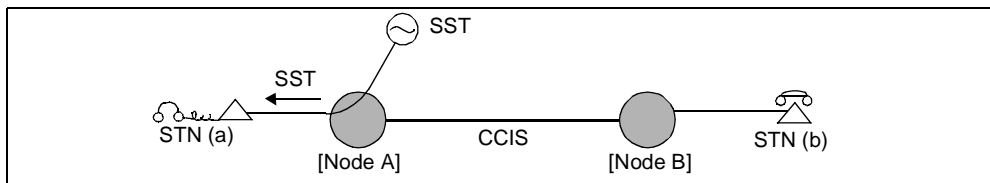
3. Station A hangs up.

Service Conditions

1. Stations with this feature set may originate calls and access the CALL FORWARDING-ALL CALLS Cancel Code.

2. There is no limitation to the number of stations which can set CALL FORWARDING-ALL CALLS simultaneously.

3. When a call is directed to a FORWARDED station, a one-burst ringing signal will be sent to the station to indicate that it is CALL FORWARDED.

4. Stations activating CALL FORWARDING-ALL CALLS may be restricted from placing any calls except to the Attendant. (This is an optional, programmable feature). ASYD, System Data 2, Index 6, Bit 4.

5. When the operator answers a FORWARDED call, System Data programming can provide a called telephone number display on the ATTENDANT CONSOLE [A-3].

6. CALL FORWARDING-ALL CALLS- CCIS is assigned to a station via CLASS OF SERVICE-INDIVIDUAL [C-15] programming.

7. When CALL FORWARDING-ALL CALLS - CCIS is used, the following conditions exist:

    a.) Station A calls Station B. Station B is set to CALL FORWARDING-ALL CALLS - CCIS to Station C. Station C is set to CALL FORWARDING-ALL CALLS to Station D. CALL FORWARDING-ALL CALLS occurs to Station D.

Service Conditions (cont'd)

b.) Station A calls Station B. Station B is set to CALL FORWARDING-ALL CALLS - CCIS to Station C. Station C is set to CALL FORWARDING-ALL CALLS - CCIS to Station D. CALL FORWARDING-ALL CALLS - CCIS does not occur to Station D. If Station C is idle, Station C will ring.

NEAX2400   CCIS NETWORK   NEAX2400

A   B   C

Node A   Node B

D

▲   CALLING STATION

△   CALL FORWARDING-ALL CALLS SET

△   IDLE

- - - - CALL FORWARDING IS SET, BUT FORWARDING DOES NOT OCCUR

c.) A Central Office call is directed to Station B. Station B is set to CALL FORWARDING-ALL CALLS - CCIS to Station C. Station C is set to CALL FORWARDING-ALL CALLS to Station D. CALL FORWARDING-ALL CALLS occurs to Station D.

NEAX2400   CCIS NETWORK   NEAX2400

CO Call → B   C   D

Node A   Node B

▲   CALLING STATION

△   CALL FORWARDING-ALL CALLS SET

△   IDLE

Service Conditions (cont'd)

    d.) A Central Office call is directed to Station B. Station B is set to CALL FORWARDING-ALL CALLS - CCIS to Station C. Station C is set to CALL FORWARDING-ALL CALLS - CCIS to Station D. CALL FORWARDING-ALL CALLS - CCIS does not occur to Station D. If Station C is idle, Station C will ring.

8. CALL FORWARDING-ALL CALLS - CCIS can be set or cancelled by a user or an Attendant.

9. Any number of stations can set CALL FORWARDING-ALL CALLS - CCIS to the same forwarded-to station.

10. The display of the forwarded-to telephone number on the LCD panel of the forwarding D^{term} can be allowed or denied in system programming, on a system-wide basis.

11. When a call is directed to a forwarded-to station, one burst of ringing can be sent to the forwarding single-line station to indicate that it is call forwarded.

12. When calls are forwarded to the Attendant Console, the INCOMING CALL IDENTIFICATION [I-2] feature allows the Attendant to identify the call as a forwarded call.

13. If ATTENDANT CAMP-ON WITH TONE INDICATION [A-1] [A-45] is directed to a station that is forwarded to a busy station in a Hunt Group, the call hunts for an idle station. If all stations in the Hunt Group are busy, the call is camped-on to the forwarded-to station.

14. CALL FORWARDING-ALL CALLS - CCIS can be overridden, allowing the forwarded-to station to initiate or transfer calls to the forwarding station.

    a.) The idle forwarding station can be reached by the forwarded-to station, using CALL FORWARDING OVERRIDE - CCIS [C-49].

    b.) A busy forwarding station receives call waiting treatment when the designated station calls directly or when EXECUTIVE RIGHT-OF-WAY - CCIS [E-8] is used.

    c.) When CALL FORWARDING-ALL CALLS - CCIS is set to the Attendant Console, the Attendant cannot reach the forwarding station using the override capability

15. When EXECUTIVE RIGHT-OF-WAY [E-1] [E-8] is initiated to a station, which has set CALL FORWARDING-ALL CALLS - CCIS, EXECUTIVE RIGHT-OF-WAY - CCIS [E-8] terminates at the forwarded-to station.

16. If a called station has set call forwarding, and the forwarded-to station is listening to a tone being rung, or has set CALL WAITING [C-12], CALL BACK [C-44], OUTGOING TRUNK QUEUING [O-2] [O-12], or THREE-WAY CALLING [T-2], the calling station cannot use EXECUTIVE RIGHT-OF-WAY - CCIS [E-8] to access the forwarded-to station. If attempted, the calling station will receive reorder tone.

Service Conditions (cont'd)

17. When OUTGOING TRUNK QUEUING - CCIS [O-12] is provided, the forwarding station can use one of the call forwarding features and OUTGOING TRUNK QUEUING - CCIS [O-12] at the same time. Ringback tone is sent to the forwarding station and not to the forwarded-to station.

18. A call forwarded to a busy station that is allowed CALL WAITING [C-12] waits at the forwarded-to station, provided that the forwarded-to station is in a two-way conversation and no other call is waiting.

19. When a station that is call forwarded uses the CALL BACK - CCIS [C-44] feature, the automatic call back rings to the forwarding, not the forwarded-to, station.

20. If any of the following restrictions are in effect at a forwarded-to station, incoming trunk calls to the forwarding station will not be call forwarded (intercept arrangements will apply):
     a.) Fully Restricted Station
     b.) Station Restricted from Outgoing Calls
     c.) Toll Restricted Station

21. When a station in a Hunt Group sets CALL FORWARDING-ALL CALLS - CCIS, it is temporarily removed from the Hunt Group.

22. When the Pilot station of a UNIFORM CALL DISTRIBUTION (UCD) [U-1] group sets CALL FORWARDING-ALL CALLS - CCIS, only calls to the Pilot number are forwarded.

23. If the forwarding station is the Pilot station of a UCD group and the forwarded-to station is idle, a call to the UCD group is routed immediately to the forwarded-to station. If the forwarded-to station is busy, the calling station will receive busy tone.

24. If a station in a UCD group sets CALL FORWARDING-ALL CALLS - CCIS, it is temporarily removed from the group.

25. When a call is forwarded, the telephone number recorded in the STATION MESSAGE DETAIL RECORDING [S-10] is the forwarded-to station.

Interactions

1. Users are unaccustomed to hearing ringback tone when responding to their own station's ring. Be sure to inform them when providing ringback tone with CALL FORWARDING-ALL CALLS - CCIS in System Data 1, Index 69, Bit 1.

2. Call forwarding can only be activated from an idle station.

3. When CALL WAITING [C-12, 31], ATTENDANT CAMP-ON WITH TONE INDICATION [A-45], and CALL BACK [C-44] is directed toward Station A with call forwarding set to Station B, Station B will receive Call Waiting Tone.

4. When a station in a Hunt Group initiates CALL FORWARDING-ALL CALLS - CCIS, calls normally destined for this station will not be received. The Hunt Group operates as if the station were busy.

5. A non-controlling UCD station is allowed to activate call forwarding. With this station call forwarded, only directly-dialed calls to this station are call forwarded. The member station is removed from the UCD group under the conditions of this call forwarding feature.

6. When CALL FORWARDING-ALL CALLS - CCIS is in effect, the activating station may be used to originate calls. See System Data 2, Index 6, Bit 4.

7. When a station is call forwarded, the destination station is recorded STATION MESSAGE DETAIL RECORDING [S-10].

8. CALL FORWARDING-ALL CALLS - CCIS can be overridden allowing Station B to initiate or transfer calls back to Station A.

C-46 Call Forwarding - Busy Line - CCIS

General Description

This service feature allows Inter-Office Call Forwarding-Busy Line for a case where the transferring station and the transferred station respectively belong to a different PBX in the CCIS network.

Operating Procedure

When setting call Forwarding-Busy Line Service
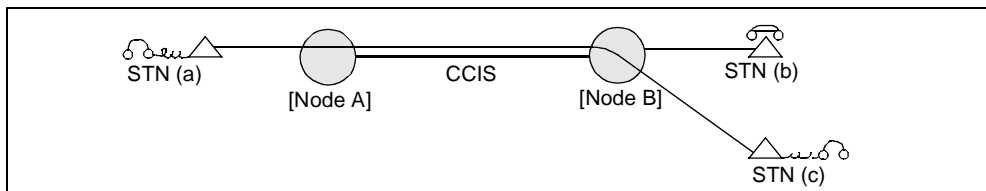
1. Station A goes off-hook; receives dial tone.
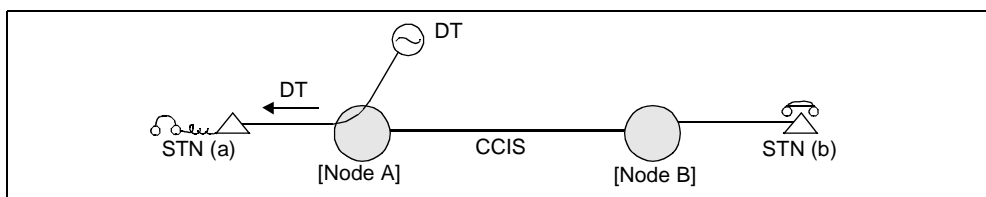
2. Station A dials the Access Code for Call Forwarding-Busy Line; receives special dial tone.
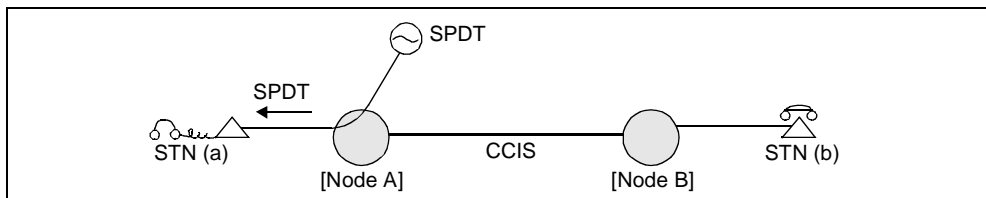
3. Station A dials the number for the designated Station B; receives service set tone.
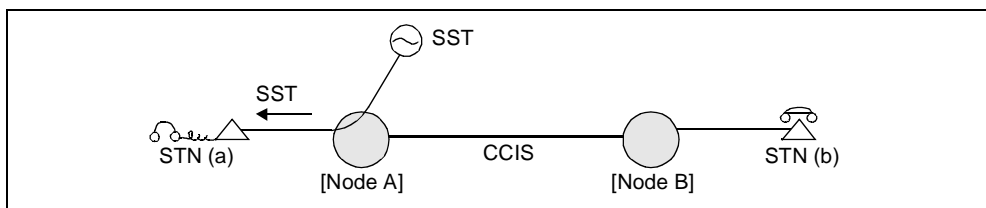
4. Station A hangs up.
5. Station A is engaging in a call with Station C through a CCIS line.

Operating Procedure (cont'd)

6. Station A is called from Station D through a CCIS line. The call is automatically transferred to Station B which Station A has designated as the call destination. Station D receives ringback tone; Station B is rung.
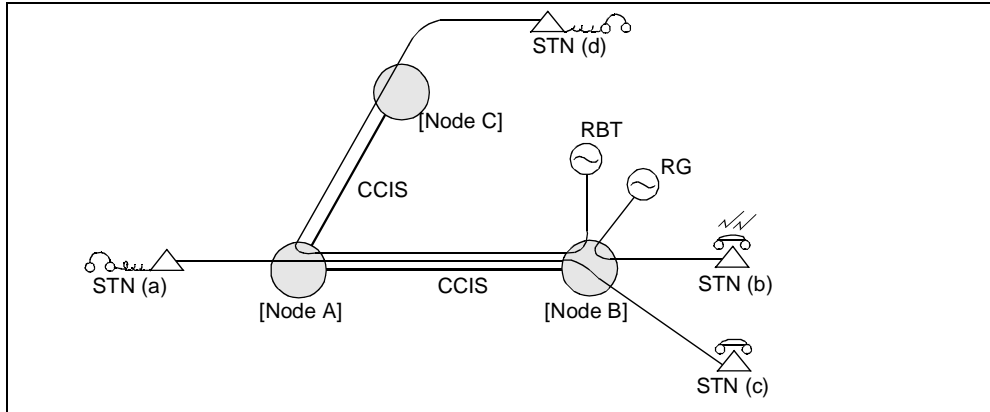
7. When Station B answers, Stations B and D are connected with each other.
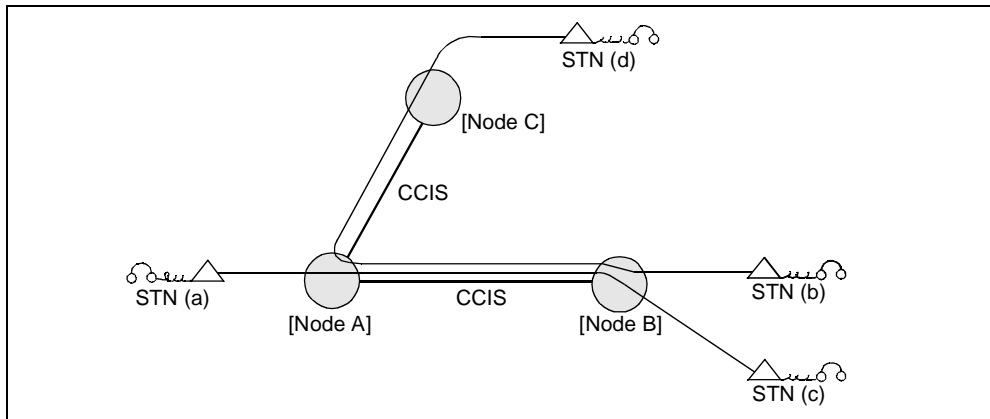
When cancelling CALL FORWARDING-BUSY LINE service

1. Station A goes off-hook; receives dial tone.
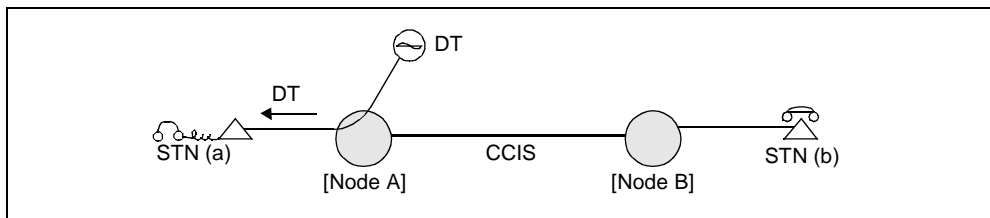
Operating Procedure (cont'd)

2. Station A dials the Cancel Code of CALL FORWARDING-BUSY LINE; receives service set tone.
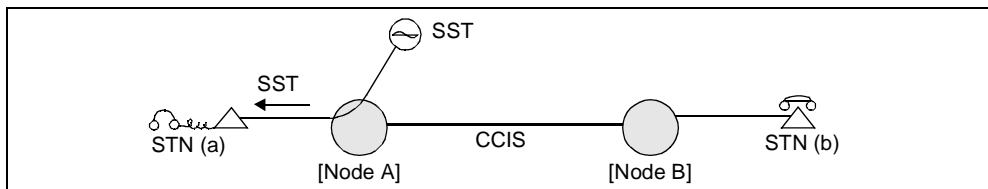
Service Conditions

1. When CALL FORWARDING-BUSY LINE - CCIS is used, the following conditions exist:

   a.) Station A calls station B. Station B is call forwarded to Station C. Station C is call forwarded to Station D. Call forwarding does occur to Station D. CALL BACK - CCIS [C-44], CALL WAITING-TERMINATING [C-12], or EXECUTIVE RIGHT-OF-WAY - CCIS [E-8] can be set from Station A to Station C.
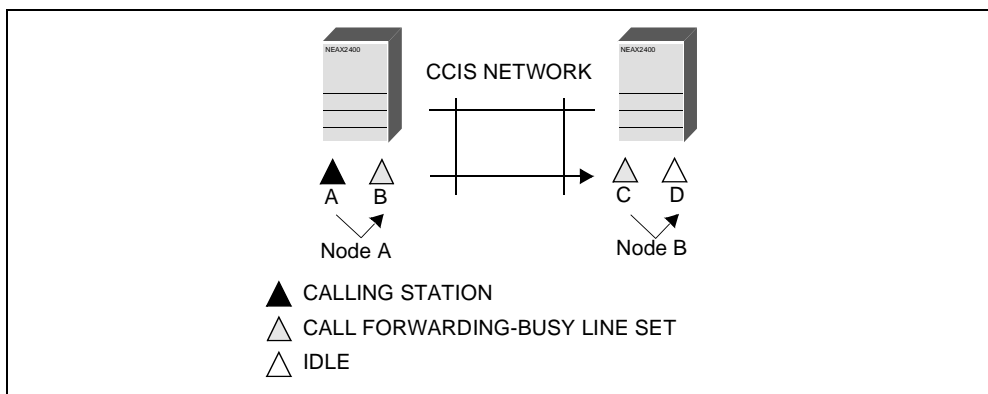
Service Conditions (cont'd)

b.) Station A calls station B. Station B is call forwarded - CCIS to Station C. Station C is call forwarded - CCIS to Station D. Call forwarding does not occur to Station D. If Station C is idle, Station C will ring. If Station C is busy, busy tone is returned from Station C. CALL BACK - CCIS [C-44], CALL WAITING-TERMINATING [C-12], or EXECUTIVE RIGHT-OF-WAY - CCIS [E-8] can be set from Station A to Station C.
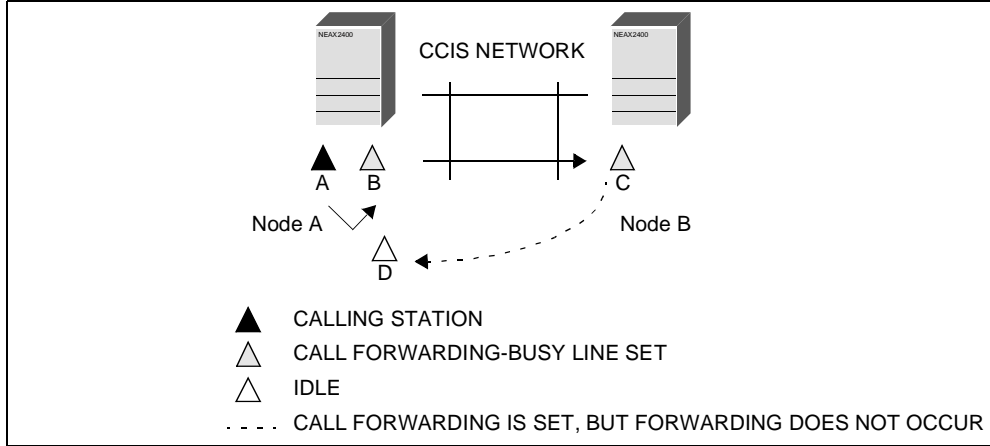
c.) A Central Office call is directed to Station B. Station B is call forwarded to Station C. Station C is call forwarded to Station D. Call forwarding does occur to Station D. If Station C is idle, Station C will ring. If Station C is busy, Station D will ring.
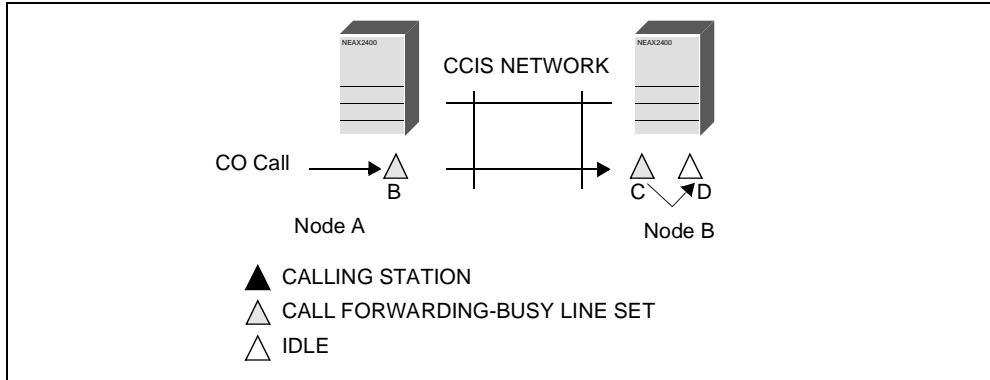
Service Conditions (cont'd)

d.) A Central Office call is directed to Station B. Station B is call forwarded to Station C. Station C is call forwarded - CCIS to Station D. Call forwarding does not occur to Station D. If Station C is idle, Station C will ring. If Station C is busy, busy tone is returned from Station C.
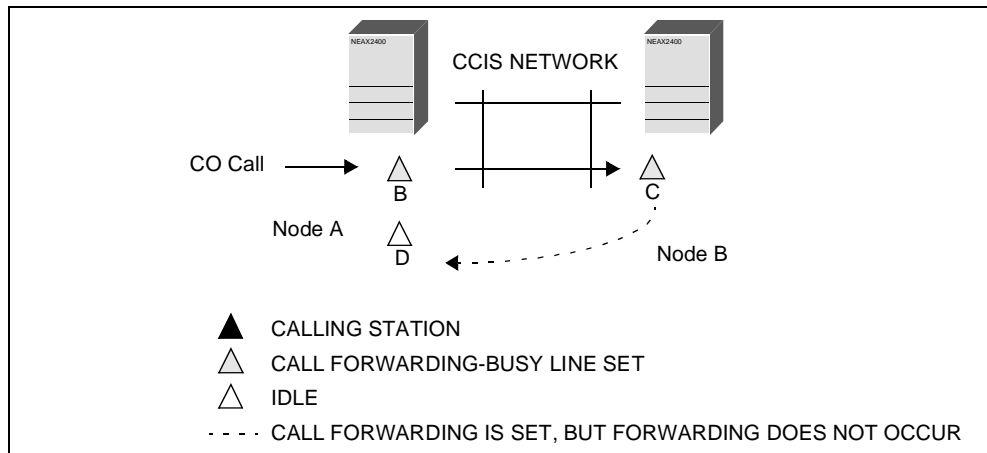
2. Registration memories for CALL FORWARDING-BUSY LINE and CALL FORWARDING-DON'T ANSWER [C-3] are common. Changing system data will enable separation of the two, permitting separate access codes to be assigned.

3. CALL FORWARDING-BUSY LINE can be provided on a system and/or an individual basis.

4. CALL FORWARDING on a system basis allows any incoming calls which encounter a BUSY condition to be forwarded to a predetermined station or ATTENDANT CONSOLE [A-3].

5. Individual CALL FORWARDING-BUSY LINE supersedes system CALL FORWARDING.

6. If all the stations in the terminating hunt group are busy, the forwarding call will hear busy tone and will not return to the calling party's Hunt group.

7. When MULTIPLE CALL FORWARDING-BUSY LINE [M-24] service is activated, hunting will be performed at the last destination of the forwarded call, even though the multiple jumped stations are in a hunt group.

8. When the pilot station of a Pilot Hunt Group activates CALL FORWARDING - BUSY LINE to a station (not a member of a hunt group) and system parameters specify that call hunting will be activated at the forwarded station, the NEAX2400 IPX will send busy tone if the forwarded station is busy. If the system parameters specify hunting at the forwarding station, and the forwarded station is busy, the call will hunt in the forwarding station's hunt group.

9. When a station activates CALL FORWARDING-ALL CALLS [C-5] to a pilot in a hunt group, and the pilot activates CALL FORWARDING-BUSY LINE to another pilot hunt group, if system parameters define the call to hunt to the forwarded hunt group and the pilot station is busy, the calling party will hunt at the called station's hunt group. If system parameters define the call to hunt to the forwarding hunt group and the pilot station is busy, the calling party will then hunt to the forwarding station's hunt group.

10. If the called station is the pilot of a UCD group and activates CALL FORWARDING-BUSY LINE the calling station will queue to the UCD group and will not Call Forward.

11. CALL FORWARDING-BUSY LINE - CCIS is assigned to a station via CLASS OF SERVICE-INDIVIDUAL [C-15] programming.

12. There is no limit to the number of stations that can simultaneously set CALL FORWARDING-BUSY LINE - CCIS.

Service Conditions (cont'd)

13. CALL FORWARDING-BUSY LINE - CCIS can be set by any number of stations to the same forwarded-to station.

14. The display of the forwarded-to telephone number on the LCD panel of the forwarding D^{term} can be allowed or denied in system programming on a system-wide basis.

15. When calls are forwarded to the Attendant Console, INCOMING CALL IDENTIFICATION [I-2] allows the Attendant to identify the call as a forwarded call.

16. When a call is call forwarded to the Attendant Console, the Attendant can identify the called station at the Attendant Console.

17. When a station sets CALL FORWARDING-BUSY LINE - CCIS to the Attendant Console, and the system is in the Night mode, the calling party will receive reorder tone, or transfer to the ATTENDANT NIGHT TRANSFER [A-19] station, if provided.

18. When ATTENDANT CAMP-ON WITH TONE INDICATION [A-45] is directed to a station which has set CALL FORWARDING-BUSY LINE - CCIS, and the forwarded-to station is busy, the call is camped-on to the called station.

19. If ATTENDANT CAMP-ON WITH TONE INDICATION [A-45] is directed to a station which is forwarded to a busy station in a Hunt group, the call hunts for an idle station. If all stations in the Hunt group are busy, the call is camped-on to the forwarded-to station.

20. If a calling station, Attendant Console, or trunk receives busy tone after dialing a station which has set CALL FORWARDING-BUSY LINE - CCIS because both the called and forwarded-to stations are busy, and if the calling station activates BUSY VERIFICATION - CCIS [B-9], CALL BACK - CCIS [C-44], CALL WAITING-TERMINATING [C-12], or EXECUTIVE RIGHT-OF-WAY - CCIS [E-8], these services will be activated to the forwarded-to station.

21. If any of the following restrictions are in effect at a forwarded-to station, incoming trunk calls to the forwarding station will not be call forwarded (intercept arrangements will apply):
    a.) Fully Restricted Station
    b.) Station Restricted from Outgoing Calls
    c.) Toll Restricted Station

22. CALL FORWARDING-BUSY LINE - CCIS supersedes the station Hunting features [S-7, S-8, S-9].

23. If a forwarded-to station is a member of a UCD group and that station is busy, the call will ring at an idle station within the group. If all members of the group are busy, the call remains in queue waiting for a member to become available; or (if programmed), until DELAY ANNOUNCEMENT-UCD [D-31] or OVERFLOW-UCD [O-13] is invoked.

24. If a member of a UCD group, other than the Pilot station, sets CALL FORWARDING-BUSY LINE - CCIS, only calls to that extension number are forwarded.

25. When a call is forwarded, the number recorded in the STATION MESSAGE DETAIL RECORDING [S-10] is the forwarded-to telephone number.

26. CALL FORWARDING-BUSY LINE - CCIS data remains programmed even if the system is reinitialized without data memory clear or should a power failure occur.

27. CALL FORWARDING-BUSY LINE - CCIS can also be accessed from a D^{term} via the dial pad or SPEED CALLING-ONE TOUCH [S-26D]. If this feature is accessed via the dial pad, it must also be cancelled via the dial pad.

28. If separate access codes are programmed into system data for CALL FORWARDING-BUSY LINE - CCIS and CALL FORWARDING-DON'T ANSWER - CCIS [C-47], separate feature keys must be programmed on each D^{term} to equip it for both features.

29. If the station is in a Hunt Group, the call will hunt.

Service Conditions (cont'd)

30. SPLIT CALL FORWARDING [S-99] is available only when the calling party is the station or the CCIS line.

31. When a call terminates to a busy station setting CALL FORWARDING-BUSY LINE - CCIS, depending on the calling station service restriction class, it can be selected to make the station busy (not to activate Calling Forwarding-Busy Line) and to activate services as ATTENDANT CAMP-ON [A-1], BUSY VERIFICATION [B-3], CALL WAITING - TERMINATING [C-12], STEP CALL [S-13], etc.

32. This service is not available when the called party is the attendant console, monitoring station, or the paging station. However, the service is available when these stations are designated as the transfer destination of Call Forwarding - Busy Line service.

33. This service is available only when the called party is busy and has set Call Forwarding - Busy Line. In case Call Forwarding - Busy Line is set as the second jump or later in the Multiple Call Forwarding link, this service is not available.

34. This service is available in the following occasions:
    a.) when the destination of the Call Forwarding - Busy Line service is the calling station,
    b.) when the calling party is the attendant console or the night station, and the destination Call Forwarding - Busy Line service is also the attendant console or the night station.

Interactions

1. If access codes for CALL FORWARDING-BUSY LINE - CCIS and CALL FORWARDING-DON'T ANSWER - CCIS [C-47] are the same, only one key needs to be assigned in AKYD.

2. When CALL WAITING [C-12, 31], ATTENDANT CAMP-ON WITH TONE INDICATION [A-45], or CALL BACK [C-44] is directed toward Station A with call forwarding set to Station B, Station B will receive Call Waiting Tone.

3. A non-controlling UCD station is allowed to activate CALL FORWARDING-BUSY LINE - CCIS. When this station sets CALL FORWARDING-BUSY LINE - CCIS, only calls dialed directly to this station are call forwarded.

4. If an Attendant attempts BUSY VERIFICATION [B-9] to station A that has CALL FORWARDING-BUSY LINE - CCIS set to Station B and Station B is busy, BUSY VERIFICATION proceeds again with Station A. If Station A has set call forwarding to the Attendant Console, BUSY VERIFICATION [B-9] is allowed at Station A.

5. When CALL FORWARDING - BUSY LINE - CCIS is in effect, the activating station may be used to originate calls.

6. When a call is forwarded, the destination station is recorded for STATION MESSAGE DETAIL RECORDING [S-10].

C-47   Call Forwarding - Don't Answer - CCIS

General Description

This service feature allows Inter-Office Call Forwarding-Don't Answer for a case where the transferring station and the transferred station respectively belong to a different PBX in the CCIS network.
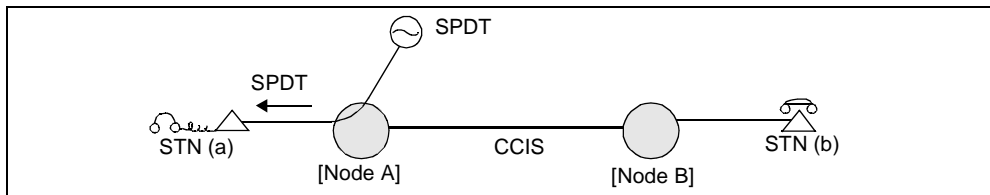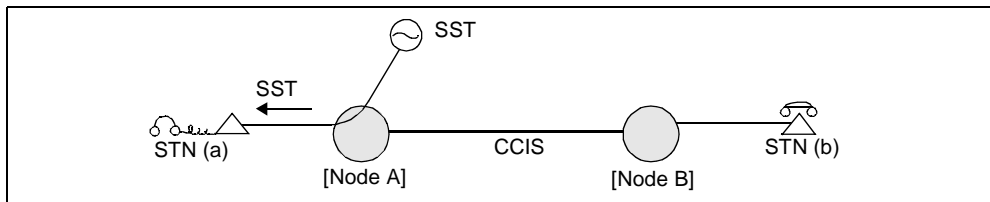
Operating Procedure

When setting

1. Station A goes off-hook; receives dial tone.
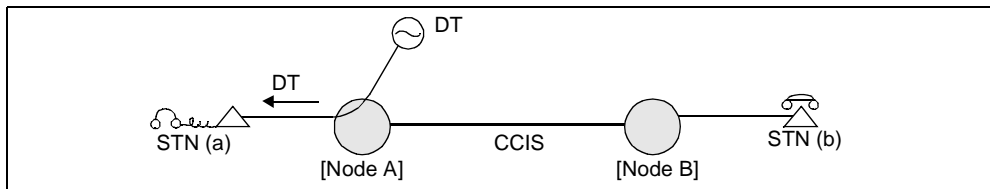
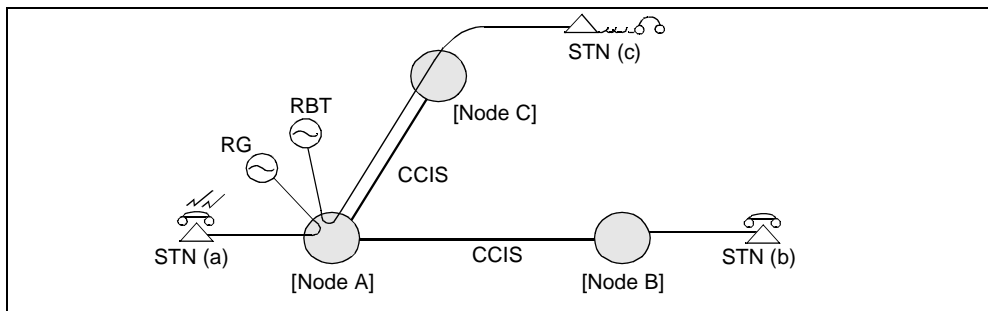2. Station A dials the Access Code for CALL FORWARDING-DON'T ANSWER; receives special dial tone.

3. Station A dials the number for the designated Station B; receives service set tone.

4. Station A hangs up.

Operating Procedure (cont'd)

5. Station A is called from Station C; Station C receives ringback tone; Station A is rung.

6. Station A does not answer the call within a predetermined amount of time. The ringing at Station A stops and the call is automatically transferred to Station B, which A has designated as the transfer destination; Station B is rung.
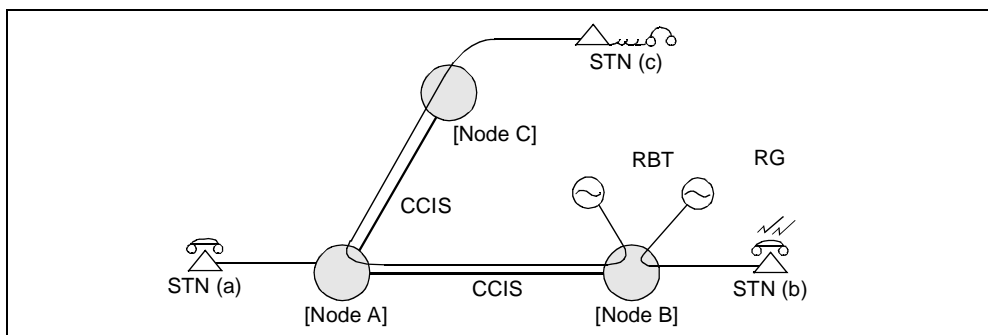
7. Station B answers the call; Stations B and C are connected with each other.
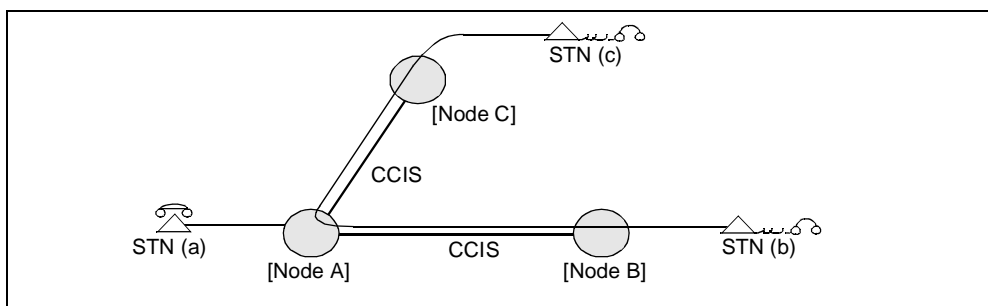
Operating Procedure (cont'd)

When cancelling

1.   Station A goes off-hook; receives dial tone.
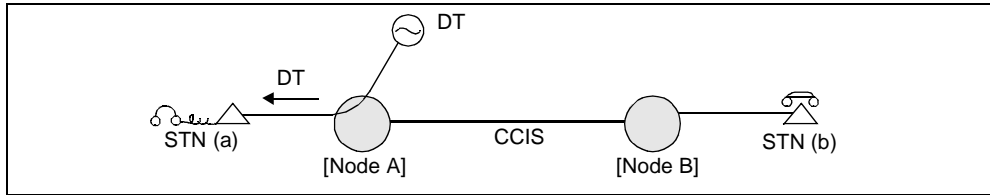
2.   Station A dials the Cancel Code of CALL FORWARDING-DON'T ANSWER; receives service set tone.
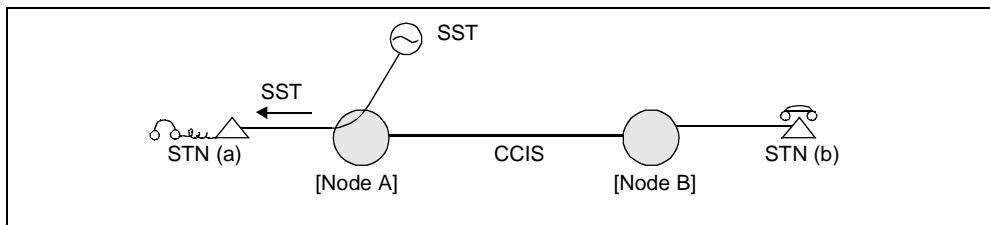
3.   Station A hangs up.

Service Conditions

1.   When CALL FORWARDING-DON'T ANSWER - CCIS is used, the following conditions exist:
      a.) Station A calls Station B. Station B is call forwarded to Station C. Station C is call forwarded to
           Station D. Call forwarding does occur to Station D.
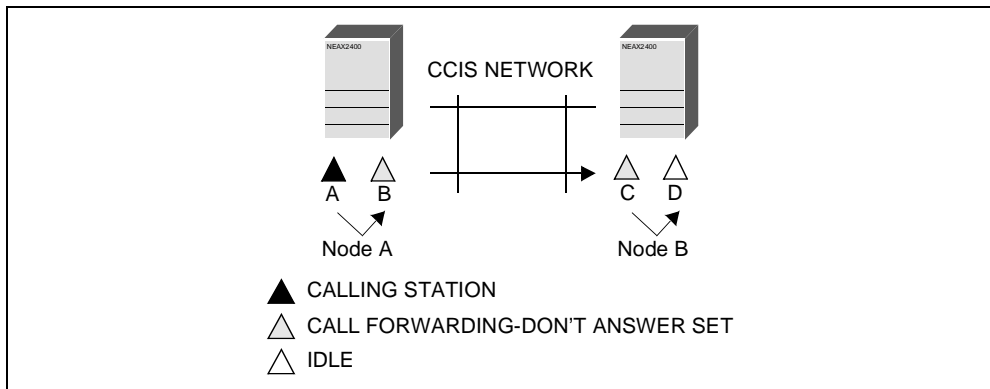
Service Conditions (cont'd)

b.) Station A calls Station B. Station B is call forwarded to Station C. Station C is call forwarded to Station D. Call forwarding does not occur to Station D. If Station C is idle, it will ring beyond the Don't Answer timer.
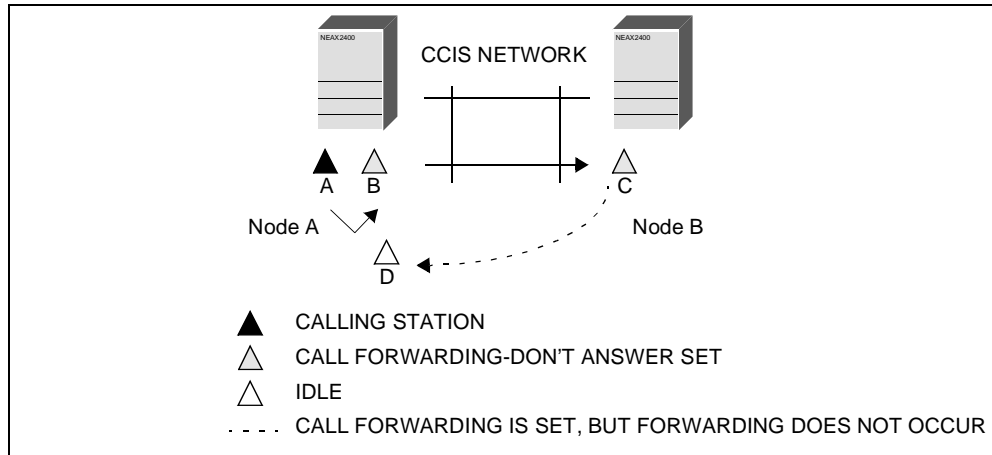
c.) A Central Office call is directed to Station B. Station B is call forwarded to Station C. Station C is call forwarded to Station D. Call forwarding does occur to Station D.
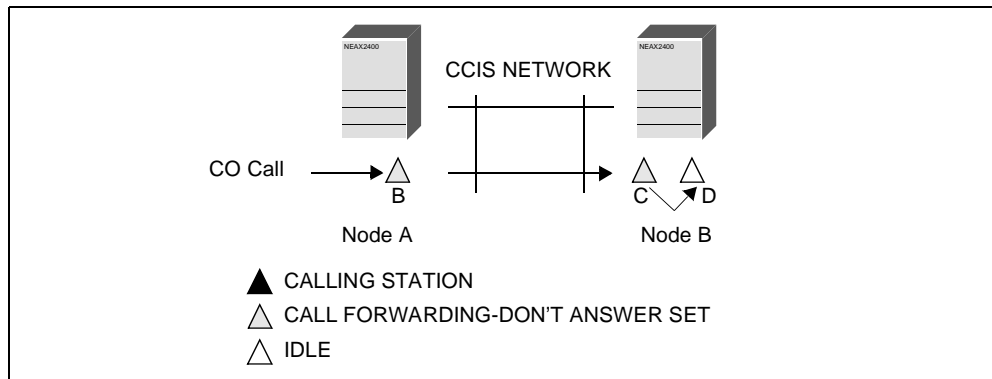
Service Conditions (cont'd)

d.) A Central Office call is directed to Station B. Station B is call forwarded to Station C. Station C is call forwarded to Station D. Call forwarding does not occur to Station D. If Station C is idle, Station C will ring beyond the Don't Answer timer.
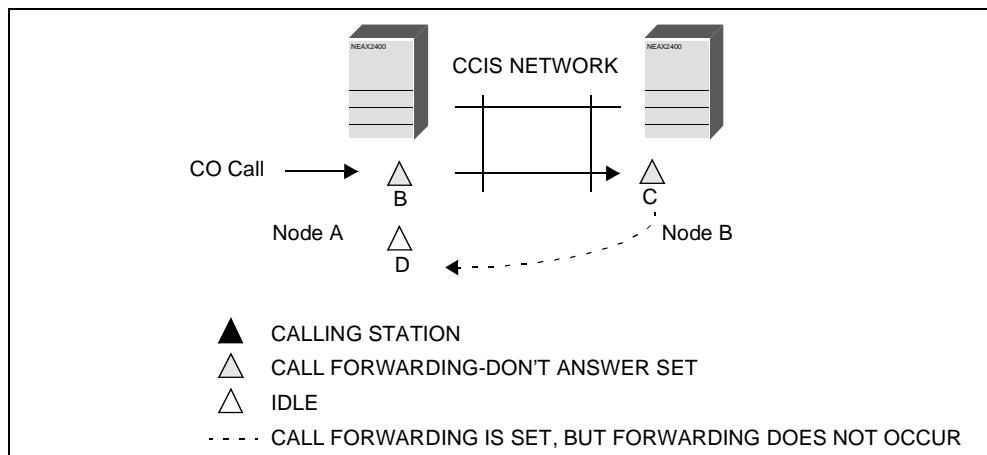
2. CALL FORWARDING-DON'T ANSWER can be provided on either a system or an individual basis.

3. Individual CALL FORWARDING-DON'T ANSWER supersedes system CALL FORWARDING.

4. CALL FORWARDING on a system basis allows direct incoming trunk calls that encounter a DON'T ANSWER condition to be forwarded to a predetermined station or the ATTENDANT CONSOLE [A-3].

5. The operator answering a CALL FORWARDING call can identify the called telephone number on the ATTENDANT CONSOLE [A-3] display.

6. CALL FORWARDING-DON'T ANSWER - CCIS is assigned to a station via CLASS OF SERVICE-INDIVIDUAL [C-15] programming.

7. There is no limit to the number of stations that can simultaneously set CALL FORWARDING-DON'T ANSWER - CCIS.

8. CALL FORWARDING-DON'T ANSWER - CCIS can be set from any number of stations to the same forwarded-to station.

9. The display of the forwarded-to telephone number on the LCD panel of the forwarding D^{term} can be allowed or denied in system programming on a system-wide basis.

10. If a station transfers a call to another station that has set CALL FORWARDING-DON'T ANSWER - CCIS and releases from the call, recall service will override CALL FORWARDING-DON'T ANSWER - CCIS if the call is unanswered after a predetermined time period (unless Blind Transfer station is in service).

11. When calls are forwarded to the Attendant Console, the INCOMING CALL IDENTIFICATION [I-2] feature allows the Attendant to identify the call as a forwarded call.

12. When a station-to-station call within the same node is CALL FORWARDING-DON'T ANSWER [C-3] to the Attendant Console, the call terminates on the NANS key. When the call is CALL FORWARDING-DON'T ANSWER - CCIS to the Attendant Console, it terminates on the NANS key.

13. When the system is in Night mode, CALL FORWARDING-DON'T ANSWER - CCIS to the Attendant Console will continue ringing at the called station, or transfer to the ATTENDANT NIGHT TRANSFER [A-19] station, if provided.

Service Conditions (cont'd)

14. When an Attendant extends a call to a station in another node in the CCIS network, and that station has set CALL FORWARDING-DON'T ANSWER - CCIS, the call will be forwarded if the called station does not answer within a predetermined time period.

15. If separate access codes are programmed into system data for CALL FORWARDING-DON'T ANSWER - CCIS and CALL FORWARDING-BUSY LINE - CCIS [C-46], separate feature keys must be programmed on each D^{term} to equip it for both features.

16. When OUTGOING TRUNK QUEUING - CCIS [O-12] is provided, a station can use this feature and one of the other call forwarding features at the same time. When a trunk becomes available, ringback tone will be to the forwarding, not the forwarded-to, station.

17. If any of the following restrictions are in effect at a forwarded-to station, incoming trunk calls to the forwarding station will not be forwarded (intercept arrangements will apply):
    a.) Fully Restricted Station
    b.) Station Restricted from Outgoing Calls
    c.) Toll Restricted Station

18. If a member of a UNIFORM CALL DISTRIBUTION (UCD) [U-1] group sets CALL FORWARDING-DON'T ANSWER - CCIS, only UCD calls to that extension number are forwarded.

19. When a call is forwarded, the number recorded in the STATION MESSAGE DETAIL RECORDING [S-10] is the forwarded-to telephone number.

20. CALL FORWARDING-DON'T ANSWER - CCIS can also be accessed from a D^{term} via the dial pad or SPEED CALLING-ONE TOUCH [S-26D]. If this feature is accessed via the dial pad, it must also be cancelled via the dial pad.

21. When an Attendant extends a call to a station in the same node which has set CALL FORWARDING-DON'T ANSWER - CCIS, the called station will ring for 30 seconds. If the call is not answered, it will forward across CCIS.

Interactions

1. If access codes for CALL FORWARDING-BUSY LINE - CCIS and CALL FORWARDING-DON'T ANSWER - CCIS are the same, only one key needs to be assigned in AKYD.

2. ACFO is applicable to DID, DIT, and TIE Line calls only.

3. A non-controlling UCD station is allowed to activate CALL FORWARDING-DON'T ANSWER - CCIS. When this station sets call forwarding, calls directed to this station will be forwarded. The member station is not removed from the UCD group under the conditions of the call forwarding feature used. When it is the station's turn to ring, that call is affected by CALL FORWARDING-DON'T ANSWER - CCIS.

4. CALL FORWARDING-DON'T ANSWER - CCIS to an Attendant Console will not operate when the system is in Night Mode. If ATTENDANT NIGHT TRANSFER [A-19] is provided, the call is forwarded to the ATTENDANT NIGHT TRANSFER station.

5. If the CALL FORWARDING-DON'T ANSWER - CCIS target station is a D^{term} which has activated DO NOT DISTURB [D-21D], call forwarding is not activated. The forwarding station will ring beyond the timer set in System Data 1, Index 145.

6. When the CALL FORWARDING-DON'T ANSWER - CCIS feature is set from Station A to Station B, and if Station A is idle and Station B is busy, Station A will ring beyond the timer set in System Data 1, Index 145.

7. When a call is call forwarded, the destination station is recorded for STATION MESSAGE DETAIL RECORDING [S-10].

C-48 Call Forwarding - Intercept - CCIS

General Description

This feature allows calls to an inoperative number, through a CCIS trunk, to be intercepted and routed to a recorded announcement. This announcement will inform the caller that an inoperative number was dialed and will give the Listed Directory Number for information.

Operating Procedure

This feature is set in system programming and no manual operation is required.

Service Conditions

1. This feature requires an announcement trunk and an announcement machine at each node.
2. Only one call at a time can be connected to each announcement trunk. If a second call arrives while the first call is being processed, the caller will receive ringback tone until the trunk becomes idle. This is when AAED - M = 1.
3. If disconnect timing is programmed in system data and the calling party forgets to hang up, the system will automatically disconnect from the call after 30 seconds. If no disconnect timing is programmed, the calling party will control disconnect.
4. This feature is provided on a per-tenant basis.
5. Calls to restricted numbers will receive reorder tone.
6. Only one common message can be provided for all intercept conditions.
7. The following call conditions are routed to CALL FORWARDING-INTERCEPT - CCIS:
   - Vacant level
   - Unassigned telephone number

Interactions

1. The trunk number will only be required when a multiple connection is assigned.
2. The COT trunk circuit is used to interface a customer-provided announcement machine.
3. The Digital Announcement Trunk (DAT) card may be used for announcements instead of an external announcement machine. In this case, the COT card is not required.
4. The type of connection to the announcement machine depends on whether the machine provides a battery reversal at the end of the message. Battery reversal allows for the recycling of the message so that a calling station will always be connected to the beginning of the message. Therefore, the calling party will continue to hear ringback tone until connected to the beginning of the announcement.
5. See ANNOUNCEMENT SERVICE [A-15].

C-49   Call Forwarding - Override - CCIS

General Description

This feature allows a forwarded-to station (Station A) to ring the station (Station B), which has set CALL FORWARDING - ALL CALLS - CCIS [C-45] to it. If the called station (Station B) has set CALL FORWARDING - BUSY LINE - CCIS [C-46] to the calling station (Station A), the calling station will receive busy tone and can activate CALL BACK - CCIS [C-44].

Operating Procedure

No manual operation is required.

Service Conditions

1.   This service feature is allowed to all stations in the CCIS network, except the ATTENDANT CONSOLES [A-3].

2.   Any station that has set CALL FORWARDING - ALL CALLS [C-5] can activate any feature if the station is allowed the feature in Class of Service.

C-50   Call Transfer - All Calls - CCIS

General Description

This service feature allows Inter-Office CALL TRANSFER-ALL CALLS when the transferring station and the transferred station respectively belong to a different PBX in the CCIS network.

Operating Procedure

1.   Station A and C are in connection on a station-to-station call.
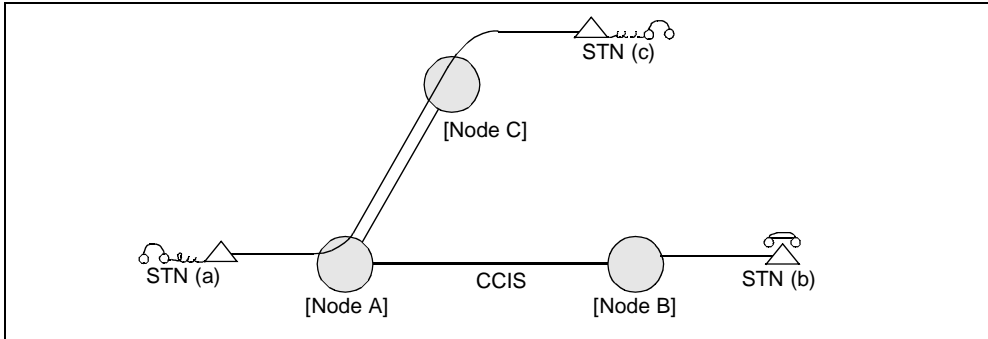
2.   Station A switch hook flashes; receives special dial tone. Station C receives Hold Tone.
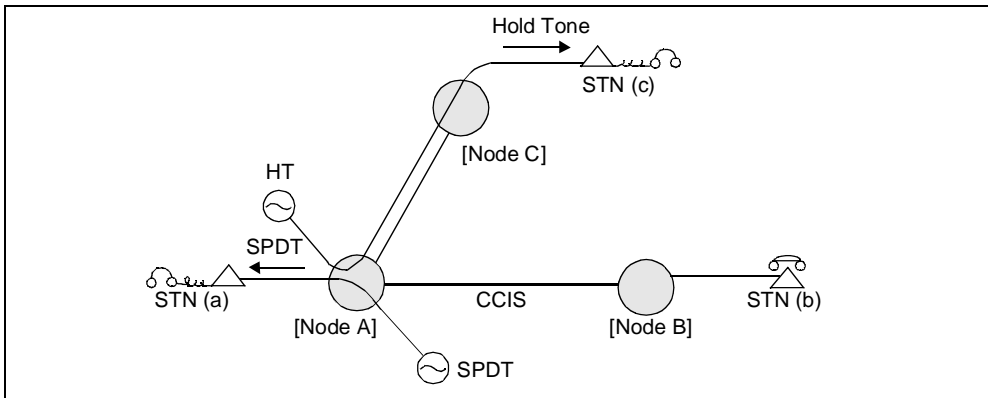
Operating Procedure (cont'd)

3.   Station A dials the number for B; receives ringback tone. Station B is rung. **Note 1**
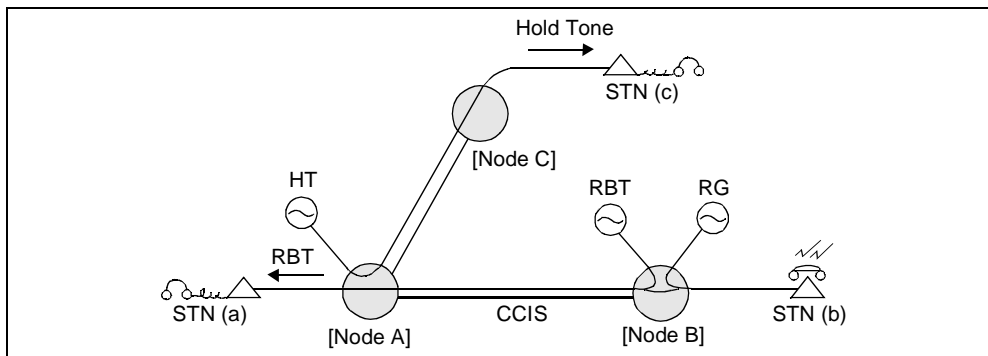
Note 1: *The status of Station A can be restored to normal with a switch hook flash in one of the following cases:*
When Station A has received busy tone.
When Station B is under a call restriction or when Station A cannot access Station B for some other reasons.
*When Station B does not answer the call.*

4.   Station B answers the call **Note 2**; Stations B and A are connected with each other. Station A tells Station B that a call is being transferred to B.
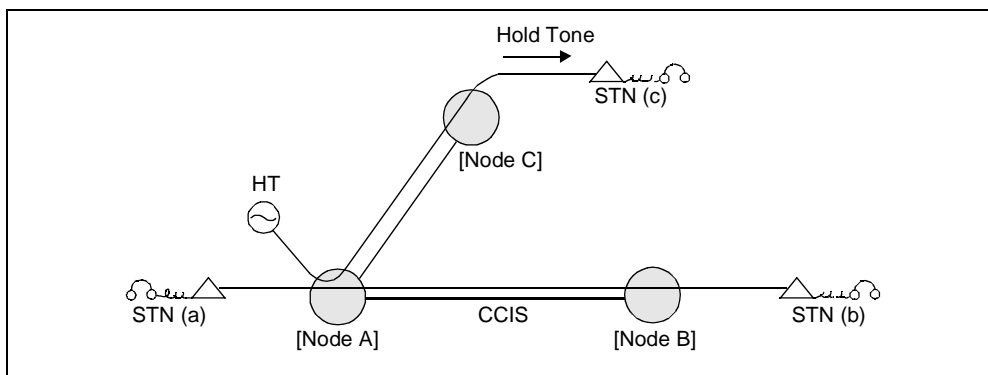
Note 2: *(i) If Station A hangs up before Station B answers the call; Station B is rung continuously; Station C receives ringback tone.*
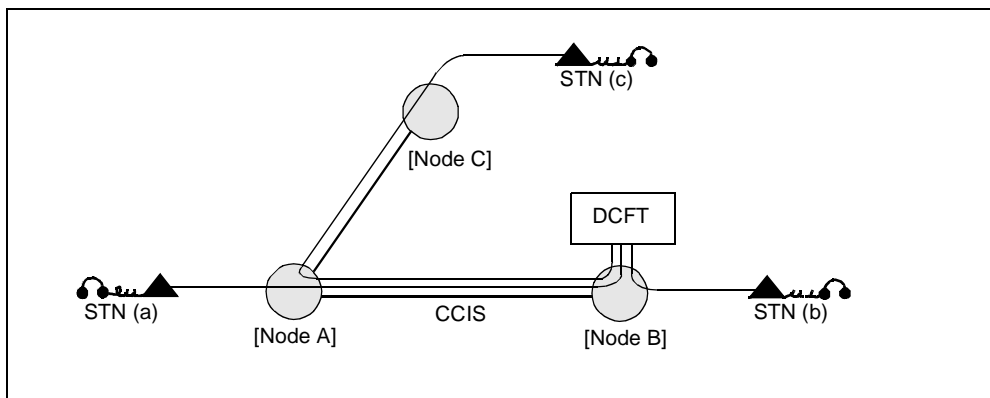*(ii) Station B answers the call; Stations B and C are connected with each other.*
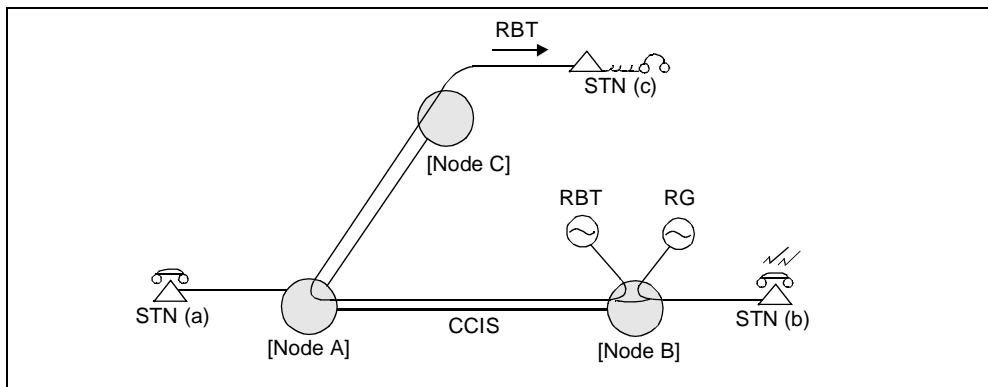
Operating Procedure (cont'd)
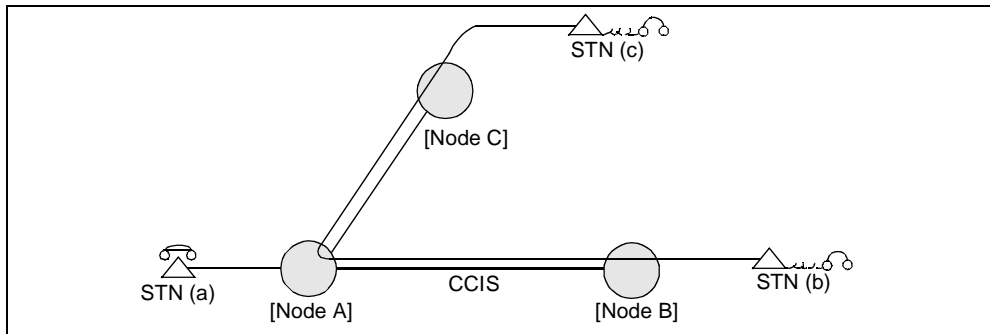
5.   Station A hangs up **Note 3**; Stations B and C are connected with each other.
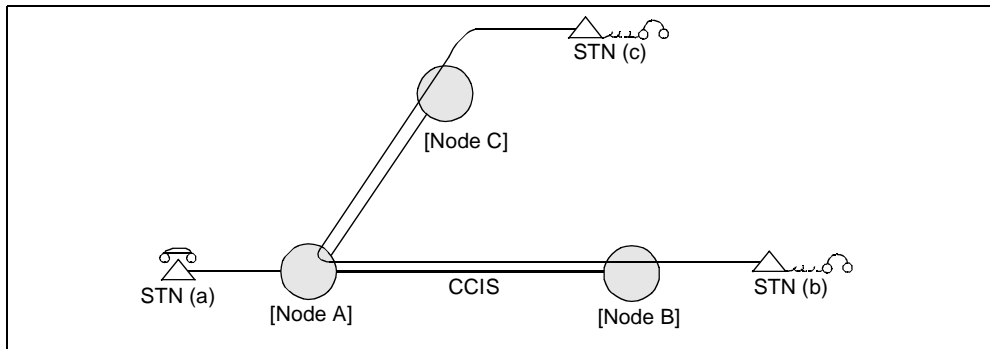
Note 3: *If Station A switch hook flashes instead of hanging up, a three-way connection is set up.*

Service Conditions

1.   When TRUNK-TO-TRUNK CONNECTION [T-10] is provided, an incoming or outgoing network or TIE Line call may be transferred to an outgoing network trunk, provided that the trunk is ground-start. The user who transfers the call gives line control to the two remaining parties upon hanging up. Therefore, if the trunk is loop-start, CALL TRANSFER-ALL CALLS - CCIS from trunk-to-trunk will not function.

Service Conditions (cont'd)

2. The THREE-WAY CALLING [T-2] feature allows a maximum of three parties on one connection. The three parties can be:
    - Three stations,
    - Two stations and one trunk, or
    - One station and two trunks.
3. The maximum number of simultaneous THREE-WAY CALLING [T-2] connections is dependent upon the quantity of conference trunks (Route 909s) programmed in the system.
4. Reorder tone is returned to the transferring station under the following conditions:
    a.) The transferring station is restricted.
    b.) The transferring station dials an unequipped number or the route is restricted.
    c.) The transferring station dials an invalid first digit.
5. If a station is in an established THREE-WAY [T-2] conference, it cannot activate any features. If the station switch hook flashes to activate a feature, the switch hook flash is ignored and the THREE-WAY conference remains connected.
6. The user who has transferred the call can hang up before the called party answers the call. The called party will continue to ring and recall is not effected.
7. Outgoing calls with answer supervision may be transferred immediately after the call answered (no time delay).
8. Outgoing calls with no answer supervision can be transferred only after the time periods assigned in ASYD, Indexes 156 or 157 have elapsed since the last digit was dialed.
9. If a station is in CONSULTATION HOLD [C-58] or in an established THREE-WAY connection, any attempt to override the connection using one of the following features will be denied:

    ATTENDANT CAMP-ON WITH TONE INDICATION   [A-1] [A-45]
    BOSS-SECRETARY OVERRIDE   [B-5]
    BUSY VERIFICATION   [B-3] [B-9]
    CALL WAITING-TERMINATING   [C-12]
    EXECUTIVE RIGHT-OF-WAY   [E-1] [E-8]
10. A station engaged in either a SERIAL CALL - CCIS [S-52] or SUPERVISORY CALL - CCIS [S-73] is not allowed CALL TRANSFER-ALL CALLS - CCIS.

Interactions

1. This feature is denied whenever the transferring station is engaged in any state other than a simple two-party connection.
2. See TRUNK-TO-TRUNK CONNECTION [T-10] for additional programming if the call is to be transferred off network.
3. Features that cannot be activated while a user has a party in CONSULTATION HOLD [C-58] are:

    EXECUTIVE RIGHT-OF-WAY   [E-1][E-8]
    TRUNK ANSWER FROM ANY STATION (TAS)   [T-8]
    CALL BACK (Activate or Cancel)   [C-1] [C-44]
    CALL PICKUP-DIRECT   [C-30]
    CALL FORWARDING (Activate or Cancel)   [C-2,3,5] [C-45,46,47]
    OUTGOING TRUNK QUEUING Cancel   [O-2] [O-12]
    SPEED CALLING-STATION Entry   [S-21]
    MESSAGE REMINDER   [M-19D] [M-34]

Interactions (cont'd)

4. Upon establishing a CONSULTATION HOLD [C-58] connection and dialing a third party, if the user receives busy or reorder tone instead of ringback tone, the user flashes once to disconnect the tone and reconnect the second party.

5. Upon establishing a CONSULTATION HOLD [C-58] connection and dialing a MISCELLANEOUS TRUNK ACCESS [M-2] code, if no dial tone is given (after the trunk is seized), if a mistake is made in dialing, or if intercept announcement or a permanent tone is given, the user must go on-hook and is rung back.

6. The user who establishes CONSULTATION HOLD [C-58] will be reconnected to the party in soft hold when the third party disconnects.

7. Reorder tone is returned to the user when the user's line is restricted via Route CLASS OF SERVICE [C-15] or the user dials the number of an unassigned station or of a station residing in an inaccessible tenant via TENANT SERVICE [T-12].

8. A CALL TRANSFER to a station with call forwarding set will forward according to the conditions of the forwarding feature set.

9. A CALL TRANSFER to a station in a station Hunt [S-7, 8, 9] group will hunt according to the conditions of the Hunt group.)

10. A CALL TRANSFER to a D^{term} that has DO NOT DISTURB [D-21D] set, will receive reorder tone, or follow CALL FORWARDING-BUSY LINE or ALL CALLS if set.

11. A CALL TRANSFER call may be answered by CALL PICKUP-GROUP/DIRECT [C-7, 30].

C-51 Called Station Status Display - CCIS

General Description

This feature provides for the status of a called station to appear on the LCD display of a calling D^{term} using CCIS.

Operating Procedure

Lift the handset or press the SPEAKER key and dial the desired station. The LCD display indicates the status of the called station.

Service Conditions

1. If the called station is idle, the display flashes its number until the call is answered.
2. If the called station is busy, the LCD displays:

```
┌─────────────────────────────────────┐
│  BUSY                        XXXX    │
│            (Time Display)            │
│                                      │
│                                      │
└─────────────────────────────────────┘
```

3. If the called station is in DO NOT DISTURB [D-21D], the LCD displays:

```
┌─────────────────────────────────────┐
│  REST                        XXXX    │
│            (Time Display)            │
│                                      │
│                                      │
└─────────────────────────────────────┘
```

4. If the calling station encounters a restricted station, the LCD displays:

```
┌─────────────────────────────────────┐
│  REST                        XXXX    │
│            (Time Display)            │
│                                      │
│                                      │
└─────────────────────────────────────┘
```

C-52   Calling/Called Number Display - CCIS

General Description

This service feature allows an Inter-Office calling/called number display when the Attendant Console and the calling/called party belong to different offices within the CCIS network.

If the Attendant dials a telephone number, the dialed telephone number is displayed on the Console (Calling Number Display). If a station calls an Attendant, the telephone number is displayed on the Console (Called Number Display).
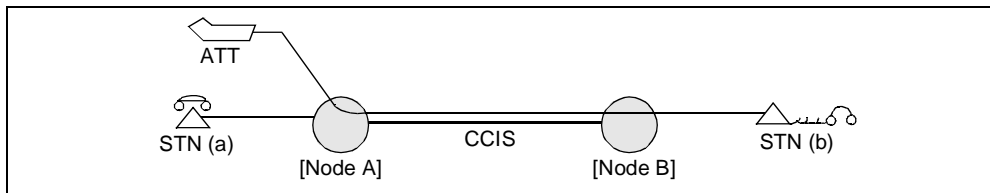
Operating Procedure

Calling Number Display

1. The Attendant in Node A dials the number for Station B in Node B through a CCIS line; the Attendant receives ringback tone and Station B is rung.
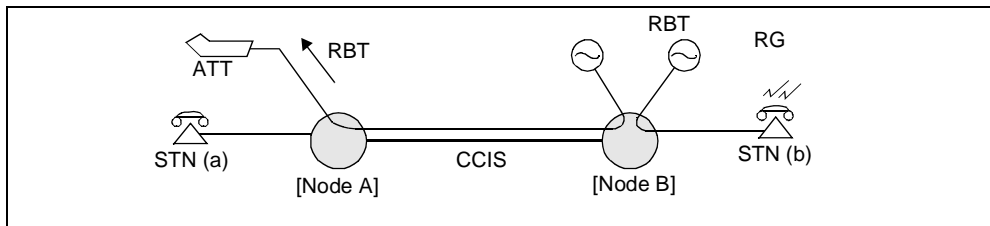
2. Station B goes off-hook and answers the call; the Attendant and Station B are connected; the number of Station B is displayed on the Attendant Console.

Called Number Display

1. Station B dials the LDN of Node A; receives ringback tone. The Attendant receives an audible tone.
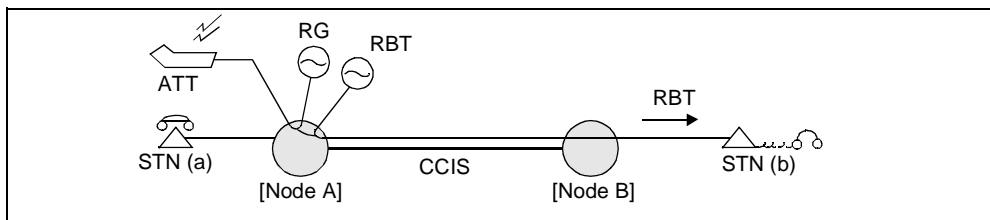
Operating Procedure (cont'd)

2.   The Attendant presses the ANSWER key; Station B and the Attendant are connected. The number of Station B is displayed on the Attendant Console.

ATT

STN (a)   CCIS   STN (b)
[Node A]   [Node B]
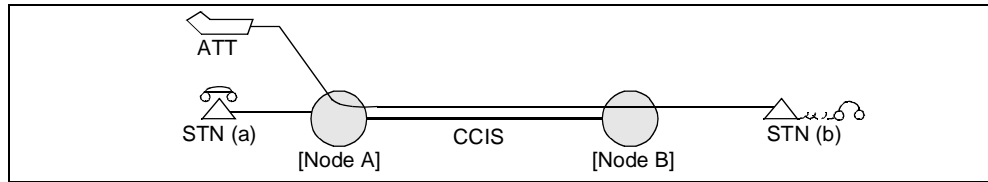
Service Conditions

For the Attendant Console

1.   At the time of call origination:

     a.) The called number is displayed (last 6 digits) only when the called party has answered the call.

2.   At the time of call termination:

     a.) The calling number is displayed (last 6 digits) only when the Attendant has answered the terminated call.

3.   The display of the telephone number of the station that has answered the call routed by the Attendant has priority over this service. This is not applicable to Inter-office telephone number display in the above case.

4.   Even if the communicating party has changed during a call, the display of the telephone number remains unchanged.

5.   As stated in the preceding paragraph, the telephone number display is made only for the station that has first engaged in a call with the Attendant.

For the D^{term}

1.   Call origination: The called number is displayed (8 digits).

2.   Call termination: The calling number is displayed while the called side is being rung.

3.   Display of the telephone number of the station which has answered the call routed by the Attendant has priority over this service. This is not applicable to inter-office telephone number display in the above case.

4.   Even if the communicating party has changed during a call, display of the telephone number remains unchanged.

C-53   Call Processing Indication - CCIS

General Description

This feature provides a visual indication at the ATTENDANT CONSOLE [A-3] of all CCIS calls being handled by the ATTENDANT CONSOLE [A-3] through the CCIS network.

Operating Procedure

Refer to the operation guide of the Attendant Console.

Service Conditions

1. The status of calls being processed by the Attendant is indicated by the status lamps (BUSY, ATND, or HOLD) corresponding to the particular loop key.
2. The ATTENDANT CONSOLE [A-3] is equipped with six dedicated switched loop keys. Each loop key has five associated indicator lamps (HOLD, ATND, BUSY, RING, ANSWER) which display the status of the call on that loop. The indicator lamps may be on, off or flashing (400 ms. On and 400 ms. Off).
3. When the ATTENDANT LOOP RELEASE [A-6] feature is activated, the status of the call is removed from the ATTENDANT CONSOLE [A-3] until alerted by the AUTOMATIC RECALL [A-8] feature.

Interactions

The ATTENDANT CONSOLE [A-3] must first be provided.

C-54   Call Transfer - Attendant - CCIS

General Description

This feature allows a user to transfer a call through the CCIS network to an Attendant Console located in a Main or Satellite node, while connected to a CCIS network call.

Operating Procedure

To transfer a call to an Attendant Console

1.   While engaged in a Central Office trunk call, switch hook flash; receive special dial tone.
2.   Dial the Operator Access Code.
3.   The Attendant Console ATND lamp flashes and the buzzer sounds. The station receives ringback tone.

To answer from the Attendant Console

1.   Refer to the operation guide of the Attendant Console.

If the station wishes to return to the Central Office trunk call while the Attendant Console is being called

1.   Switch hook flash; the ATND lamp is extinguished at the Attendant Console and the buzzer stops.
2.   The station returns to the Central Office trunk call.

Service Conditions

1.   This feature is available when the Attendant Console is in a different node in the CCIS network.
2.   This feature is available for incoming or outgoing C.O. trunk calls and station-to-station calls.
3.   When the Attendant Console is in NIGHT CONNECTION - CCIS mode, the transferring station will receive reorder tone.
4.   When a HOTLINE - CCIS [H-12] set is equipped with a dial, the user can switch hook flash to get the special dial tone, then dial "0". Ringback tone is provided and the Attendant Console is notified of the call.
5.   This feature cannot be used when NIGHT CONNECTION-FIXED - CCIS [N-15] or NIGHT CONNECTION-FLEXIBLE - CCIS [N-16] is activated. In this case, CALL TRANSFER-ALL CALLS - CCIS [C-50] would be used to transfer a call. If CALL TRANSFER-ATTENDANT - CCIS is attempted, reorder tone will be returned.
6.   If the SPLITTING [S-4, S-4D] or ATTENDANT LOCKOUT [A-5] feature is activated, CALL TRANSFER-ATTENDANT - CCIS can be implemented.
7.   A station-to-station or station-to-trunk connection, within the same node as the NIGHT ATTENDANT TRANSFER [A-19] station, cannot be transferred to the NIGHT ATTENDANT TRANSFER [A-19] station. However, a station-to-station or station-to-trunk connection, in which one party is located in the same system as the NIGHT ATTENDANT TRANSFER [A-19] station, can be transferred to the NIGHT ATTENDANT TRANSFER [A-19] station.

Interactions

1.   A HOTLINE [H-1] station may transfer a call to the Attendant Console.
2.   A call transferred to a station with a call forwarding feature set will forward according to the conditions of the feature, unless the station is CALL FORWARDING-ALL CALLS - CCIS to the Attendant Console. CALL FORWARDING-OVERRIDE [C-26] supersedes CALL FORWARDING-ALL CALLS - CCIS.
3.   A call transfer to a station in a station Hunt Group will hunt according to the conditions of the station hunting feature used.

Interactions (cont'd)

4. A call transfer to a D$^{\text{term}}$ that has DO NOT DISTURB [D-21D] set will receive reorder tone, or follow CALL FORWARDING-BUSY LINE or ALL CALLS if set.

C-55 Centralized Billing - CCIS

General Description

This service is used for collecting billing information from each office within the network and directing it to associated offices, thus providing the billing information to the CENTRALIZED BILLING CENTER via an RS-232C interface.

This feature may be provided through multiple FCCS groups (networks where multiple NEAX2000 IVS^{2}s are connected via FCCS link) and the NEAX2400 IPX, using CCIS link.

Note: *NEAX2400 IPX - NEAX2000 IVS^2 connection is available only if the NEAX2000 IVS^2 is the satellite office (requires NEAX2000 IVS^2 Series 2000 or later software).*

Operating Procedure
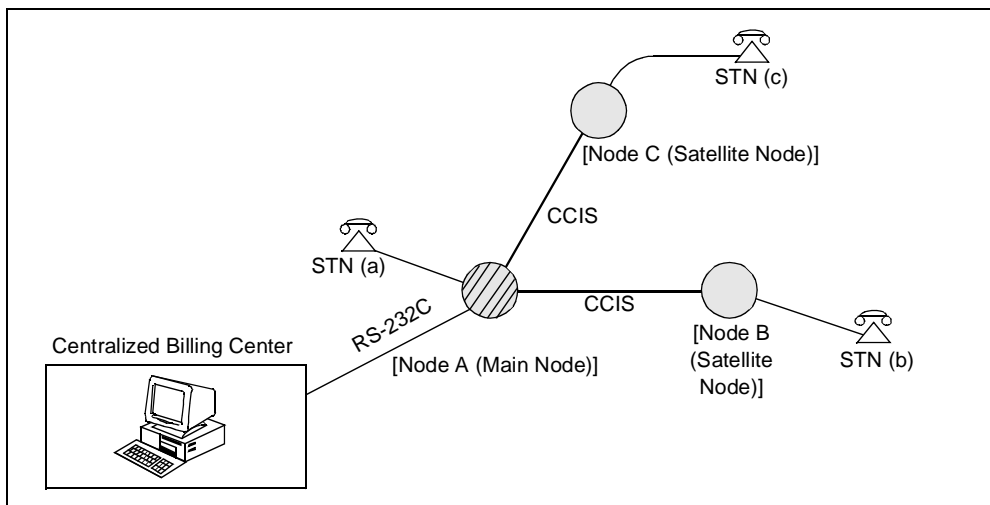
1. Station A in Node A (Main Node) dials Station C in Node C; Station A receives ringback tone and Station C is rung.
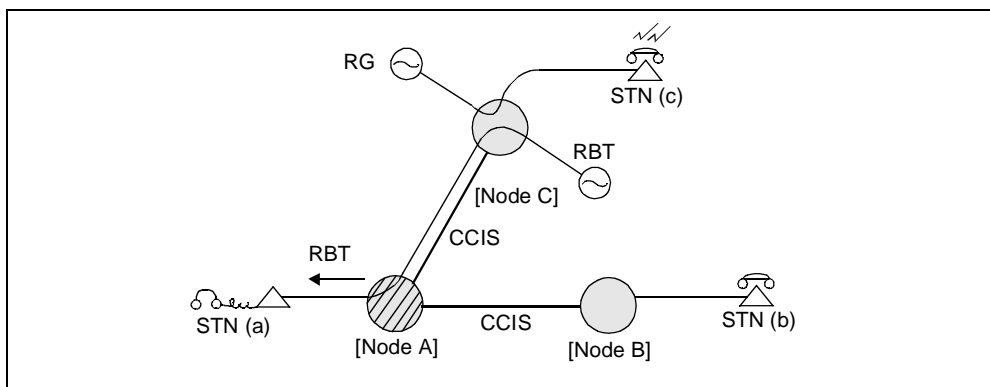
Operating Procedure (cont'd)

2. Station C goes off-hook; Stations A and C are connected with each other in conversation.
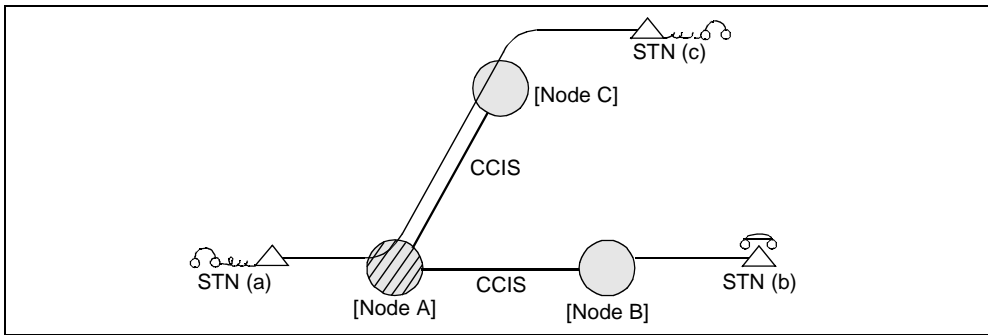
3. Stations A and C go on-hook; SMDR information is sent out to the CENTRALIZED BILLING CENTER.
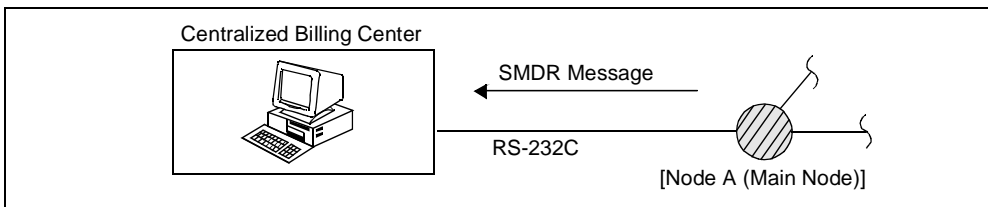
4. Station B dials Station C in Node C; Station B receives ringback tone and Station C is rung.
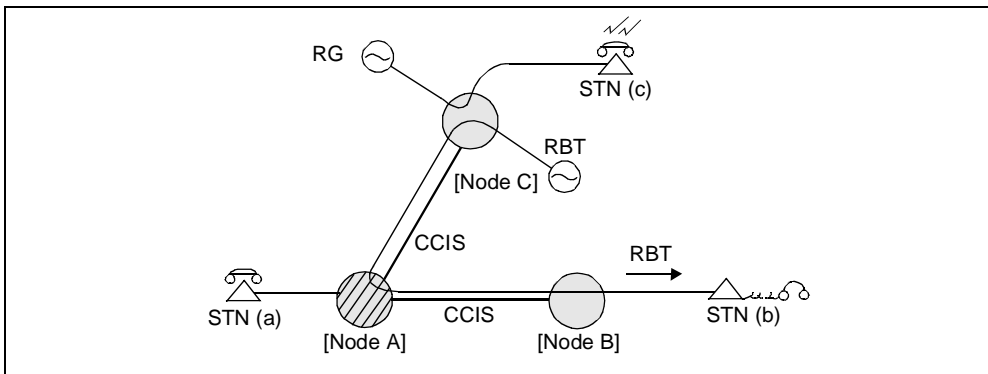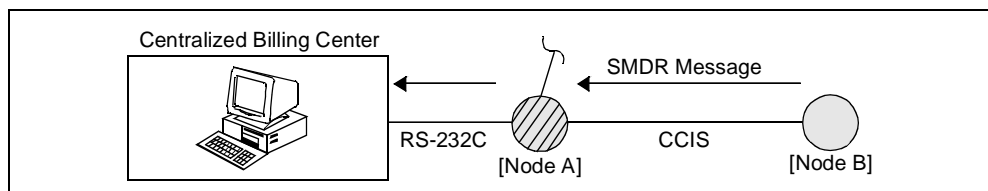
Operating Procedure (cont'd)

5. Station C goes off-hook; Stations B and C are connected in conversation.
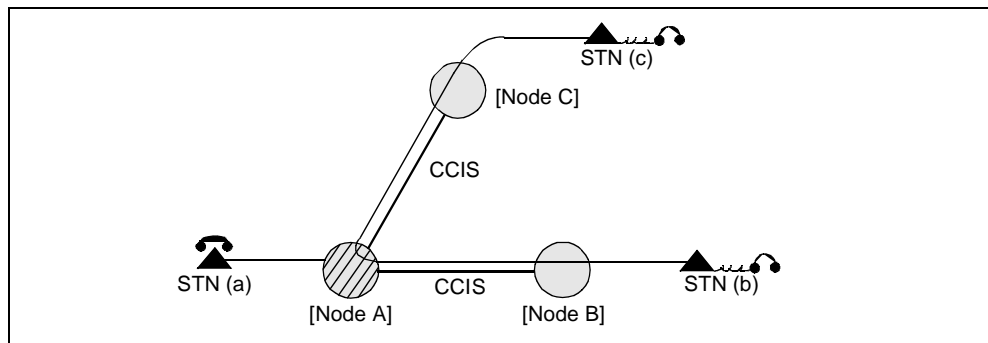
6. Stations C and B go on-hook; SMDR information is sent to the Billing Center through the CCIS line.

Service Conditions

1. The maximum number of billing information output ports at the Center Office is 2.
2. Information storage capacity of the office should be 700 calls.
3. If billing information in excess of the above mentioned storage capability is generated at a time when the billing information cannot be transmitted to the associated Center Office because of a fault condition, the newly generated billing information cannot be processed.
4. The number of billing information output ports at a local office is 1.
5. When using CENTRALIZED BILLING - CCIS, it is recommended that the speed of the CCIS signalling link be higher than 9600 bps.

When this service is provided in the network through FCCS groups and NEAX2000 IVS^2

1. For general information of this network, refer to "Network Through FCCS Groups and NEAX2000 IVS^2", in the NEAX2400 IPX No. 7 CCIS System Manual.
2. When the 7 or 8-digit telephone number (assigned in AELGN command) is used in the network, for the NEAX2000 IVS^2, it is output to station number field and the office code field of the originating party. The telephone number is not used in ICS text format, therefore, when the 7 or 8-digit telephone number is used in the network, it is converted to office code and station number (the station number is output to the station number field of the originating party, and the office code is output to office code field of the originating party).
3. When the Centralized Billing Office adopts the CCIS billing method, the receiving message field is output as it is.
4. When the Centralized Billing Office adopts the FCCS billing method, the information field of the originating call is also output to the Telephone Number field.

C-56 Centralized Day/Night Mode Change - CCIS

General Description

This service feature switches the DAY/NIGHT mode of Satellite Nodes which are linked to the Main Node via CCIS, in accordance with the DAY/NIGHT mode switching [A-3] at the Main Node.

Operating Procedure
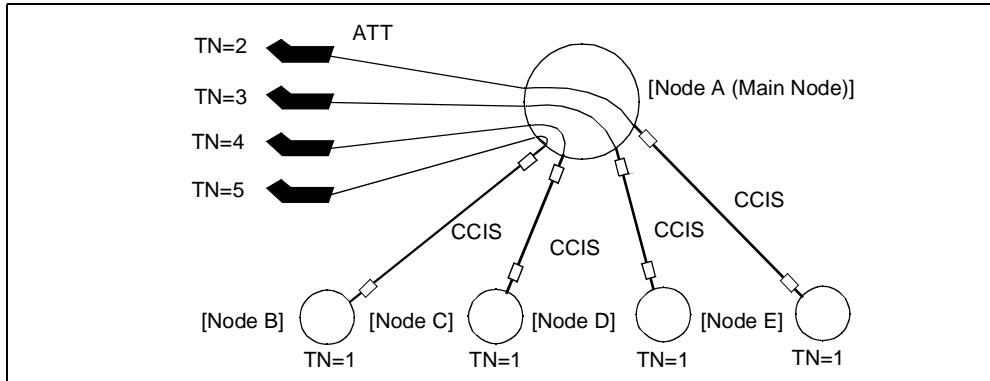
Note: *Node B - Node E are Satellite Nodes.*

1. Press the NIGHT key on the Attendant Console for each Tenant; the NIGHT lamp illuminates. The mode of Satellite Node for each Tenant changes from Day mode to Night mode.
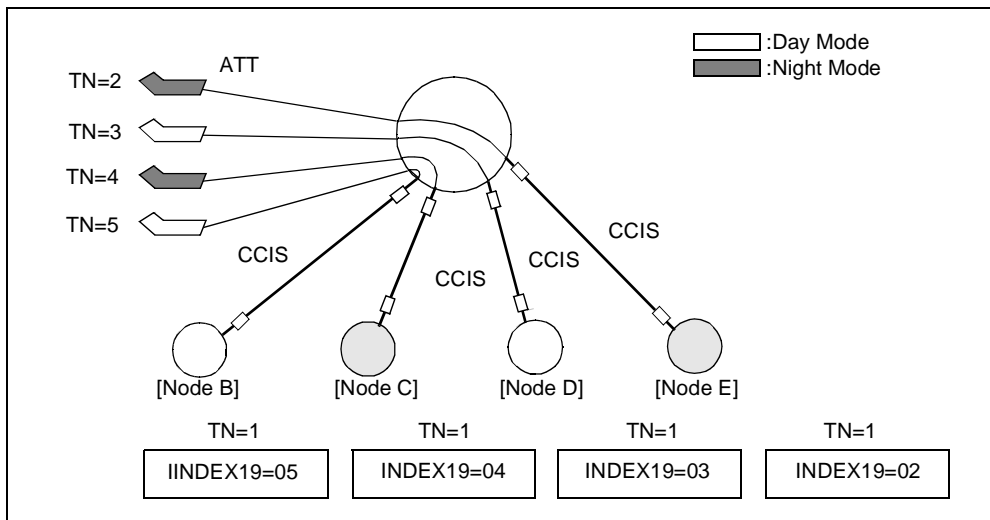
Note: *To confirm Night Mode, see Night Connection-Fixed - CCIS [N-15].*

Service Conditions

1. A Main Node can control DAY/NIGHT mode changeover for a maximum of 16 remote nodes.

Service Conditions (cont'd)

2. DAY/NIGHT mode changeover will be performed in one-minute increments. If consistency between the DAY/NIGHT mode at the Main and Satellite Nodes is lost, the status is restored to that of the Main Node within 16 minutes.

3. At the Main Node, from 1 to 15 tenants can use the system.

4. At a Satellite Node, only TN = 1 is possible.

5. When a Satellite Node is equipped with DAY/NIGHT mode changeover features, changeover of the Satellite Node DAY/NIGHT mode is not performed from the Main Node.

6. The Satellite Node cannot have an Attendant Console programmed.

7. Selecting DAY/NIGHT option from the NEAX2400 IPX does not change the NEAX2000 IVS^2 DAY/NIGHT status.

C-57 Centralized System Management Report - CCIS

General Description

This service feature provides automatic reporting of fault information of Satellite Nodes to the Centralized Management Center with an external indication of the detected fault.

This feature may be provided through multiple FCCS groups (networks where multiple NEAX2400 IPXs are connected via FCCS link) and the NEAX2000 IVS^2, using CCIS link.

Note: *NEAX2400 IPX - NEAX2000 IVS^2 connection is available only if the NEAX2000 IVS^2 is the satellite office (requires NEAX2000 IVS^2 Series 2000 or later software).*

Operating Procedure
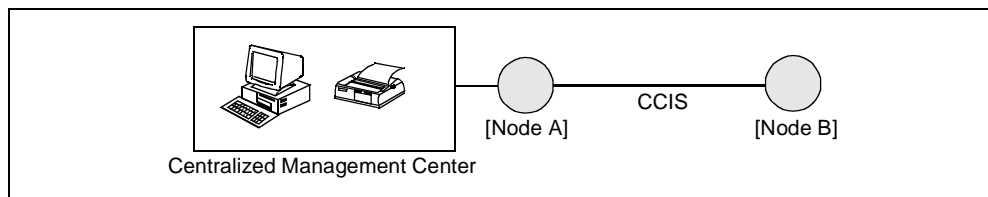
1. On the ACT side CPU of Node B, set the MBR switch up (ON); system messages are sent out to Node A, and the CPU is changed over.
2. Return the MBR switch down (OFF); system messages are sent out to Node A.
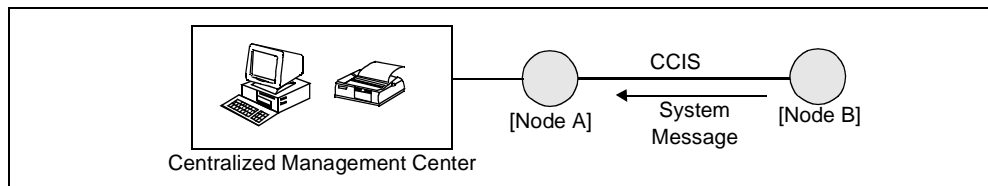
3. The system messages of Node B are printed out from the printer in Node A.

Note: *If System Data (Index 188) is assigned in such a way that MJ/MN alarm at a local office is to be displayed on the Display Panel at the Center Office, an MJ/MN alarm that is generated in Node B is indicated as an MJ/MN alarm on the Display Panel in Node A and the corresponding system message is given out.*

Service Conditions

1. When the fault information cannot be sent from the Satellite Node to the Main Node, fault information buffer capacity is 64 messages.
2. An alarm lamp indication of a fault that occurs at a Remote Node is made only at the local office. At the Center Office, fault indication is made to the MAT and to the external equipment. However, no frametop alarm indication is given.
3. At the Main Node, the system message will be printed automatically, when the command is executed.
4. When the Center Node provides the printer for Fault Data Automatic Printout Function (SYS1, Index 86, bit 4) and the printer directly connected to the MAT together, the former printer has priority over the latter. At that time, the printer connected to the MAT is used to print the collected fault data when the printer for Fault Data Automatic Printout Function cannot print for any reason.

Service Conditions (cont'd)

When this service is provided in the network through FCCS groups and NEAX2000 IVS^2

1. For general information of this network, refer to "Network Through FCCS Groups and NEAX2000 IVS^2", in the NEAX2400 IPX No. 7 CCIS System Manual.

2. The Centralized System Message Report feature for this network may be controlled only by the Centralized MAT.

Note: *See Centralized Maintenance - CCIS [C-167] for explanation of the Centralized MAT.*

3. By polling from the Centralized MAT connected to the Center Office, the information regarding faults occurring at all nodes (NEAX2400 IPX and NEAX2000 IVS^2) can be collected.

4. When a fault occurs in the NEAX2000 IVS^2, only the basic fault information is collected from the Center Office using polling method. To collect detailed information, log-in to the system where the fault occurred.

5. The buffer for fault information of the NEAX2400 IPX and that of the NEAX2000 IVS^2 are separate. A maximum of 64 calls can be stored in the buffer at each system. Therefore, a fault occurring when the buffer capacity is full cannot be stored, and the system receives the NACK signal. At that time, the system resends the information after waiting for a preprogrammed time.

6. The table below shows the controllability of fault information received from the NEAX2000 IVS^2:

	CONNECTION METHOD	SMJ/SMN LAMP ON TOPU	MENU DISPLAY ON MAT	DFTD COMMAND
NEAX2000 IVS^2 to NEAX2400 IPX	CCIS	Not Controllable	Not Controllable **Note**	Not Controllable
NEAX2400 IPX (A) to NEAX2400 IPX (B) within an FCCS group	FCCS	Not Controllable	Controllable	Controllable
FCCS Group (A) to FCCS Group (B)	CCIS	Controllable	Controllable	Controllable

Note: *Available when the alarm grade is changed by ASYD, SYS 1, Index 188, bit 1 = 1, and the ALMG command.*

7. The fault information of NEAX2000 IVS^2 received at Center Office is cleared by the RALM/RALMN command.

8. When the information of faults occurred at all the FCCS groups and the connected NEAX2000 IVS^2 is managed by the Centralized-MAT, the destination of fault message output must be changed to the designated Center Office (for example, NCN) at each Local Node (including NEAX2000 IVS^2). Additional information is outlined in Programming.

C-58   Consultation Hold - All Calls - CCIS

General Description

This feature permits a user within the CCIS network to hold any incoming or outgoing public network, intra-office, or CCIS call while originating a call to another station within the CCIS network.

Operating Procedure

To hold the original call and place a second call from a single-line telephone

1. Switch hook flash; receive special dial tone.
2. The original call is placed on hold.
3. Dial the second telephone number; receive ringback tone.
4. The second station answers; CONSULTATION HOLD is established.

To return to the original call from a single-line telephone

1. Under any of the following conditions, the calling station can return to the original call by pressing the switch hook:
    a.) The second station called for CONSULTATION HOLD is busy.
    b.) The calling station cannot gain access to the second station because of a restriction, or for any other reason.
    c.) The second station does not answer.
2. If a CONSULTATION HOLD call is established and the second party hangs up, the calling station will automatically be returned to the original call.
3. If the originating station switch hook flashes, a THREE-WAY CALL [T-2] will be established.

To hold the original call and place a second call from a D^{term}

1. Press the TRANSFER key; receive special dial tone.
2. The original call is placed on hold.
3. Dial the second telephone number; receive ringback tone.
4. The second station answers; CONSULTATION HOLD is established.

To return to the original call from a D^{term}

1. Under any of the following conditions, the calling station can return to the original call by pressing the TRANSFER key.
    a.) The second station called for CONSULTATION HOLD is busy.
    b.) The calling station cannot gain access to the second station because of a restriction, or for any other reason.
    c.) The second station does not answer.
2. If the second station hangs up, the calling station will automatically be returned to the original call.
3. If the originating station presses the TRANSFER key while connected to the second station, the second station is put on hold and the calling party returns to the original call.

Service Conditions

1. When TRUNK-TO-TRUNK CONNECTION [T-10] is provided, an outgoing exchange network or TIE Line call can be made by the user.
2. The party placed in CONSULTATION HOLD-ALL CALLS - CCIS will hear MUSIC ON HOLD [M-7], if provided.

Interactions

1. This feature is denied whenever the destination telephone set is engaged in any state other than simple two-party connection.

2. CONSULTATION HOLD-ALL CALLS - CCIS must always be made available when features require hooking services.

3. Indexes 156 and 157 also are used for SMDR, establishing an arbitrary connection timing when no answer supervision is used.

4. If a party is involved in a CONSULTATION HOLD-ALL CALLS - CCIS state or in an established THREE-WAY CALLING [T-2] connection, attempts to override the connection are denied. These features are:

ATTENDANT CAMP-ON WITH TONE INDICATION	[A-1][A-45]
ATTENDANT OVERRIDE	[A-7]
BUSY VERIFICATION	[B-3][B-9]
CALL WAITING-TERMINATING	[C-12]
EXECUTIVE RIGHT-OF-WAY	[E-1][E-8]

5. Features that cannot be activated while a user has a party in CONSULTATION HOLD-ALL CALLS - CCIS are:

CALL BACK, Activate or Cancel	[C-44]
CALL PICKUP-DIRECT	[C-30]
CALL FORWARDING, Activate or Cancel	[C-45,46,47]
EXECUTIVE RIGHT-OF-WAY	[E-1]
MESSAGE REMINDER	[M-34D]
OUTGOING TRUNK QUEUING, Cancel	[O-12]
SPEED CALLING-INDIVIDUAL, Entry	[S-21]
TRUNK ANSWER FROM ANY STATION (TAS)	[T-27]

    All other features may be activated as long as the user's line CLASS OF SERVICE-INDIVIDUAL [C-15] allows that feature.

6. If the user receives busy or reorder tone instead of ringback tone upon establishing a CONSULTATION HOLD-ALL CALLS - CCIS connection and dialing a third party, the user flashes once to disconnect the tone and reconnect the second party.

7. Upon establishing a CONSULTATION HOLD-ALL CALLS - CCIS connection and dialing a MISCELLANEOUS TRUNK ACCESS [M-2] code, if no dial tone is given (after the trunk is seized), if a mistake is made in dialing, or if an intercept announcement or a permanent is given, the user must go on-hook and is rung back.

8. A user who established CONSULTATION HOLD-ALL CALLS - CCIS is reconnected to the party in soft hold when the third party disconnects.

9. When using CALL TRANSFER-ALL CALLS - CCIS [C-50] from a station (second party) to another station or trunk (third party), the control station can transfer the call during ringing (blind transfer). When the control station goes on-hook, the station in soft hold is connected to the third party's connection and hears ringback tone. A 30-second timer is set when the controlling station goes on-hook. If the timer times out before the third party answers, the control station is rung back.

C-94 Call Forwarding Assignment - Attendant - CCIS

General Description

This feature allows the attendant of an Attendant Console to set/cancel the following Call Forwarding services to a station within the CCIS network.

CALL FORWARDING-ALL CALLS	[C-5]
CALL FORWARDING-ALL CALLS - CCIS	[C-45]
CALL FORWARDING-BUSY LINE	[C-2]
CALL FORWARDING-BUSY LINE - CCIS	[C-46]
CALL FORWARDING-DON'T ANSWER	[C-3]
CALL FORWARDING-DON'T ANSWER - CCIS	[C-47]
CALL FORWARDING-ALL CALLS-OUTSIDE	[C-28]
CALL FORWARDING-DON'T ANSWER-OUTSIDE	[C-74]

Operating Procedure

To set Call Forwarding

1. Attendant presses an idle loop key.
2. Attendant dials the Call Forwarding - All Calls, Call Forwarding - Busy Line, or Call Forwarding - Don't Answer entry code; receives special dial tone.
3. Attendant dials the Tenant Number of the transferring station.
4. Attendant dials the office code (including access code) of the transferring station and the telephone number of the transferring station.
5. Attendant dials the telephone number of the target-station. **Note**
6. Attendant dials "#"; receives service set tone.
7. Attendant presses the RELEASE key.

Note: *When the transfer target station is in the CCIS network, dial the office code (including access code and the station number of the target station.*

To cancel Call Forwarding

1. Attendant presses an idle loop key.
2. Attendant dials the Call Forwarding - All Calls, Call Forwarding - Busy Line, or Call Forwarding - Don't Answer entry code; receives special dial tone.
3. Attendant dials the Tenant Number of the transferring station.
4. Attendant dials the office code (including access code) of the transferring station and the telephone number of the transferring station; receives service set tone.
5. Attendant presses the RELEASE key.

Service Conditions

1. A transferring station, accommodated in the CCIS network, dials the office code inclusive of access code and the telephone number. A method for setting a Call Forwarding by this service can be selected from the following patterns on each tenant basis by the system data. (ASYD, SYS2, Index 15, b4).
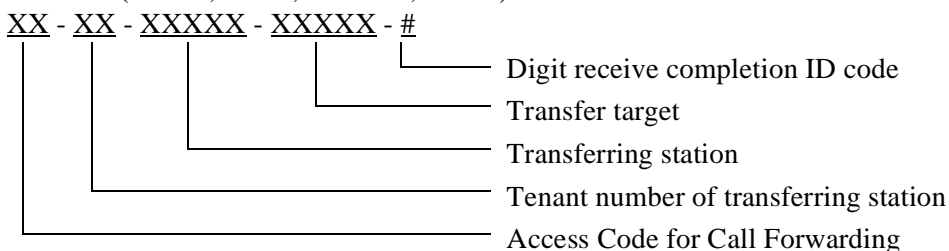
Service Conditions (cont'd)

a.) Pattern 1 (ASYD, SYS2, Index 15, b4= 0)

<u>XX</u> - <u>XX</u> - <u>XXXXX</u> - <u>XXXXX</u>

                Transfer target station

                Transferring station

                Tenant number of transferring station

                Access Code for Call Forwarding
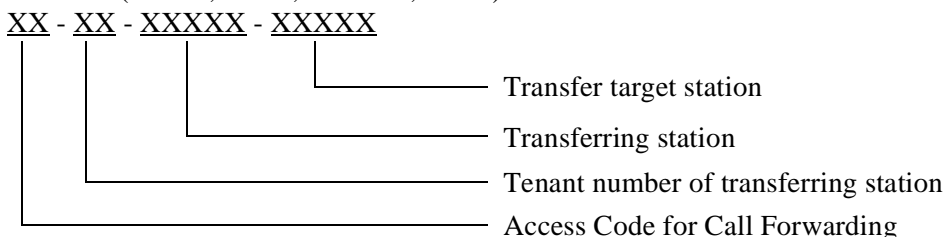
This pattern is used when a unified numbering plan is in use within the CCIS network.

b.) Pattern 2 (ASYD, SYS2, Index 15, b4 = 1)

<u>XX</u> - <u>XX</u> - <u>XXXXX</u> - <u>XXXXX</u> - <u>#</u>

                Digit receive completion ID code

                Transfer target

                Transferring station

                Tenant number of transferring station

                Access Code for Call Forwarding

This pattern is used when a unified numbering plan is not in use within the CCIS network.

2. Since the numbering plan at the transfer destination cannot be identified in this case, dialing the digit receive completion ID code (#) must be dialed.

3. If the transferring telephone number of the transfer target telephone number dialed by the attendant is a wrong number, the attendant receives Reorder tone. For example:

    a.) When an unobtainable number has been dialed.

    b.) When the transferring station or the transfer target station is restricted from the service.

    c.) When the number dialed is double registered.

4. A transferring telephone number is a maximum of 8 digits.

5. When the transferring station is an ATTCON, service can be set by its individual Attendant Number but the call is not transferred to the designated target station.

C-163   CCIS Networking via IP

General Description

This feature allows the system to utilize the CCIS network over Internet/Intranet. To establish or release a call, an IPTRK card is used for both speech and signal channels.
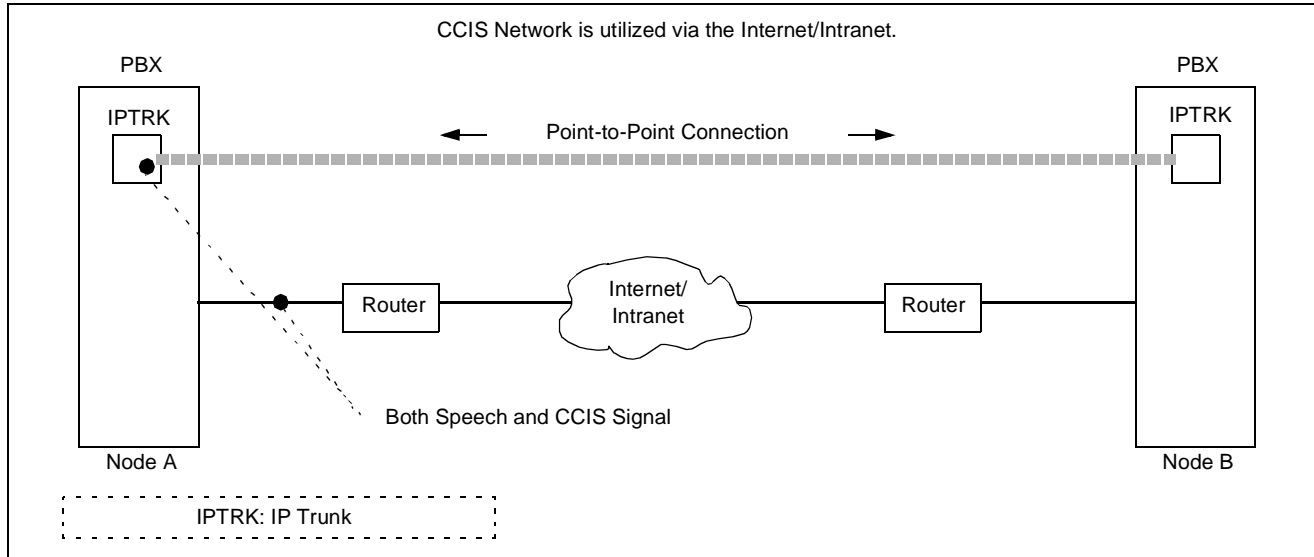
Operating Procedure

No manual operation is required.

Service Conditions

1.   To send or receive speech and CCIS signals, each node shall use an IPTRK circuit card(s). At this time, the IPTRK cards in the self-node and each of its connected node must be in 1-to-1 ratio, respectively (point-to-point connection).
2.   Two IPTRK cards per unit are the maximum. Accordingly, a total of 16 IPTRK cards can be accommodated per IMG.
3.   Only voice and FAX (G3) information can be sent or received via IPTRK card.
4.   The port, assignable for CCIS signaling, is only the 1st LEN of each HW block. Other ports are to be used for speech channels.
5.   A D-channel, assigned on an IPTRK card, can control the B-channels of the same card, and also those of a maximum of 7 other IPTRK cards.
6.   Tandem Path through function is not provided.
7.   This feature supports QoS (Quality of Service) function.
8.   When a system message indicates "TCP link failure" due to data congestion on the router or IP network, a call cannot be made via an IPTRK circuit card. When a call is attempted despite this, the caller hears busy tone.
9.   When a system message related to "TCP link failure", is created during call origination or speech, that call's speech channel is automatically restored via patrol function.

Service Conditions (cont'd)

10. The table below shows CCIS service features to be provided beyond the nodes:

	SERVICE FEATURE NAME	CONDITION
A-45	Attendant Camp-On with Tone Indication - CCIS	Provided
B-9	Busy Verification - CCIS	Provided
C-44	Call Back - CCIS	Provided
C-45	Call Forwarding - All Calls - CCIS	Provided
C-46	Call Forwarding - Busy Line - CCIS	Provided
C-47	Call Forwarding - Don't Answer - CCIS	Provided
C-50	Call Transfer - All Calls - CCIS	Provided
C-54	Call Transfer - Attendant - CCIS	Provided
C-55	Centralized Billing - CCIS	Provided
C-57	Centralized System Management Report - CCIS	Provided
D-68	Data Privacy on Demand - CCIS	Provided
D-71	Dial Access to Attendant - CCIS	Provided
D-74	Direct Termination - CCIS	Provided
D-75	Distinctive Ringing - CCIS	Provided independently
E-8	Executive Right of Way - CCIS	Provided
H-12	Hot Line - CCIS	Provided independently
I-17	Individual Attendant Access - CCIS	Provided
M-34	Message Reminder - CCIS	Provided
M-34D	Message Reminder - D^{term} - CCIS	Provided
M-35	Message Waiting Lamp Setting - Attendant - CCIS	Provided
M-36	Message Waiting Lamp Setting - Station - CCIS	Provided
N-37	Name Display - System - CCIS	Provided independently
O-11	Off-Hook Queuing - CCIS	Provided
S-52	Serial Call - CCIS	Provided
S-59	Step Call - CCIS	Provided
S-73	Supervisory Call - CCIS	Provided
V-7	Voice Call - CCIS	Provided

11. This feature does not support Broad Band Services H0/H1.
12. This feature can use Link Re-connection function. At this time, service conditions are the same as those for the normal CCIS network.
13. PAD can be provided for "receive" control only.
14. IPTRK-related tandem connection is not provided.

C-167   Centralized Maintenance - CCIS

General Description

This FCCS service allows all nodes (NEAX2400 IPX systems) in the multiple FCCS groups (networks where multiple NEAX2400 IPXs are connected via FCCS link) and NEAX2000 IVS^2 systems, connected via CCIS link, to be maintained from a single MAT. The MAT used for this feature is called Centralized MAT.

Note: *Requires NEAX2000 IVS^2 Series 2000 or later software.*

Operating Procedure

Refer to the NEAX2400 IPX CCIS No.7 System Manual.

Service Conditions

NEAX2000 IVS^2

1. The data transmission speed between a NEAX2000 IVS^2 and a NEAX2400 IPX is 64 kbps maximum.
2. Internal MAT software for NEAX2400 IPX and NEAX2000 IVS^2 are installed in a MAT and start up the software at the node to be logged in to.
3. See the manual describing NEAX2400 IPX for the method of checking the log-in user.

NEAX2400 IPX

1. All the systems in the network can be maintained by a single MAT (Centralized MAT).
2. The existing system (not NEAX2400 IPX) cannot be maintained via the Centralized MAT.
3. Time required for transmitting the 1 mbyte data (1 block of Data Memory) is 2 hours at 64 kbps data speed/ 1 hour at 128 kbps data speed/15 minutes at 512 kbps data speed.
4. The number of MATs to be installed may vary depending on the customer specification (one or two MATs can be used to centralize the MAT operation, and three or more MATs can be used to separate the MAT operation).
5. By user ID and password written in the NDM of each FCCS group, the log-in user is checked when logging in to the NEAX2400 IPX. This data is decided by the AUIDN command.
6. When on e of the conditions below are applied, the MAT is logged in to the node designated by the FPC, but within the FCCS group where the MAT is installed, regardless of the designated FUG number (FCCS group number) data.
   a.) When no data is assigned to the SELF_FUG (FUG number in the self-FUG) in the AFUGN command.
   b.) When the FUG requested by the MAT is "0".
   c.) When the FUG requested by the MAT is the FUG number of the self-FUG.
7. The traffic information of the NEAX2000 IVS^2 may be collected from the Centralized MAT by logging into the NEAX2000 IVS^2 node, and using the traffic information collecting command dedicated to the NEAX2000 IVS^2.
8. The function to collect traffic information of the NEAX2400 IPX is activated by logging into the NCN (Network Center Node) of each FCCS group.

D-41 Data Communication - CCIS

General Description

This service allows Inter-Office data communication service where the Digital Interface (DTI) is used as the CCIS Line over a T1 channel (Digital Link Channel).
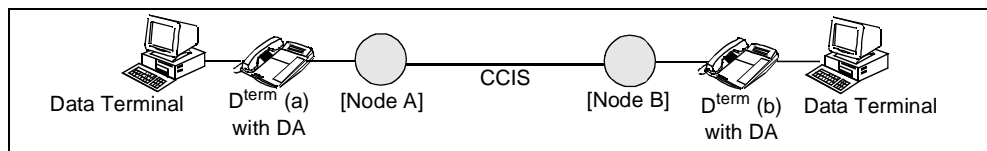
With this service, the data communication line between synchronous and asynchronous terminals can be directly connected to the DTI without using the MODEM Pooling or a DST card.

Operating Procedure

When transmitting data from Data Adapter

1. Press the DATA key on D^{term} (a); the LCD displays:

DATA

   Data Terminal — D^{term} (a) with DA — [Node A] — CCIS — [Node B] — D^{term} (b) with DA — Data Terminal

2. D^{term} (a) dials the number for D^{term} (b); the LCD displays:

DATA XXXX

3. D^{term} (b) is being rung; the LCD displays:

WAIT DATA XXXX

   RBT — [Node B] — Data Terminal — D^{term} (a) with DA — [Node A] — CCIS — RBT — RG — D^{term} (b) with DA — Data Terminal
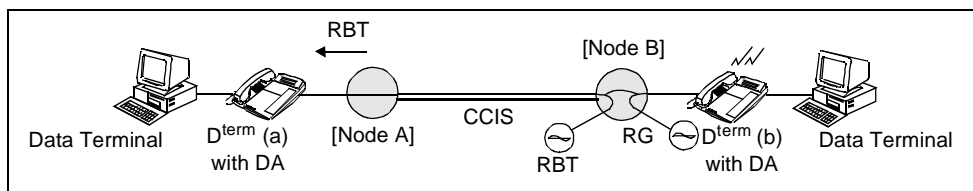
4. D^{term} (b) answers; the LCD displays:

READY D YYY XX

   TRK Name   TRK Number

   Data Terminal — D^{term} (a) with DA — [Node A] — CCIS — [Node B] — D^{term} (b) with DA — Data Terminal
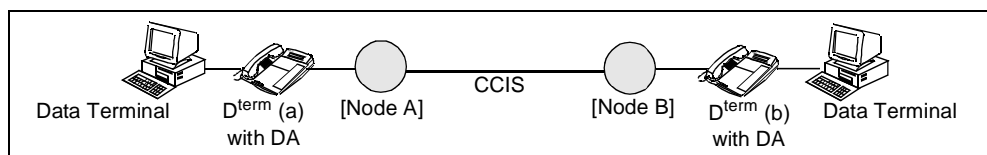
5. Data communication ends.

Operating Procedure (cont'd)

When cancelling the data connection

1.   Press the DATA key on D$^{\text{term}}$ (a); the LCD of D$^{\text{term}}$ (a) restores the display of Time and Date.

Note: *If the opposite DTE is released, the buzzer on the Data Module/Data Adapter sounds three times. Enter Release command RLS RETURN from the keyboard of the DTE. RLS and RELEASED are displayed on the monitor screen. The data connection has been released.*

Service Conditions

1.   In Tandem Operation, the second T1 link does not have CCIS, so that a digital end-to-end connection cannot be digital because no control signals are passed. In this case, MODEM Pooling (or use of DST cards if installed) is necessary.

2.   A data call originated from a DTE via the digital data line is valid only when the call is an LCR call. This is also applicable to a tandem connection.

3.   For 56 kbps synchronous data, a separate T1 channel with no voice capability is required.

D-65 Data Interface - Automatic Answer - CCIS

General Description

This feature allows a data terminal to automatically answer an incoming CCIS call without manual operation, therefore, providing the capability of receiving electronic mail.

Operating Procedure

AUTOMATIC ANSWER for terminating data calls, Automatic Answer Mode can be set by the following methods

1. Set the Data Module DIP switch to the proper setting.
2. Press the DISP/AUTO key of the D^{term} to set the Data Adapter to Auto Answer ON.
3. Set Automatic Answer when assigning attribute data via the D^{term}/Data Adapter or MAT.

Service Conditions

1. This feature can be cancelled at the data terminal by changing the DIP switch setting to Manual Answer or by pressing the DISP/AUTO button of the D^{term} again (the associated LED is extinguished).
2. This feature can be activated even if the D^{term} station is in the DO NOT DISTURB - CCIS [D-76] mode.

Interactions

1. DATA INTERFACE-AUTOMATIC ANSWER for a Data Module is set via switch settings on the outside of the Data Module.
2. DATA INTERFACE-AUTOMATIC ANSWER may be programmed from the D^{term} via attribute data, thus saving a programmable line/feature key.
3. When a Data Module is used between a Data Terminal and the PBX, certain character string sequences relating to status are exchanged as call set up progresses.
4. After a call connection is made, the Data Module looks for the ESC character followed by RELEASE as a disconnect request from the DTE. The Data Module requests a disconnect from the PBX.

D-66   Data Line Security - CCIS

General Description

This feature allows line circuits used for data transmission to be protected from interruptions, such as, ATTENDANT CAMP-ON WITH TONE INDICATION - CCIS [A-45], BUSY VERIFICATION - CCIS [B-9], EXECUTIVE RIGHT-OF-WAY - CCIS [E-8], and ATTENDANT OVERRIDE [A-7].

Operating Procedure

No manual operation is required.

Service Conditions

1. If an Attendant or user attempts to set ATTENDANT CAMP-ON WITH TONE INDICATION [A-1] [A-45], BUSY VERIFICATION [B-3, B-9], EXECUTIVE RIGHT-OF-WAY [E-1, E-8], or ATTENDANT OVERRIDE [A-7], reorder tone will be received.
2. This feature is activated through system data programming (see CLASS OF SERVICE-INDIVIDUAL [C-15]).

Interactions

1. This feature is usually programmed on a per-station basis.
2. The DATA LINE SECURITY feature functions both when calls are originated and when calls are terminated.
3. CALL PICK-UP [C-7, C-30]: Calls directed to a station assigned a DATA LINE SECURITY feature can be picked-up by another station.
4. DIRECT OUTWARD DIALING: If the Attendant Console extends a C.O. trunk to a station, the DATA LINE SECURITY feature is not effective until after the Attendant Console has released from the connection.

D-67   Data Line Privacy - CCIS

General Description

This feature automatically prevents interruptions from features such as ATTENDANT CAMP-ON WITH TONE INDICATION - CCIS [A-45], BUSY VERIFICATION - CCIS [B-9], and EXECUTIVE RIGHT-OF-WAY - CCIS [E-8] during data transmission through the CCIS network.

Operating Procedure

Data Connection (D^{term} - Data Adapter/Data Module): No manual operation is required. When a data call is activated (Data Adapter/Data Module), DATA PRIVACY - CCIS is set automatically. When the data transmission has finished, DATA PRIVACY is automatically cancelled.

Service Conditions

1. The following connections are restricted when DATA PRIVACY - CCIS is active because transmitted tones are involved in their operation.

ATTENDANT CAMP-ON WITH TONE INDICATION	[A-1, A-45]
BUSY VERIFICATION	[B-3, B-9]
EXECUTIVE RIGHT-OF-WAY	[E-1, E-8]

    If these features are attempted, a reorder tone will be received.
2. DATA PRIVACY - CCIS cannot prevent disruptions in data transmission generated from outside the CCIS network.
3. When the data call disconnects, DATA PRIVACY - CCIS is automatically cancelled.
4. When DATA PRIVACY - CCIS is activated, the circuit cannot be accessed by any PBX feature.
5. This feature cannot be activated at a Tandem Office in the CCIS network.
6. DATA PRIVACY - CCIS must be set at both communicating offices in the CCIS network.

Interactions

DATA PRIVACY - CCIS is the disallowing of the EXECUTIVE RIGHT-OF-WAY [E-1, E-8], BUSY VERIFICATION [B-3, B-9], and ATTENDANT OVERRIDE [A-7] features. All of the above options will provide the desired effect.

D-68 Data Privacy on Demand - CCIS

General Description

This feature allows a station user to prevent interruptions by features such as ATTENDANT CAMP-ON - CCIS [A-45], BUSY VERIFICATION - CCIS [B-9], and EXECUTIVE RIGHT-OF-WAY - CCIS [E-8] during data transmission through the CCIS network by dialing a DATA PRIVACY feature code.

Operating Procedure

To activate DATA PRIVACY ON DEMAND from a single-line telephone

1. Lift the handset; receive Dial Tone.
2. Dial the desired station number.
3. Before starting data communications, switch hook flash; receive Special Dial Tone.
4. Dial the DATA PRIVACY ON DEMAND-CCIS access code; receive Service Set Tone.
5. Switch hook flash to return to the original connection, or wait 30 seconds to return automatically.

To cancel DATA PRIVACY ON DEMAND from a single-line telephone

1. While connected, switch hook flash; receive Special Dial Tone.
2. Dial the DATA PRIVACY ON DEMAND-CCIS cancel code; receive Service Set Tone.
3. Switch hook flash to return to the original connection, or wait 30 seconds to return automatically.

Service Conditions

1. The following connections are restricted when DATA PRIVACY ON DEMAND-CCIS is active as transmitted tones are involved in their operation.

BUSY VERIFICATION-CCIS	[B-9]
ATTENDANT CAMP-ON WITH TONE INDICATION-CCIS	[A-45]
EXECUTIVE RIGHT-OF-WAY-CCIS	[E-8]

   If these features are attempted, a reorder tone will be received.
2. DATA PRIVACY ON DEMAND-CCIS cannot prevent disruptions in data transmission generated from outside the CCIS network.
3. When the data call disconnects, DATA PRIVACY ON DEMAND-CCIS is automatically cancelled.
4. When DATA PRIVACY ON DEMAND-CCIS is activated, the circuit cannot be accessed by any PBX feature.
5. A station user can activate this feature at any time during data transmission.
6. DATA PRIVACY ON DEMAND-CCIS cannot be activated for a station user from the Attendant Console.
7. This feature can be activated for both originating and terminating calls.
8. This feature cannot be activated at a Tandem Office in the CCIS network.
9. DATA PRIVACY ON DEMAND-CCIS must be set at both communicating offices in the CCIS network.

Interactions

A single-line telephone may have set both ATTENDANT CAMP-ON WITH TONE INDICATION [A-45] and DATA PRIVACY ON DEMAND-CCIS.

D-69   Data Transparency - CCIS

General Description

This feature provides a DATA TRANSPARENCY path between nodes within the CCIS network for data transmission using a Data Module or D^{term}/ Data Adapter.

Operating Procedure

No manual operation is required.

Service Conditions

1. Upon data call origination or termination using a Data Module equipped DTE, certain character string sequences relating to status are exchanged over the CCIS network during call set up.
2. After the data connection is established, the Data Module looks for a disconnect request from the DTE, which consists of the ESC character followed immediately by RELEASE.
3. An asynchronous transparency path up to 9600 bps is provided.
4. A synchronous transparency path up to 48 Kbps is provided.

D-70   Deluxe Traveling Class Mark - CCIS

General Description

This feature provides call connection restrictions within the CCIS network. The following three types of restrictions are allowed:

- Deluxe Traveling Class Mark Restriction
- Route Restriction
- Numbering Restriction

Operating Procedure

Refer to the NEAX2400 IPX Office Data Specification.

Service Conditions

1. The Route Restriction Class (RSC) of the calling party is sent to the called office as a Deluxe Traveling Class Mark (TCM), which is used for call restriction.

2. A maximum of 15 restriction levels can be sent as a TCM.

3. The transmitted TCM is used to check restrictions on calls outside the CCIS network.

4. Route Restriction is used to restrict a call based on the caller's restriction class and the selected route.

5. Numbering Restriction is used to restrict a call based on the number dialed. The following three types of Numbering Restrictions are used:
   - Toll Restriction
   - Toll Restriction-3/6 Digit
   - Unauthorized Code Restriction

6. The following additional restriction features can be used by an office within the CCIS network:
   - Time-of-Day Change
   - Clocked Manual Override
   - Attendant Manual Override

Interactions

DELUXE TRAVELING CLASS MARK - CCIS is required when used in an EPN or ETN environment. It is not required for CCIS.

D-71 Dial Access to Attendant - CCIS

General Description

This feature allows a user to access an Attendant Console through the CCIS network by dialing an Operator Call Code.

Operating Procedure

To access an Attendant Console

1. Dial the Operator Call Code; receive ringback tone.
2. The ATND lamp on the Attendant Console flashes for INCOMING CALL IDENTIFICATION - CCIS.
3. The Attendant answers the call.

Service Conditions

The attendant can complete these calls to trunk facilities, if allowed by the station's CLASS OF SERVICE [C-15]. Therefore, the Attendant can extend a station call to another station in the CCIS network.

Interactions

1. Stations will terminate to the Attendant Console.
2. If Tenant A is not equipped with an Attendant Console, stations in Tenant A may terminate at Tenant B's Attendant Console. Tenant B's Attendant Console must be programmed to accept the calls from Tenant A.
3. Stations may dial the ASAT number to terminate at a specific Attendant Console. See INDIVIDUAL ATTENDANT ACCESS [I-6].
4. When the system is in the Night mode, a station dialing "0" can be answered by the assigned ATTENDANT NIGHT TRANSFER [A-19] station, if provided. However, when the ASAT number is dialed in the Night mode, reorder tone is returned. No connection is allowed to the ATTENDANT NIGHT TRANSFER [A-19] or telephone number.
5. A remote station in TN 2 will ring the ATTENDANT CONSOLE of TN 2 in the MAIN NODE.
6. A remote station in TN 2 will ring the Attendant Night Transfer station of TN 2 in the MAIN NODE.

D-72 Digital Display - Station - CCIS

General Description

This feature provides the Attendant Console with a visual display of the telephone number, the Trunk Route Restriction CLASS OF SERVICE [C-15], and tenant number during Attendant-to-Station connection within the CCIS network.

Operating Procedure

The DIGITAL DISPLAY is automatically activated whenever the Attendant Console answers an incoming call from a station or originates a call to a station.

Service Conditions

1.   The tenant number appears on the left side of the display, followed by the Trunk Route Restriction class, then the station number. See Example 1.
2.   If the Trunk Route Restriction Class and/or tenant number are not single digits, refer to Examples 2 and 3.
3.   If the station dialed by the Attendant Console is busy or in LINE LOCKOUT [L-3] mode, only the telephone number will be displayed.
4.   The DIGITAL DISPLAY is limited to six digits. Since the CLASS OF SERVICE [C-15] and Trunk Route displays are in numerical form, a list must be provided for the Attendant to explain the restrictions of each CLASS OF SERVICE [C-15] number and Trunk Identification number.
5.   The DIGITAL DISPLAY will occur automatically whenever a call is answered or originated by the Attendant.

     Example 1: Single-digit Trunk Route Restriction class and Tenant number; four-digit station number:

| 1 | 1 | 2 | 2 | 2 | 2 |

Tenant Number — Route Restriction Class — Telephone Number
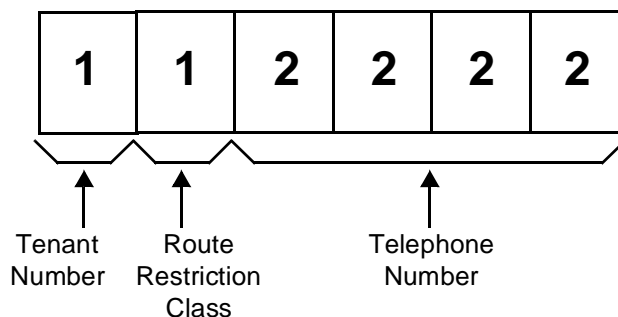
Example 2: Two-digit Trunk Route Restriction class of Tenant number; four-digit station number:

| | | 2 | 2 | 2 | 2 |

2-Digit Route Restriction or Tenant Number — Telephone Number
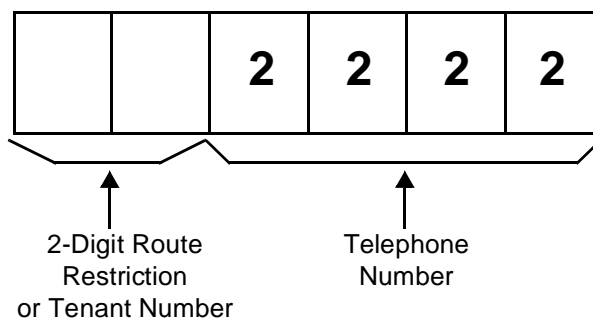
Service Conditions (cont'd)

Example 3: When five-digit station numbering is used, only the station number is displayed:

	2	2	1	1	2
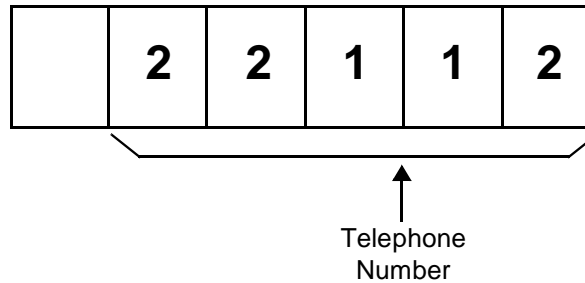
Telephone
Number

Note: *When the telephone number exceeds 6 digits, last 6 digits are displayed.*

Interactions

1. CALL FORWARDING - CCIS [C-45, 46, 47]: Calls are forwarded from Station A to Station B. When the Attendant extends a call to Station A, Station B's number is indicated on the DIGITAL DISPLAY-STATION rather than Station A's number.

2. STATION HUNTING [S-7, 8, 9]: The Attendant Console extends a call to a busy telephone in a Hunt group. The terminating telephone number is indicated on the DIGITAL DISPLAY-STATION rather than the called telephone number.

3. DIGITAL DISPLAY STATION feature will occur whenever the Attendant performs any of the following actions:
   a.) Extends an incoming call to a user.
   b.) Originates a call to a user.
   c.) Answers a recall or call forwarding call.
   d.) Re-enters a held station call.

D-73   Digital Display - Trunk - CCIS

General Description

This feature provides a visual indication at the Attendant Console of incoming and outgoing trunk calls through the CCIS network. Trunk Identification number, Trunk Route number, and tenant number or Central Office trunk code, are displayed on a six-digit digital display.

Operating Procedure

The digital display is automatically activated whenever the Attendant answers or originates a trunk call.

Service Conditions

1. All trunks (WATS, FX, CCSA and TIE) will appear on the digital display.
2. The tenant number is displayed on the left side of the digital display, followed by the Trunk Route number, and then the Trunk Identification number.
3. If the Trunk Route number is three digits, the tenant number is not displayed.
4. The DIGITAL DISPLAY is limited to six digits. Because the Class Of Service and Trunk Route displays are in numerical form, a list must be provided for the Attendant, giving an explanation of each Class Of Service and Trunk Identification number.
5. The DIGITAL DISPLAY-TRUNK - CCIS feature displays either Trunk Route information or a four-digit Central Office code. These options are selected on a per-trunk-group basis.
6. When Trunk Route information is displayed, one digit identifies the tenant, two digits identify the trunk group, and three digits identify the trunk number.
7. The DIGITAL DISPLAY-TRUNK - CCIS will appear automatically whenever the Attendant answers or originates:
    a.) An incoming C.O. call
    b.) Incoming TIE Line call
    c.) Intercept call
    d.) Outgoing C.O. call
    e.) Outgoing TIE Line call
    f.) Reenters a held trunk call.
    Example 1: Trunk

Service Conditions (cont'd)

Example 2: Trunk

		2	**1**	**1**	**2**
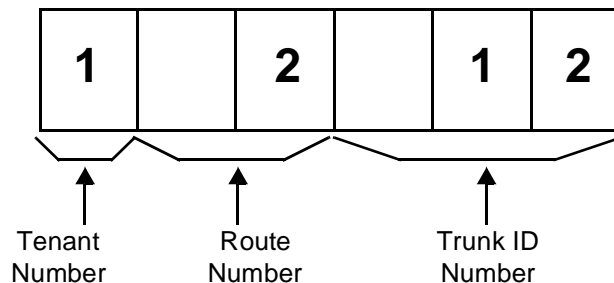
Central Office
Trunk Code
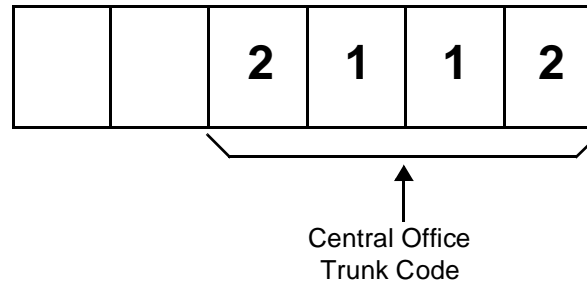
Interactions

1. For display purposes only, Route and Trunk numbers and Central Office Codes may be used simultaneously in the same system and are applied on a per-route basis, via ARTD, CDN 25:R/L.

2. If System Data 1, Index 68 bit 2 is assigned for Individual Trunk Access to be the ACOC code, then all trunks in all routes in the system must have the ACOC code assigned. Trunk Routing display information:

   1 digit identifies the tenant
   2 digits identify the trunk group
   3 digits identify the trunk number.

3. DIGITAL DISPLAY-TRUNK - CCIS feature will occur whenever the Attendant answers/originates:

   Incoming CO-type (DID, 2-way, 1-way INC, FX, WATS) calls
   Incoming TIE Line calls
   Intercept calls
   Outgoing CO-type (DOD, WATS, FX) calls
   Outgoing TIE Line calls
   Reenters held trunk calls.

4. By pressing the loop key of a camped-on call, the Attendant can determine both the trunk and telephone numbers of the camped on call. See ATTENDANT CAMP-ON WITH TONE INDICATION - CCIS [A-45].

D-74   Direct-In Termination - CCIS

General Description

This service feature allows Inter-Office Direct-In Termination for a case where an incoming call addressed to a station in a PBX from a C.O. line is to be terminated to a station belonging to a different PBX in the CCIS network.

Operating Procedure

1.   A DIT call terminates to Node A.
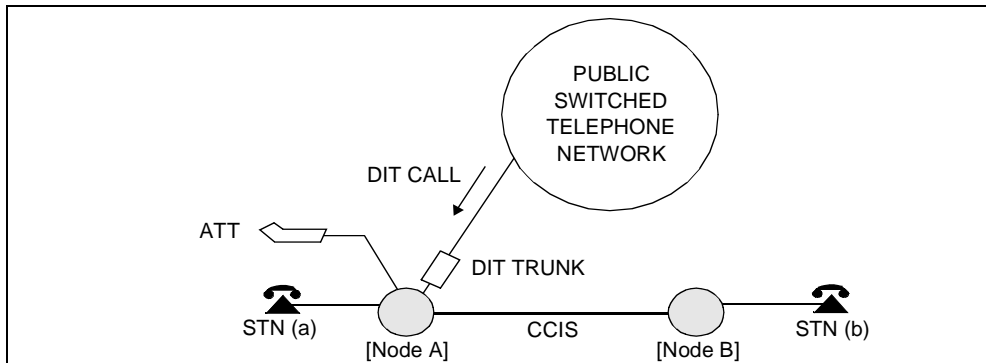
2.   The DIT call terminates to Node B through CCIS and rings station B in Node B.
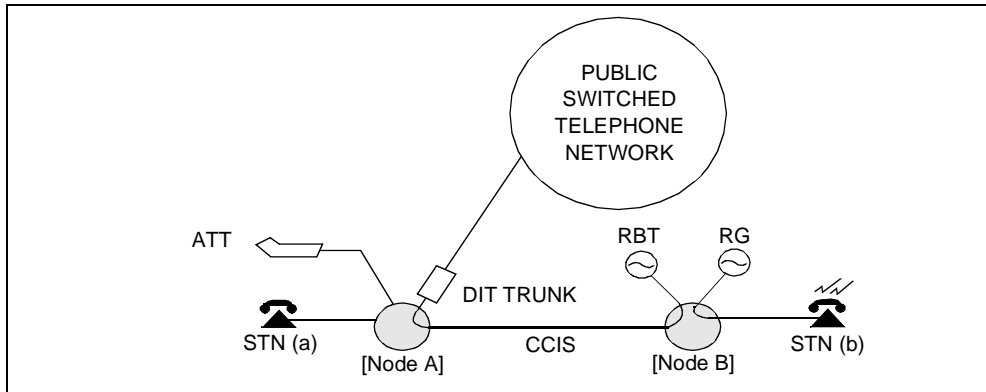
Service Conditions

1.   Bothway trunks can be used for DIRECT-IN TERMINATION, but incoming only trunks are recommended.
2.   It is not necessary to order special DID trunks as is required with DIRECT INWARD DIALING [D-8]. However, care should be exercised in the application of central office trunk hunting.
3.   If the called party is busy, the following conditions apply:
      a.)   When the call is directly terminated, the call will ring until the called station becomes idle or the call is forwarded to an attendant according to the system data.
      b.)   In case of the call terminated via tandem connection (the call is originated from C.O. line and CCIS line is intermediate interface), the call waits for a certain time and tries to terminate to the destination (the call is not forwarded to Attendant Console irrespective of the system data).

Service Conditions (cont'd)

   c.) In case the call is terminated via tandem connection (the call is originated from ISDN line and CCIS line is intermediate interface), the call is disconnected (the call is not forwarded to Attendant Console irrespective of the system data).

4. If there is no answer at a station, the calling party will continue to receive Ring Back Tone. There is no AUTOMATIC RECALL [A-8] to the attendant.

5. Once a call is answered, it can be processed by the called station like any normal trunk call.

6. DIRECT-IN TERNIMATION is mutually exclusive with NIGHT CONNECTION-FIXED [N-1].

7. If the station is assigned to a STATION HUNTING [S-7, 8, 9] group, the incoming call will follow the hunt group station assignment. If the station is in CALL FORWARDING mode, the incoming call is connected to the CALL FORWARDING target station.

8. Direct-In Termination trunks can be programmed to terminate elsewhere in the night mode.

9. DIRECT-IN TERMINATION must be assigned as Ground Start.

D-75 Distinctive Ringing - CCIS

General Description

This service feature allows Inter-Office Distinctive Ringing for a call terminated from a different PBX in the CCIS network.

Operating Procedure

1.   Station (c) and the Attendant in Node A are engaging in a call.
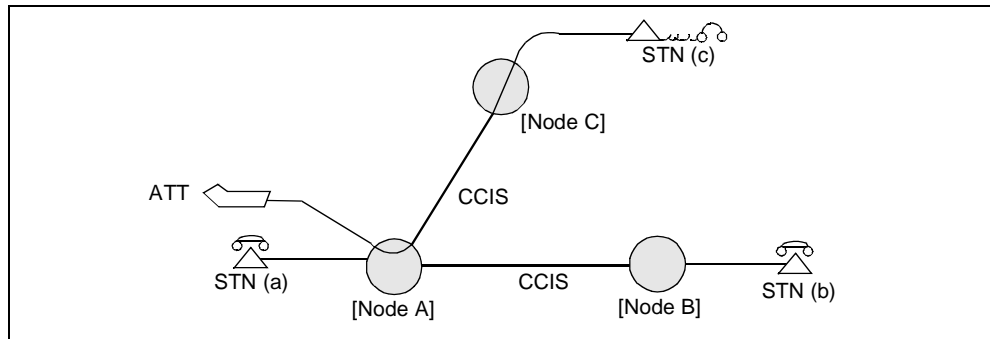
2.   The Attendant dials the number for Station (b); receives ringback tone. Station (c) receives Hold Tone, and Station (b) is rung (Distinctive Ringing).
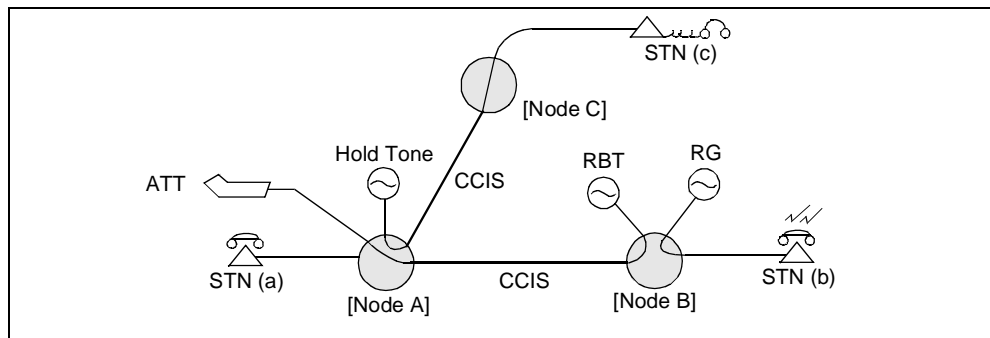
Service Conditions

1.   Ring for Incoming Internal Calls on CCIS network:

     2-seconds on
     4-seconds off
     2-seconds ring
     4-seconds off

2.   Ring for Incoming External Calls on CCIS network:

     1-second on
     2-second off or 2-second on
     4-second off

3.   This feature may be assigned to individual trunk routes via system data programming.

D-76D   Do Not Disturb - D^{term} - CCIS

General Description

This feature allows a D^{term} user to temporarily establish a DO NOT DISTURB status, during which time incoming CCIS calls will be denied access to the MY-Line of the D^{term}.

Operating Procedure

To set

1.   Press the DO NOT DISTURB (DND) key. The associated LED will light. The LCD displays:

```
┌─────────────────────────────────┐
│  DND SET                         │
│             (Time Display)       │
│                                  │
│                                  │
└─────────────────────────────────┘
```

To cancel

1.   Press the DO NOT DISTURB (DND) key. The associated LED will be extinguished. The LCD displays:

```
┌─────────────────────────────────┐
│  DND CANCEL                      │
│             (Time Display)       │
│                                  │
│                                  │
└─────────────────────────────────┘
```

Service Conditions

1.   This service can only be set or cancelled while the D^{term} is idle.
2.   Line appearances programmed to ring will not do so while DND is set.
3.   While DND is set, outgoing calls can be made from the My-Line. Incoming calls can be answered on all lines except the My-Line.
4.   DND is not displayed on a calling D^{term}'s LCD when the called station is in DND mode (ASFC: SFI 114 = 1), and reorder tone is sent to the calling party. No indication will appear when the called station is a HOTLINE [H-12] in the DO NOT DISTURB mode.
5.   If the DND station is in a Hunt group, that station will be skipped in the hunting pattern.
6.   The following service features are denied to the DND station:

ATTENDANT CAMP-ON WITH TONE INDICATION	[A-45]
ATTENDANT OVERRIDE	[A-7]
BOSS-SECRETARY OVERRIDE-D^{term}	[B-6]
BUSY VERIFICATION - CCIS	[B-9]
CALL WAITING-TERMINATING	[C-12]
CALL WAITING-ORIGINATING	[C-31]
EXECUTIVE RIGHT-OF-WAY - CCIS	[E-8]
VOICE CALL - CCIS	[V-7]

Interactions

1. DATA INTERFACE-AUTOMATIC ANSWER - CCIS [D-65] may not be activated if the D^{term} station is in the DND mode.

2. CALL FORWARDING-BUSY LINE - CCIS [C-45]: This feature can be activated to an idle station that has set DO NOT DISTURB - CCIS.

D-86 Data Hotline - CCIS

General Description

This feature allows data stations to access Data Terminal Equipment (DTE) in a satellite office of a CCIS network, by automatically dialing a SPEED CALLING-SYSTEM [S-3] number.

Operating Procedure

1. Manual CALL Origination via a Data Adapter:
    a.) Press the D^{term} DATA key
    b.) The DATA lamp will flash and the calling D^{term} will display the following:

    ```
    DATA                          XXXX
            (Time Display)
    ```

2. Manual Call Origination via Keyboard Dialing:
    a.) Enter DM CALL at the terminal
    b.) The display of the terminal will indicate the following:

    ```
    CALLING
            (Time Display)
    ```

3. Activation of Data Terminal Ready (DTR) via a Data Adapter:
    a.) Activate Equipment Ready (ER) or DTR from the data terminal equipment.
    b.) The D^{term} will display the following:

    ```
    CALLING
            (Time Display)
    ```

4. Activation of DTR via Keyboard Dialing:
    a.) Activate ER or DTR from the Data Terminal Equipment.

Service Conditions

The following hardware supports this feature:

D^{term}:	PA-4DLCC issue 14A/PA-8DLCH
	PA-4DLCE issue 1A/PA 16ELCD (when set in DLCH mode)
	PA-4DLCF
Data Module:	PA-4DTLA issue 7A
Modem Trunk:	PA-4MDTA issue 2A PA-M28

Interactions

1. SPEED CALLING-SYSTEM [S-3] must first be provided.
2. FORCED ACCOUNT CODES [F-7] and AUTHORIZATION CODES [A-20] cannot be programmed for use via SPEED CALLING-SYSTEM.
3. Pauses are programmable from the MAT, using the P of the keyboard. Pauses consume one digit of the 24 digits available. A pause lasts for 2.8 seconds.

Interactions (cont'd)

4. TOLL DIVERSION/TOLL DENIAL [T-6] and TOLL RESTRICTION-3/6 DIGIT [T-7] will not interact with this feature if a station is allowed access to an ADC via Service Feature Class.

5. This feature designates the use of a SPEED CALLING-SYSTEM [S-3] number when the DATA key is activated.

6. UNIVERSAL SENDER [U-3] must also be provided.

D-91 Dialed Number Display - Recall - CCIS

General Description

When the Attendant Console makes an outgoing call to a CCIS line by means of a tandem connection, and the Attendant has left the call by pressing the RELEASE button before the called Party answers, the Attendant Console will be recalled if the Called Party does not answer. This service feature changes the display, when the Recall is answered, from Route and Trunk to Dialed Number.

Operating Procedure

1. Subscriber (a) and the Attendant in Node A are engaging in a call through a DID line.
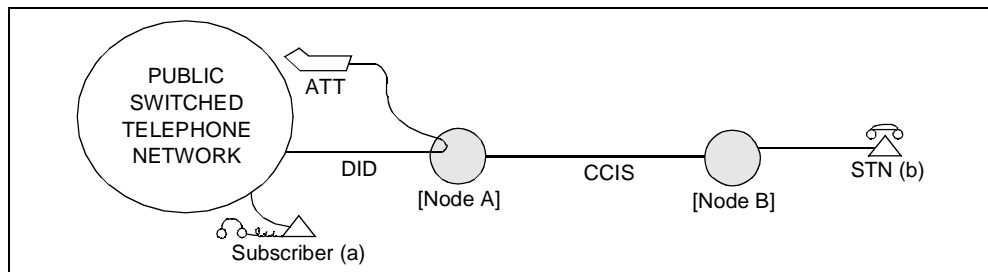
2. The Attendant dials the number for Station (b); receives ringback tone. Subscriber (a) receives Hold Tone, and Station (b) is rung (Distinctive Ringing).
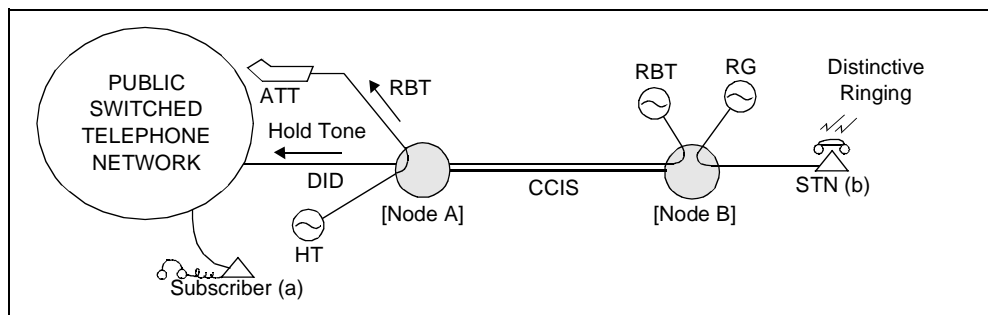
3. The Attendant presses the RELEASE key; Subscriber (a) receives ringback tone.
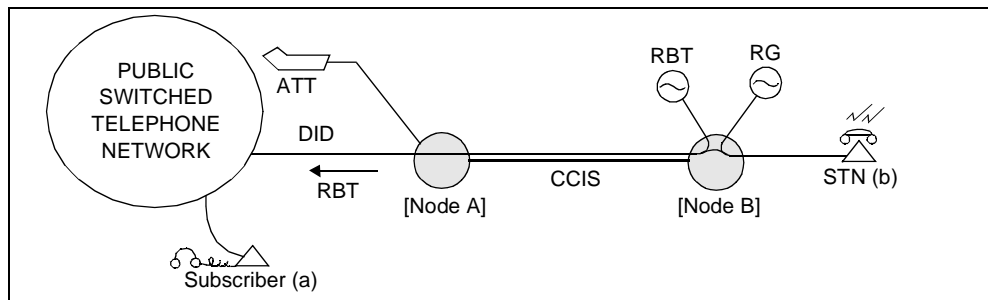
Operating Procedure (cont'd)

4. If, after a predetermined time has elapsed, Subscriber (a) is not connected with Station (b), the call is recalled to the Attendant Console in Node A and it answers. Press the DEST key; the dialed number of Station (b) is indicated. Station (b) continues to ring until the Attendant presses CANCEL Key.
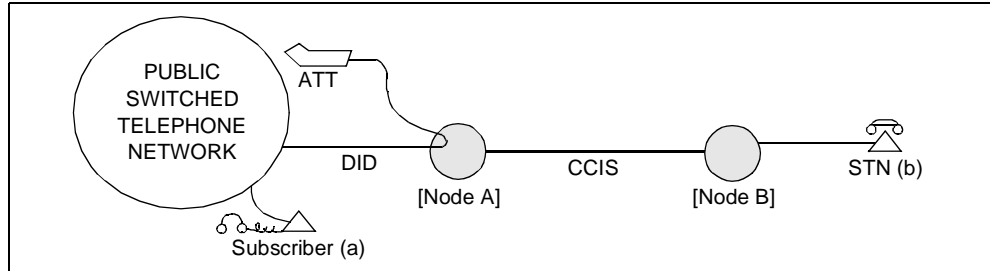
Service Conditions

If the called party answers after the Attendant has answered the recall, the display changes from dialed number to the answering telephone number. A three-way conference is made.

D-93D Dual Hold D^term - CCIS

General Description

This feature allows two connected D^terms to simultaneously be placed on non-exclusive hold over a CCIS link. This enables the held parties to answer or originate a call from a sub-line appearance or the idle Prime Line.

Operating Procedure

To place a call

1. When two D^terms are connected via CCIS, either D^term user can press the HOLD button and place the other D^term on NON-EXCLUSIVE HOLD-D^term [N-7D].

2. If the held D^term user wishes to originate or answer another call from a multi-line appearance, the held D^term presses the HOLD button and places the CCIS connection in a DUAL HOLD condition.

To answer a call

1. The D^term user goes off hook and presses the held line. If MUSIC ON HOLD [M-7] is heard (if provided), the other D^term has placed the connection on hold. MUSIC ON HOLD [M-7] will be heard until the connected D^term presses the held line and enters the call.

Service Conditions

1. While the call is in DUAL HOLD, AUTOMATIC RECALL-D^term [A-8D] will be initiated after the time-out.

2. DUAL HOLD - CCIS cannot be activated for calls established by:

    BUSY VERIFICATION - CCIS   [B-9]
    ATTENDANT CAMP-ON WITH TONE INDICATION - CCIS [A-45]
    EXECUTIVE RIGHT-OF-WAY - CCIS   [E-8]

E-8   Executive Right-of-Way - CCIS

General Description

This service feature allows Inter-Office Executive Right-of-Way when the bridging-in station and the bridged station respectively, belong to a different PBX in the CCIS network.

Operating Procedure

1. While Stations A and B are engaging in a call, Station C goes off-hook and receives dial tone.
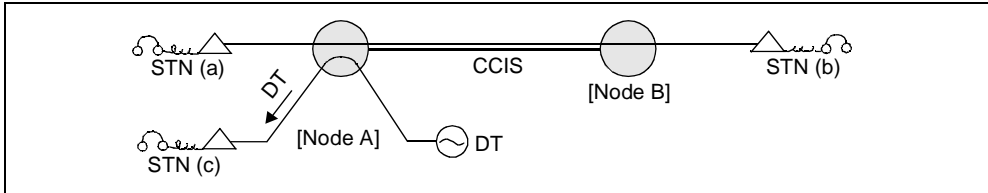
2. Station C dials the number for Station B and receives busy tone.
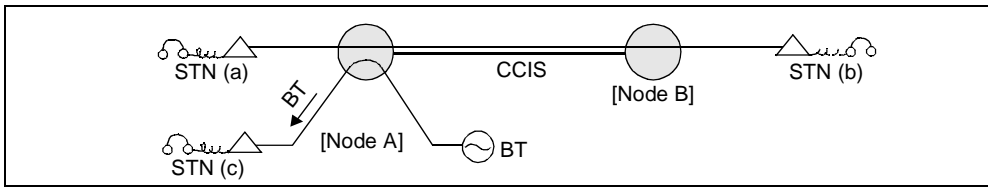
3. Station C switch hook flashes and receives special dial tone.
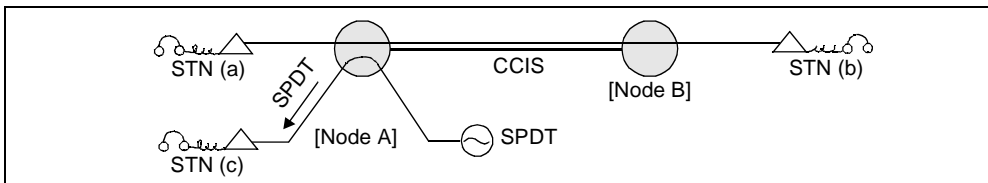
4. Station C dials the Executive Right-of-Way access Code; Stations A, B and C receive Warning Tone. Station C is added to the connection between Stations A and B, making it a 3-Way connection.
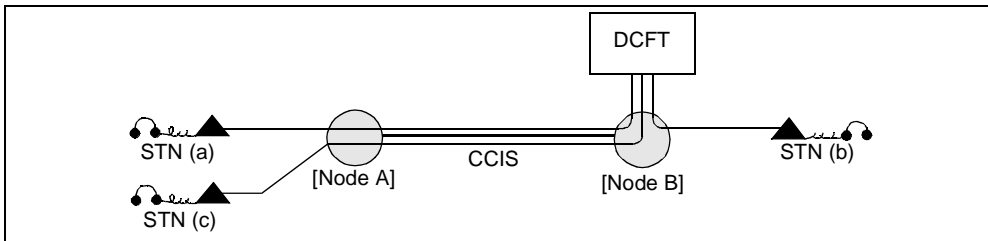
Operating Procedure (cont'd)

5. Station A hangs up; Stations C and B remain connected with each other until either or both go on-hook.
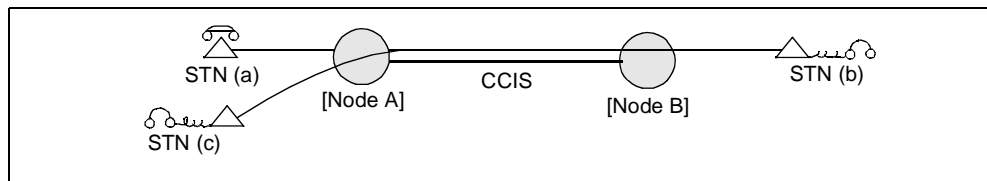
Service Conditions

1. Two burst tones are transmitted upon activation to alert connected parties that an EXECUTIVE override connection is being made.

2. EXECUTIVE Right-of-Way may be denied if the busy station is:

   a.) Dialing or in LINE LOCKOUT [L-3]
   b.) Listening to a tone
   c.) Being rung
   d.) Protected from override via CLASS OF SERVICE-INDIVIDUAL [C-15]
   e.) Protected by DATA LINE SECURITY [D-12]
   f.) Being connected to an Attendant loop
   g.) Activating a conflicting feature such as:
   Attendant CAMP-ON WITH TONE INDICATION - CCIS   [A-45]
   BUSY VERIFICATION - CCIS   [B-9]
   CALL FORWARDING-ALL CALLS   [C-5]
   CALL HOLD   [C-6]
   CALL TRANSFER - CCIS   [C-50, 54]
   CONSULTATION HOLD-ALL CALLS - CCIS   [C-58]
   CALL PARK   [C-29]
   CALL WAITING-TERMINAL   [C-12]
   THREE-WAY CALLING   [T-2]

   In any of the above instances, the calling station will receive reorder tone.

3. If after the 3-Way bridge is established, one party disconnects, the remaining two parties will still be connected.

4. The maximum number of simultaneous EXECUTIVE overrides allowable is dependent on the number of Digital Conference Trunks included in the TSW/MUX cards at the called office on the CCIS network.

5. This feature can be denied on DICTATION [D-3] and PAGING [P-1] connections through programming in system data.

E-9 Elapsed Time Display - CCIS

General Description

This feature provides an LCD display of the time elapsed while a D^{term} is connected to any trunk through the CCIS network.

Operating Procedure

No manual operation is required.

Service Conditions

1. The elapsed time is displayed in the eight left-side positions of the LCD display.
2. The elapsed time can reach a maximum of 9 hours, 59 minutes and 59 seconds, after which the clock returns to zero.
3. A continuous time display will occur during CONSULTATION HOLD - ALL CALLS - CCIS [C-58], THREE-WAY CALLING [T-2], EXCLUSIVE HOLD - D^{term} [E-4D] and NON-EXCLUSIVE HOLD - D^{term} [N-7D].
4. When a call is transferred, the elapsed time of the party receiving the transfer begins at zero.
5. When the D^{term} returns to the original call from CALL TRANSFER - ALL CALLS - CCIS [C-50] or CALL HOLD [C-6] [C-6D], the elapsed time begins at zero.
6. The elapsed time is not displayed when the station is in a specific condition, such as:
   a.) three-way conference
   b.) connecting to trunk with a held trunk.

E-20   E911 - ANI Unified Number of Digits - CCIS

General Description

This feature allows a station or Attendant Console, called via CCIS, to perform E911-ANI service. This feature is functionally identical to AUTOMATIC NUMBER IDENTIFICATION (ANI) [A-87].

Operating Procedure

The operating procedure is the same as that of a normal outgoing connection.

Service Conditions

1. This feature is available in the U.S.A. and Canada.
2. The ANI function for E911 outgoing connections is applied to:
    a.) Least-Cost Route (LCR) call from a station by MF signalling.
    b.) LCR call from an Attendant by MF signalling.
    c.) LCR call by MF signalling from a station or Attendant Console called via CCIS.
3. ANI sending number by E911-ANI - CCIS is NXX-XXXX, which is the same as that by the previous E911-ANI service.
4. Method of obtaining ANI sending number (example):
    Caller's station number: 12345 (closed numbering)
    ANI assigned data:
    RT: XX
    AT: 0   (0 = STA/ATT)
            (1 = not assigned special ATT number)
    CC: 1   (0 = Main Central)
            (1 = Satellite Central)
    COC: 826 (Remote Office Code)
    Skip: 4 (Number of digits to be skipped from the top of the STN)
    Add: 3 (Number of digits to be added to ANI information)
    DC: 789 (ANI information)
    a.) Number of skip digits deleted from STN:
        <u>8 2 6 1</u> 2 3 4 5
    b.) The number created by combining the ANI information and the above number becomes the ANI sending number:
        7 8 9 2 3 4 5
    c.) Sending ANI information:
        KP-0-789-2345-ST
5. Sending digit patterns in E911-ANI - CCIS:
    a.) Outgoing call from station/Attendant Console of the Main office.
        • If OG call is from a station and ANI data is assigned:
        KP-<u>0</u>-<u>N**-****-ST</u>
                          └──────────ANI sending number
              └──────────────────Information digit
        • If OG call is from a station and ANI data is unassigned:
        KP-<u>2</u>-ST
              └──────────────────Information digit

Service Conditions (cont'd)

- If OG call is from an ATTCON and Individual ATT Access Code is assigned, and also ANI data is assigned:

KP-0-N**-****-ST

   └──────ANI sending number
  └──────────Information digit

- If OG call is from an ATTCON and Individual ATT Access Code is unassigned, and ANI data is assigned:

KP-0-N**-****-ST

   └──────ANI sending number
  └──────────Information digit

- If OG call is from an ATTCON and ANI data is unassigned:

KP-1- ST

  └──────────Information digit

b.) Outgoing call from station/Attendant Console of Remote office, and call termination via CCIS of Main office.

- If OG call is from a station and ANI data is assigned:

KP-0-N**-****-ST

   └──────ANI sending number
  └──────────Information digit

- If OG call is from a station and ANI data is unassigned:

KP-2- ST

  └──────────Information digit

- If OG call is from an Attendant Console and ANI data is assigned:

KP-0-N**-****-ST

   └──────ANI sending number
  └──────────Information digit

- If OG call is from an Attendant Console and ANI data is unassigned:

KP-1- ST

  └──────────Information digit

c.) Outgoing call from station/Attendant Console of Remote office, and call termination to a TIE Line of Main office.

KP-2-ST

  └──────────Information digit

6. An independent route is required for E911 interface.
7. After caller's number is sent out to the remote office by E911-ANI, it takes some time until a speech path is established.
8. E911-ANI - CCIS service data are assigned only at Main office; no specific data are assigned at the remote office.
9. Both AUTOMATIC NUMBER IDENTIFICATION (ANI) [A-78] service and E911-ANI UNIFIED NUMBER OF DIGITS [E-18] service must have been assigned.
10. The Central Office Code (COC) consists of 1-5 digits. If office number and station number are used, the maximum total number of digits is still 5. The Code is set in the ARNP command as RT0.

Example 1:
Office number: 82
Station number: 2xxx, 3xxx

Service Conditions (cont'd)

The COC digit is 82; then assign ANI information.
Example 2:
Office number: 826
Station number: 34xxx, 4xxx
The COC digit is 826; then assign ANI information.

11. After digits have been sent out, DDD seizure tone is not sent.

12. Other interactions are the same as those of outgoing calls by MF signalling.

13. An 8RST-K circuit card is used for this service.

14. When a D^{term} uses this feature, the calling number transmitted is that of the Prime Line.

Interactions

If "911" is to be exclusively used as an emergency number, then dial "9" access codes cannot be used solely for LCR access. If "9-911" is used exclusively for an emergency call, then no numbering conflict will exist.

F-12 Flexible Numbering of Stations - CCIS

General Description

This feature allows voice and data station numbers to be assigned to any instrument in the CCIS network, based solely on numbering plan limitations.

Operating Procedure

Refer to the NEAX2400 IPX Office Data Specification.

Service Conditions

1. Careful consideration should be given to the network numbering plan to avoid needless loss of access codes or duplication of telephone numbers.
2. There is no limit to the number of groups that can be assigned to the network numbering plan.
3. TENANT SERVICE [T-12] is not provided, i.e. numbers cannot be duplicated in different tenants.
4. BUSY LAMP FIELD-FLEXIBLE [B-2] service cannot be provided.
5. Refer to UNIFORM NUMBERING PLAN - CCIS [U-5] for numbering plan considerations.

Interactions

Caution should be exercised when programming this feature. Large quantities of potential telephone numbers are consumed. As programmed in the example, the system will be equipped with just one two-digit station and one three-digit station.

H-10D　　　Hands-free Answerback - D^{term} - CCIS

General Description

This feature allows a D^{term} user to respond to a VOICE CALL - CCIS [V-7] without lifting the handset.

Operating Procedure

To answer

1. Lift the handset and press the line key to answer the call.
2. Press feature key and "1"; the MIC LED lights.
3. Press feature key and "5" to select hands-free operation.
4. Replace the handset; respond to the call hands-free.

To answer a VOICE CALL - CCIS [V-7]

1. Press feature key and "1"; the MIC LED lights.
2. Press feature key and "5" to select hands-free operation.
3. Respond to the call hands-free.

Service Conditions

1. The MIC may be left ON at all times.
2. Hands-free operation may be selected at all times.

H-11 House Phone - CCIS

General Description

This feature allows selected stations to call an Attendant Console through the CCIS network, simply by going off-hook.

Operating Procedure

To call the Attendant

1. The HOUSE PHONE - CCIS user lifts the handset.
2. The Attendant is automatically called.

Service Conditions

1. Attendant Console indications will appear as follows:
    a.) ATND lamp flashes.
    b.) Console buzzer sounds.
2. HOUSE PHONEs may or may not be equipped with dials.
3. HOUSE PHONE - CCIS assignments are programmed into system data via the MAINTENANCE ADMINISTRATION TERMINAL (MAT) [M-18].
4. There is no limit to the number of HOUSE PHONES - CCIS permitted in the network.
5. SPEED CALLING-SYSTEM [S-3] is used for HOUSE PHONE - CCIS calling if the Attendant is in another office.

Interactions

1. The AHLS command is not needed if the House Phone (Hotline) is in the same node as the Attendant Console. When a station is programmed as TEC: 14, HOTLINE, it will automatically be connected to the Attendant Console.
2. If the House Phone is to be used for outgoing calls via the Attendant Console (ARSC Command RRI 2), assign a Route Restriction Class that will allow these connections. The same consideration should be made for incoming calls via the Attendant Console (RRI 0).

H-12 Hotline - CCIS

General Description

This feature allows two stations at different nodes in the CCIS network to be associated with one another on an automatic ringdown basis.

Operating Procedure

1. Station A lifts the handset.
2. Station B is rung.
3. Station B lifts the handset; the connection is established.

Service Conditions

1. If both phones in a HOTLINE - CCIS pair are equipped with dials, either one may transfer a HOTLINE - CCIS call to another station in the CCIS network, using the CALL TRANSFER-ALL CALLS - CCIS [C-50] feature.
2. There is no limit to the number of originating HOTLINE - CCIS stations.
3. HOTLINE - CCIS assignments are programmed into system data via the Maintenance Administration Terminal (MAT).
4. HOTLINE - CCIS uses SPEED CALLING-SYSTEM [S-3] memory. Therefore, a total of 1000 HOTLINE - CCIS destinations, HOTLINE-OUTSIDE [H-9], and SPEED CALLING-SYSTEM codes are available.
5. OUTGOING TRUNK QUEUING - CCIS [O-12] is not provided for a HOTLINE - CCIS call.
6. A HOTLINE - CCIS station can be assigned as a line/feature key on a D^{term}. See TRUNK LINE APPEARANCE [T-23].
7. The MY-Line of a D^{term} cannot be assigned as a HOTLINE - CCIS.

Interactions

1. The connecting station does not have to be a HOTLINE station. If the connecting station is busy, the HOTLINE station will hear reorder tone, or CALL WAITING-ORIGINATING [C-31] will be automatically set.
2. CALL BACK [C-1]: If the connecting station of a HOTLINE connection is busy, CALL BACK is allowed.
3. CONSULTATION HOLD-ALL CALLS [C-58]: The HOTLINE station may put the destination station on CONSULTATION HOLD-ALL CALLS. In this state, the HOTLINE station may make an outgoing call and is therefore affected by CLASS OF SERVICE-INDIVIDUAL [C-15].
4. CALL WAITING-ORIGINATING [C-31]: A HOTLINE is allowed to camp-on to a busy destination station. Assign SFI 5 (Call Waiting-Calling Side), SFI 6 (Call Waiting-Called Side) to SFC 0 and CDN 46:CW at the remote node.
5. If the connecting station is also a HOTLINE, then the reverse connection must also be programmed.

I-16 Incoming Call Identification - CCIS

General Description

This feature allows an Attendant to visually identify the type of service and/or trunk route which is arriving or waiting to be answered at the Attendant Console through CCIS.

Operating Procedure

No manual operation is required.

Service Conditions

1. A flashing lamp indicates a call waiting to be answered.
2. A steady lamp indicates an answered call.
3. A maximum of 12 lamp and key groups can be associated with INCOMING CALL IDENTIFICATION - CCIS.
4. Lamps and keys are assigned as follows:

LDN	Listed Directory Number
WATS	Wide Area Telephone Service
FX	Foreign Exchange
ATND	Attendant Call
RECALL	Transfer to Attendant
ICPT	Intercept
NANS	Station No Answer
BUSY	Call Forwarding Busy
TIE	TIE Line

5. More than one INCOMING CALL IDENTIFICATION lamp can be lit at the same time on the Attendant Console. The Attendant can select any incoming call by pressing the associated key.
6. Calls can be answered via the ANSWER key for first-in, first-out priority.
7. The Attendant Console is limited to 12 unique INCOMING CALL IDENTIFICATION indications. However, more than one incoming trunk route can be programmed for the same INCOMING CALL IDENTIFICATION.

Interactions

1. To fulfill the requirements of the feature description, Step 1 of Programming is not required. However, the CALL WAITING LAMP [C-13] should be programmed in relationship to the INCOMING CALL IDENTIFICATION.
2. System Data 2, Index 8, Bits 6 and 7 and Index 9, Bit 0-3 can be flagged to represent an incoming call, but the meaning of the incoming call can be reassigned via the AAKP command.
3. The first six keys (LDN to CCSA) are fixed and cannot be changed. The AAKP command is used to program the remaining six optional keys.

I-17   Individual Attendant Access - CCIS

General Description

This feature permits a user to call a particular Attendant Console in the CCIS network, via an individual Attendant Identification Number.

Operating Procedure

1. The user dials an individual Attendant Identification Number.
2. The directed Attendant receives an INCOMING CALL IDENTIFICATION [I-16] indication and can answer using the normal operating procedure.

Service Conditions

The Attendant Identification Number must be published for each attendant.

Interactions

1. The Attendant Consoles must first be programmed.
2. The ASAT number should be the same number of digits as any other telephone number. ASAT assigns a telephone number to each Attendant Console.
3. An attendant is allowed to call the ASAT number of another Attendant Console for the purpose of conversation.

I-18   Inter-Position Transfer - CCIS

General Description

This feature allows calls to be transferred from one Attendant Console to another through the CCIS network.

Operating Procedure

To transfer from Console A to Console B

1. Attendant A presses the START key.
2. Attendant A dials the Attendant Console B Identification Number, or "0" for all Attendant Consoles.
3. The call is indicated at Attendant Console B or all Attendant Consoles.
4. Attendant B presses the ANSWER key.
5. Attendant A presses the RELEASE key to transfer; or consults first and then releases.

Service Conditions

1. An Identification Number is assigned to each Attendant Console for INTER-POSITION TRANSFER - CCIS.
2. An Attendant Console can receive one INTER-POSITION TRANSFER call at a time. An INCOMING CALL IDENTIFICATION - CCIS [I-16] key is designated for receipt of these calls.
3. An Attendant cannot transfer a two-party connection to another Attendant.
4. An Attendant can extend an INTER-POSITION TRANSFER - CCIS call to any other destination.
5. When NIGHT CONNECTION [N-15, N-16] is active in one system, an INTER-POSITION TRANSFER from the Attendant of another system can be answered by the Night station.

Interactions

1. The Attendant Console must first be programmed.
2. An Attendant is allowed to call the ASAT number of another Attendant Console for the purpose of conversation.
3. The ASAT number may not be programmed in the place of a telephone number in the ASID and ASGD commands. See OFF-HOOK ALARM [O-6], ATTENDANT NIGHT TRANSFER [A-19], and PRIORITY CALL [P-9].

L-25 Look Ahead Routing - CCIS

General Description

This feature allows a station to dial a Public Switched Telephone Network (PSTN) call and has the capability of looking ahead to seven directly-connected nodes in the CCIS network for an idle trunk.

Operating Procedure

1. Lift the handset; receive dial tone.
2. Dial the access code; receive second dial tone.
3. Dial the PSTN number.
4. The system completes the call by checking all available routes in the network specified by system programming.

Service Conditions

1. The PBX can look ahead to a maximum of seven <u>directly-connected</u> CCIS nodes.
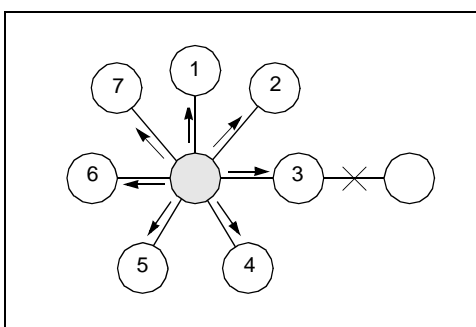
2. A maximum of eight routes at each node, directly connected to the calling node, can be checked by the calling office.
3. This feature is used in conjunction with LEAST-COST ROUTING-3/6 DIGIT [L-5].
4. Stations may be restricted from using this feature by CLASS OF SERVICE INDIVIDUAL [C-15].
5. The maximum number of adjacent CCIS links for each system is 32.

Interactions

LEAST-COST ROUTING [L-5] is used in conjunction with outgoing C.O. calling. The seven-system limitation of LOOK-AHEAD ROUTING - CCIS is based on the eight route advances available in the AOPR command. This results in seven systems for seven route advances. The eighth route is reserved for DDD off-net access to ensure the completion of the call.

L-29   LDN Night Connection - CCIS

General Description

When an LDN incoming call arrives from a CCIS line or other outside line while the System is in Night Mode, this service feature transfers the call to a transfer destination outside line, including CCIS lines, assigned for that LDN.

Operating Procedure

1. Attendants 1 & 2 in Node A set into Night mode using the NITE key; the Night lamp illuminates indicating that Night mode has been set for handling incoming calls.
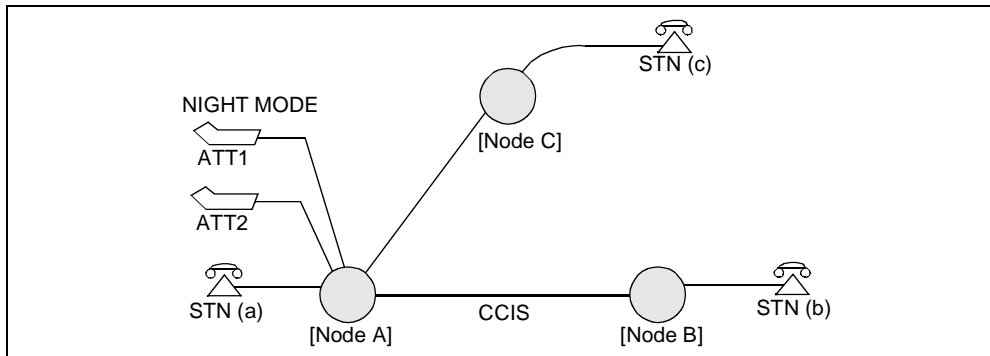
2. Station (C) dials the LDN number of Attendant Console #1. Station (C) is automatically connected to night connection Station (B), preset for Attendant Console #1; Station (C) receives ringback tone, and Station (B) is rung.
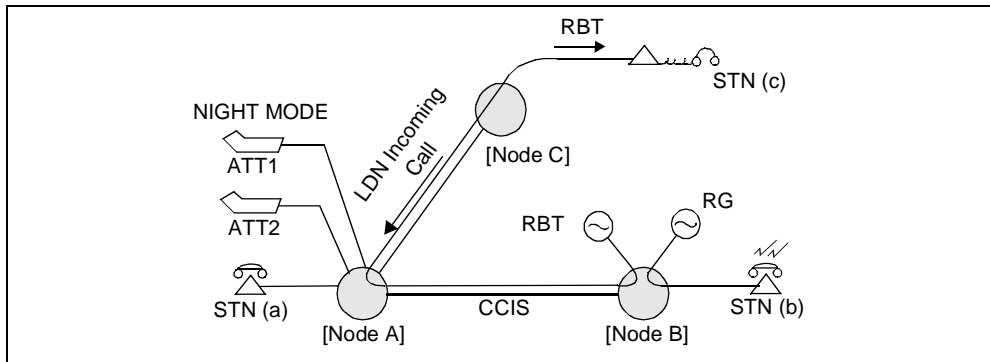
Operating Procedure (cont'd)

3. Station (B) answers; Stations (B) and (C) are connected with each other. If necessary, the call can be transferred to another station by means of Call Transfer-All Calls service.
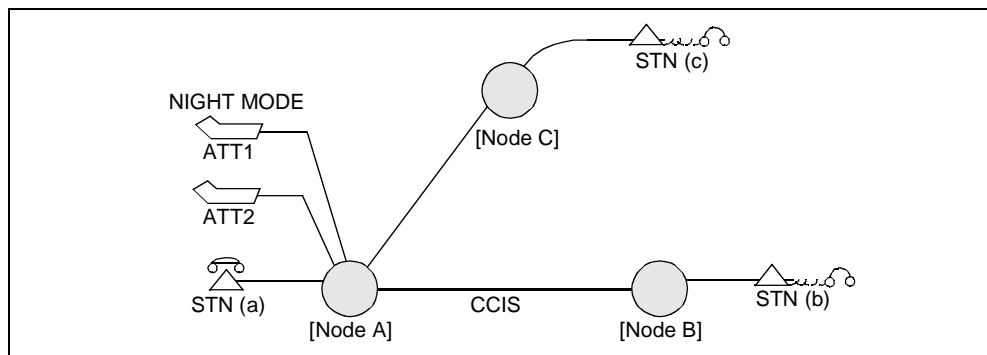
Service Conditions

1. The ranking of this service feature within the Night Connection service is as follows:
   - Night Connection Flexible.
   - Night Connection Fixed.
   - LDN Night Connection (This service).
   - Night Connection Outside.
   - Trunk Answer from Any Station (TAS) Connection.
   - Busy Tone Connection.

2. It is possible to register individual transfer destinations for up to 16 LDNs per Tenant. (Total of 16 LDNs for LDN Night Connection and LDN Night Connection Outside.)

3. Valid connections with this service feature are shown below:

	SEND			
RECEIVE	**CCIS**	**LD**	**MFC**	**REMARKS**
CCIS	Available	Available	Available	
LD	Available	Available	Available	
MFC	Available	Available	Not Available	

4. If the transfer destination is busy, restricted, etc., the call is routed to busy tone or reorder tone even when the transfer destination is a CCIS line.

5. In the cases listed below, the next-ranked Night Connection service becomes effective.
   a.) Data assignment for this service feature has not been made for the LDN.
   b.) Toll restriction or connection control is in effect between the incoming route and the transfer destination route.
   c.) All trunks/routes are busy.
   d.) There is a link block condition.

6. When there is no Night Connection service, the call is routed to busy tone.

Service Conditions (cont'd)

7. If the system changes to Night Mode during a call termination to the Attendant Console, an LDN incoming call will be connected to the transfer destination associated with the LDN dialed. If this connection is not possible because of the status of the transfer destination, the call is handled by the next-ranked Night Connection service (Night Connection Outside, TAS etc.), or is queued with the caller hearing ringback tone.

8. If the system changes to Day Mode, incoming calls being queued are handled as Attendant Console incoming calls.

M-34   Message Reminder - CCIS

General Description

This service feature allows Inter-Office Message Reminder when the calling station and the called station belong to different PBXs in the CCIS network.

Operating Procedure

From D^{term} to D^{term}

1. D^{term} A and B are engaging in a call.
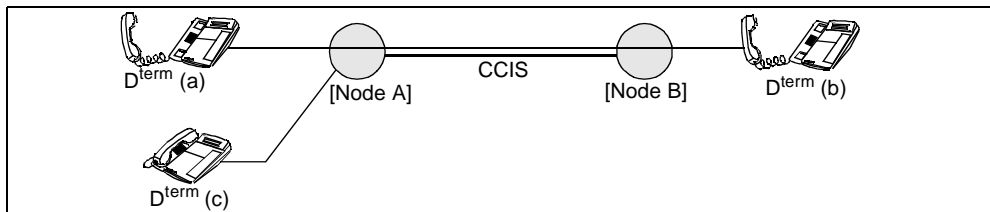
2. D^{term} C goes off-hook and dials the number for D^{term} B; receives busy tone.
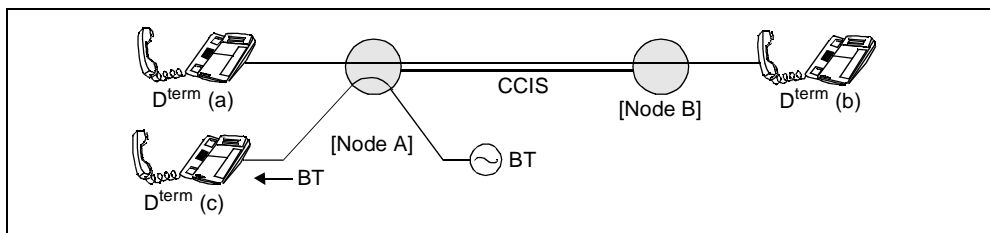
3. D^{term} C presses the MSG key and receives service set tone; the LCD displays:

MESSAGE SET	**XXXX**
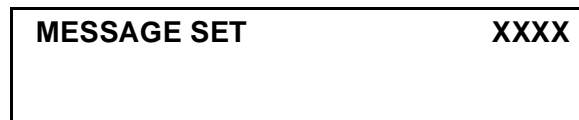
4. On D^{term} B, the MESSAGE lamp illuminates, indicating that the message has been set.

Note: *MESSAGE lamp can be programmed to any Line/Feature Access keys on a D^{term}.*
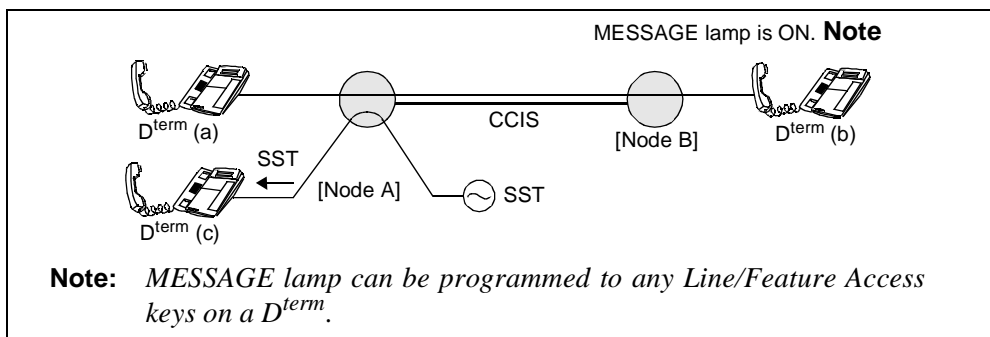
Operating Procedure (cont'd)

5.   D^{term} B hangs up.
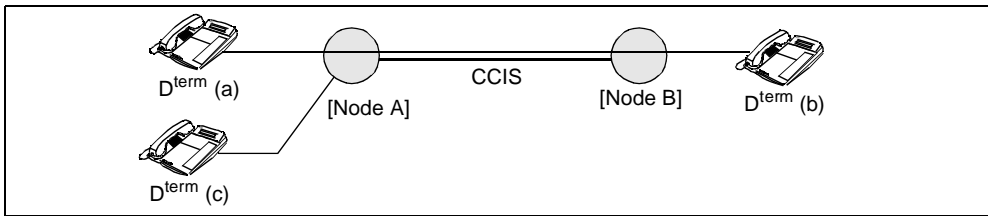
6.   While the message lamp illuminates, D^{term} B goes off-hook or presses the SPEAKER key and receives dial tone.
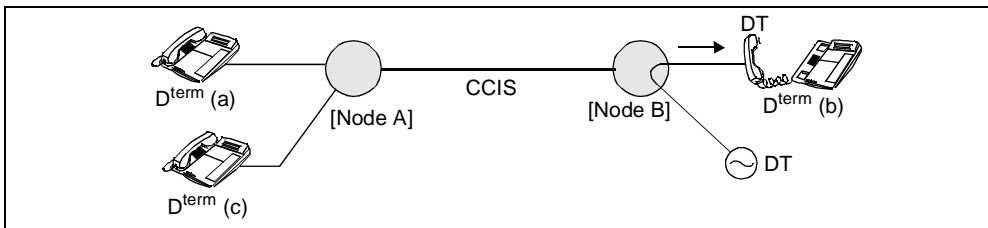
7.   D^{term} B presses the MSG key and receives ringback tone. Redial is automatically made to D^{term} C, and D^{term} C rings.
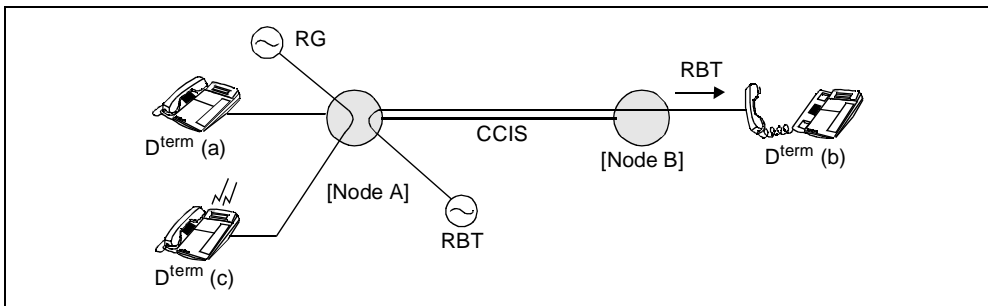
From a single-line Station to a D^{term}

1.   D^{term}s A and B are engaging in a call.
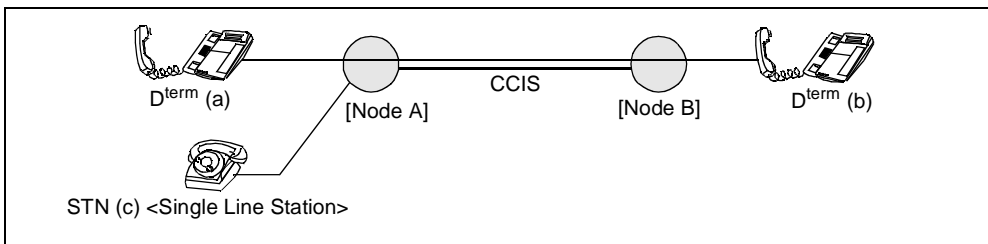
Operating Procedure (cont'd)

2. Station C goes off-hook and dials the number for D^{term} B; receives busy tone.
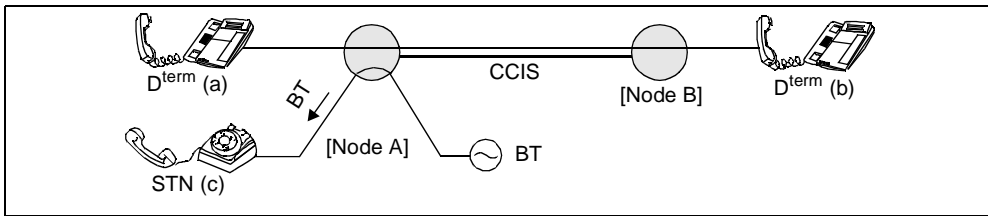
3. Station C switch hook flashes; receives special dial tone.
4. Station C dials the MESSAGE REMINDER access code; receives service set tone. The MESSAGE lamp on D^{term} B illuminates, indicating that the message has been set.
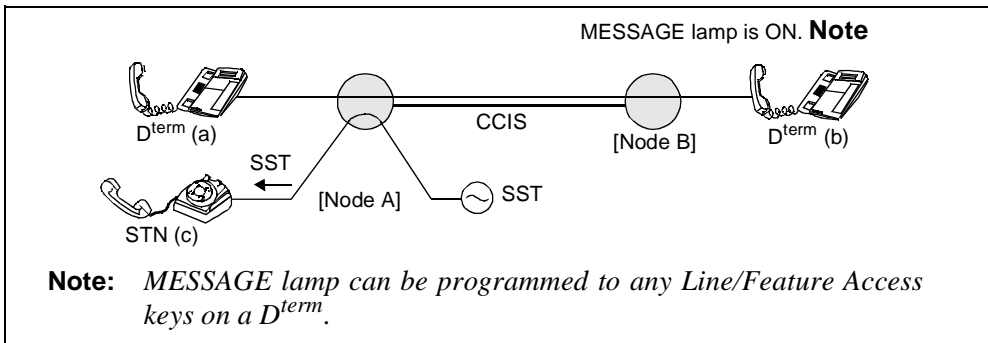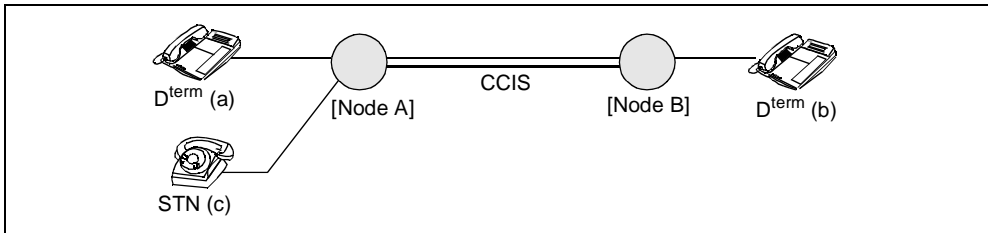
MESSAGE lamp is ON. **Note**

Note: *MESSAGE lamp can be programmed to any Line/Feature Access keys on a D^{term}.*

5. D^{term} B hangs up.

6. While the message lamp illuminates, D^{term} B goes off-hook or presses the SPEAKER key and receives dial tone.
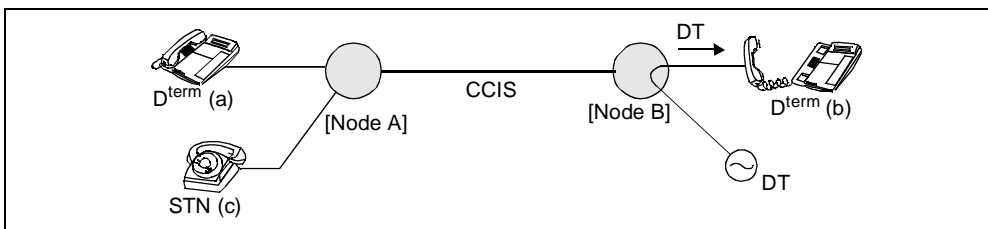
Operating Procedure (cont'd)

7.   D^term B presses the MSG key and receives ringback tone. Redial is automatically made to Station C and Station C rings.
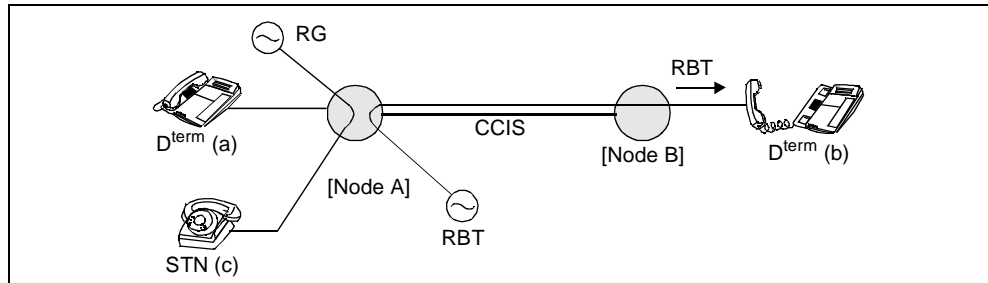
Service Conditions

1.   A message can be sent out only when the called station is either idle or busy.

2.   A message can be sent out during ringing, recall from Call Transfer-All Calls, or recall from Consultation Hold-All Calls.

3.   A maximum of four messages can be received at one D^term. If the fifth message terminates, the LCD displays:

> **MESSAGE BUSY**

4.   A message is displayed only when the handset is resting on the switch hook.

5.   To clear the message, display the message and press "#"/"∗" on the key pad. (ASYD-SYS1 Index 80, Bit 1)

6.   If the MSG key is reset, the message is cleared.

7.   A message cannot be cleared by the message sender.

8.   If the second message is sent out from the same D^term, it is memorized as the second unique message.

9.   If Call Transfer-All Calls service is set, a message is also transferred to the designated transfer destination.

10. Messages are memorized in any D^term on which the feature key has been programmed as Message Reminder key.

M-34D   Message Reminder - D^{term} - CCIS

General Description

This feature allows a D^{term} to leave a MESSAGE REMINDER at a D^{term} in a different node in the CCIS network.

Operating Procedure

To activate MESSAGE REMINDER - CCIS from a D^{term} to an idle or busy D^{term}

1. Lift the handset; receive dial tone.
2. Dial the desired D^{term} at the distant office; receive ringback tone or busy tone.
3. Press MSG key; receive service set tone. The LCD displays:

MESSAGE SET	**XXXX**
(Time Display)	

At the called D^{term}, the MESSAGE LED will light to indicate a message has been left.

To activate MESSAGE REMINDER - CCIS from a D^{term} to an idle or busy D^{term} after activating a VOICE CALL

1. Lift the handset; receive dial tone.
2. Dial the desired D^{term} at the distant office; receive ringback tone.
3. Dial the VOICE CALL [V-2] access code; VOICE CALL is activated. The LCD displays:

MESSAGE SET	**XXXX**
(Time Display)	

4. Press MSG key; receive service set tone. The LCD displays:

MESSAGE REST	**XXXX**
(Time Display)	

At the called D^{term}, the MESSAGE LED will light to indicate a message has been left.

To review the message

1. Press MSG key while idle. The LCD displays:

	Calling Station	hr.	min.	AM/PM
MESSAGE	**XXXX**	**XX:**	**XX**	**AM**
	(Time Display)			

2. Press MSG key successively to review other messages (maximum 4 messages in total).

To return the message

1. While the desired message is displayed, lift handset or press SPEAKER key; receive dial tone.
2. Press MSG key; the calling station is automatically redialed. If any other message is not returned, the MESSAGE LED will still be lit.

Service Conditions

1.   This feature is only available between two D^{term} sets that both have the MESSAGE feature key. If a message is directed to a single line or a D^{term} that does not have the MESSAGE REMINDER feature, the calling station's LCD displays:

> **MESSAGE REST**
>
> **(Time Display)**

2.   Messages cannot be sent while engaged in calling or recall from CALL TRANSFER - ALL CALLS [C-11] [C-50] or from CONSULTATION HOLD - ALL CALLS [C-17] [C-58].

3.   A maximum of four messages may be received at any one D^{term}. If a fifth message is attempted, the LCD will display:

> **MESSAGE BUSY**
>
> **(Time Display)**

4.   Messages can only be displayed when the D^{term} station is idle.

5.   A message may be cleared by pressing the MSG key on the D^{term} and pressing the "*" or "#" key on the key pad. ("*" or "#" key is selected via system data.)

6.   A message is automatically cleared when it is returned using the MSG key.

7.   Once a message has been sent, it cannot be cleared by the sender.

8.   After the first message, all subsequent messages sent by the same station are regarded as individual messages.

9.   When a user sets MESSAGE REMINDER - CCIS to the station setting CALL FORWARDING - ALL CALLS [C-5] [C-45], BUSY LINE [C-2] [C-46] while hearing ringback tone, MESSAGE REMINDER is set to the dialed station (not the forwarding destination).

10.   If the called D^{term} answers the call while the calling station is dialing the MESSAGE REMINDER - CCIS access code, the calling and called stations will be connected.

11.   Messages can be sent only if the called station is in the idle, busy, or VOICE CALL [V-2] condition.

12.   When this service is restricted and the calling station receives busy tone, the calling station can activate busy services.

13.   This service is available when the calling station receives busy tone upon encountering all trunks busy.

Interactions

If CALL WAITING - ORIGINATE [C-31] Automatic operation is in service, it will supersede MESSAGE REMINDER. If a third station calls and receives busy tone, MESSAGE REMINDER can be set.

M-35 Message Waiting Lamp Setting - Attendant - CCIS

General Description

This service feature allows the MESSAGE WAITING (MW) lamp on the D^{term} or telephone set, equipped with MW lamp accommodated in the Satellite Offices, to be controlled from the Attendant Console in the CCIS network.

Operating Procedure

To set MW Indication

1. The Attendant in Node A presses an idle loop key.
2. The Attendant enters the MW set code (maximum 3 digits); receives special dial tone.
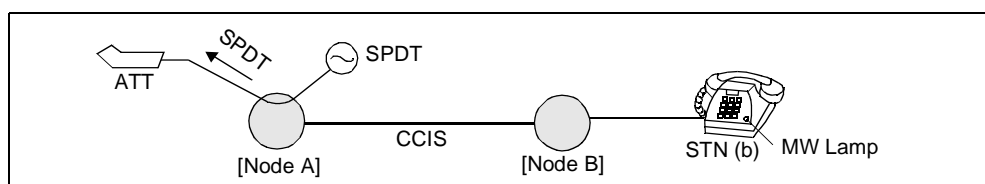
3. The Attendant dials Station (B), which is equipped with an MW lamp. The Attendant receives service set tone. The MW lamp on Station B illuminates.
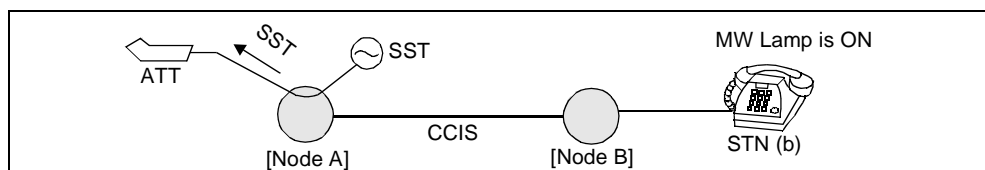
4. The Attendant presses the RELEASE key and returns to an idle state.

To cancel MW Indication

1. The Attendant presses an idle loop key, then enters the MW cancel code (maximum 3 digits); receives special dial tone.
2. The Attendant dials Station B, which is equipped with an MW lamp. The Attendant receives service set tone. The MW lamp on Station B goes out.
3. The Attendant presses the RELEASE key and returns to an idle state.

Service Conditions

1. The MW lamp on a D^{term} or single line telephone will be lit when this feature is activated.
2. MW cannot be set when the Attendant is in a consultation condition with a station or trunk.
3. An Attendant attempting to set MW to a station where MW has previously been set, will receive busy tone.
4. In a MULTIPLE CONSOLE OPERATION [M-4], if MW is set by one ATTENDANT CONSOLE [A-3], it can be cancelled by another.

M-36 Message Waiting Lamp Setting - Station - CCIS

General Description

This feature allows any D^{term} or single line telephone to set/cancel a MESSAGE WAITING indication or lamp at any other station equipped with this feature in the CCIS network.

Operating Procedure

To set from a single line telephone

1. Lift the handset; receive dial tone.
2. Dial the MESSAGE WAITING LAMP SETTING (SET) access code (up to 3 digits); receive special dial tone.
3. Dial the desired telephone number; receive service set tone.
4. MESSAGE WAITING indication is set.

To cancel from a single line telephone

1. Lift the handset; receive dial tone.
2. Dial the MESSAGE WAITING LAMP SETTING (CANCEL) access code (up to 3 digits); receive special dial tone.
3. Dial the desired telephone number; receive service set tone.
4. MESSAGE WAITING indication is cancelled.

To set from a D^{term}

1. Lift the handset or press the Speaker key; receive dial tone.
2. Press the MESSAGE WAITING LAMP SETTING (SET) line/feature key; receive special dial tone.
3. Dial the desired telephone number; receive service set tone.
4. MESSAGE WAITING indication is set.

To cancel from a D^{term}

1. Lift the handset or press the Speaker button; receive dial tone.
2. Press the MESSAGE WAITING LAMP SETTING (CANCEL) line/feature key; receive special dial tone.
3. Dial the desired telephone number; receive service set tone.
4. MESSAGE WAITING indication is cancelled.

Service Conditions

1. Single Line telephones must be equipped with a 90-volt neon light for MESSAGE WAITING indication.
2. An external + 80-volt Booster Power Unit is required at each node for lighting single line telephones.
3. 16LCBE, 16LCBJ and 16LCBK can be used to for stutter dial tone instead of Message Waiting lamp indication.
4. The MESSAGE WAITING lamp on a single line telephone and 8-button D^{term} lights when MESSAGE WAITING LAMP SETTING-STATION - CCIS is activated.
5. When MESSAGE WAITING LAMP SETTING-STATION - CCIS is set to a D^{term} phone, the display is:

```
                                        MW
              (Time Display)
```
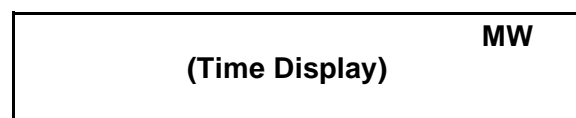
This display appears in place of the time display.

Service Conditions (cont'd)

6. If a user attempts to set MESSAGE WAITING to a station where MESSAGE WAITING has already been set, busy tone will be sent to the station, and the D^{term} phones will display:

```
                                    MW BUSY
            (Time Display)
```

7. When a station is restricted from MESSAGE WAITING LAMP SETTING-STATION - CCIS or is an unused telephone number, and another user attempts to set/cancel MESSAGE WAITING LAMP SETTING-STATION - CCIS, the calling station will hear reorder tone. A D^{term} phone will display:

```
                                    MW REST
            (Time Display)
```

8. When a D^{term} user presses the MESSAGE WAITING LAMP SETTING line/feature key, the display will indicate:

```
                                    MW SET
            (Time Display)
```

9. When a D^{term} user presses the MESSAGE WAITING LAMP SETTING cancel line/feature key, the display will indicate:

```
                                    MW CANCEL
            (Time Display)
```

Interactions

An external power source is required to light a lamp for a single line telephone.

M-37   Miscellaneous Trunk Access - CCIS

General Description

This feature provides access through the CCIS network to all types of external and customer provided equipment/ facilities, such as TIE LINE ACCESS [T-3], as well as DICTATION ACCESS [D-3], PAGING ACCESS - CCIS, and CODE CALLING ACCESS [C-21].

Operating Procedure

MISCELLANEOUS TRUNK ACCESS - CCIS is programmed in system data via the Maintenance Administration Terminal (MAT).

Service Conditions

1. Access to these trunk routes is allowed or denied in CLASS OF SERVICE-INDIVIDUAL [C-15] programming.
2. An interface circuit must be provided for each trunk.

Interactions

If other services such as STATION MESSAGE DETAIL RECORDING [S-10], TOLL RESTRICTION - CCIS [T-26], and/or LEAST-COST ROUTING-3/6 DIGIT [L-5] are being used, refer to these feature descriptions, as these services may require programming steps not listed.

M-38 Miscellaneous Trunk Restriction - CCIS

General Description

This feature allows certain stations and dial-repeating TIE Line trunks to be denied access through CCIS to certain trunk routes, such as TIE LINE ACCESS [T-3], as well as the Exchange Network, DICTATION ACCESS [D-3], or PAGING ACCESS - CCIS [P-28].

Operating Procedure

No manual operation is required. Restricted stations will receive reorder tone.

Service Conditions

1. Restricted call attempts can be either:
    a.) intercepted by the Attendant.
    b.) reorder tone can be sent to the originating user.
2. Access to a particular trunk route is allowed or denied by a station's Route Restriction Class (RSC). A maximum of 15 RSCs can be assigned per tenant. Each RSC can restrict a station from any number of trunk routes, to a maximum of 255 trunk routes.
3. This feature can be assigned to stations or dial-repeating TIE trunks via CLASS OF SERVICE-INDIVIDUAL [C-15] restrictions.
4. If a station's CLASS OF SERVICE-INDIVIDUAL [C-15] allows outgoing calls via the Attendant Console, the user can dial "0" for Attendant-assisted trunk calls.
5. MISCELLANEOUS TRUNK RESTRICTION - CCIS can change for a particular station when the system is in the Night mode.
6. If a restricted station calls another station, the called station cannot use CALL TRANSFER-ALL CALLS [C-11, C-11D, C-50] to connect the calling station to a trunk route from which it is restricted.
7. If a user accesses a TIE trunk to a distant PBX, access to outside exchanges can only be controlled by the distant PBX.

Interactions

If other services such as STATION MESSAGE DETAIL RECORDING [S-10], TOLL RESTRICTION-3/6 DIGIT - CCIS [T-26], and/or LEAST-COST ROUTING-3/6 DIGIT [L-5] are being used, refer to these feature descriptions for commands that may be required and are not listed.

M-39 Modem Pooling - CCIS

General Description

This feature allows any terminal to have access to a data terminal in a different office through a concentration of modem groups, set at different data speeds, using the Common Channel Inter-Office Signaling System.

A maximum of 8 Modem Groups are provided. One modem in the group is selected by the data station, at the time of Modem Pool selection. Least Cost Routing and other standard PBX features can be used for optimization of long distance data calls. Incoming Modem Pooling capabilities are also provided.

Operating Procedure

Outgoing Modem Pooling

Data Terminal connected to a Data Module

1. Key in DM CALL <ENTER>. READY is sent back.
2. Key in the number of the desired terminal in the distant office DIAL-XXXXXXXX <ENTER>.
3. CALLING is sent back.
4. The Outgoing Modem Pool is connected to the call.
5. WAITING is sent back when the called terminal is idle.
6. OPEN is sent back when the called terminal answers with Carrier Tone and both modems exchange Carrier Tone.
7. Data transparency path is established.
8. Key in ESC DM <ENTER> to disconnect.
9. ACK is sent back. Key in RLS <ENTER>.
10. RELEASED is sent back when the path is disconnected.

Data Terminal connected to a D^{term}/Data Adapter (Key Pad Dialing)

1. Lift the handset or press the SPEAKER key and receive dial tone.
2. Dial the desired terminal number.
3. Receive remote modem Answer Tone.
4. Press the DTX key on the D^{term}. The Outgoing Modem Pool is transferred to the trunk.
5. WAIT D XXXXXXXX is displayed when the called terminal is idle.
6. READY D XXXXXXXX is displayed when the called terminal answers with Carrier Tone.

Service Conditions

1. Modem Pooling supports asynchronous data calls up to 1200 bps using analog trunks, depending on the condition of the lines and modems used.
2. Up to 8 Modem Groups can be assigned total. There may be 8 Incoming or 8 Outgoing Modem Pool Groups assigned, or 8 Bothway. Bothway groups are defined as Incoming and Outgoing.
3. One modem in the group is selected by the DTE at the time of Modem Pool connection.
4. Least Cost Routing can be used for optimization of long distance data calls.
5. Incoming Modem Pooling capabilities are also provided.
6. Modems must be compatible.
7. Acoustically Coupled Modems, Limited Distance Modems, Line Drivers and DSUs cannot be attached to the Modem Pooling card.

Service Conditions (cont'd)

8. Distinctive Ringing - Most modems recognize only a 2-second on, 1-second off ring. This consideration must be taken into account when defining incoming trunk ringing.

9. The Reverse or Secondary Channel feature of modems is not implemented on the Modem Pool card.

10. Speed Select using pin 23 on the EIA RS232 connector is not implemented.

11. Intelligent or Auto Dial Modems must be strapped for manual operation (if available) to work on the Modem Pool card.

Interactions

The assignment of MODEM POOLING also involves ASYNCHRONOUS DATA SWITCHING [A-24], DATA INTERFACE AUTOMATIC ANSWER [D-18], DATA TRANSPARENCY [D-19], CLASS OF SERVICE - INDIVIDUAL [C-15], LEAST COST ROUTING [L-5], and TOLL RESTRICTION - 3/6 DIGIT [T-7]. Any of these features programmed incorrectly may cause MODEM POOLING to operate incorrectly. Take special precautions when programming Attribute Data to the data terminal. This programming will determine which MODEM POOLING Route will be allowed to the Data Terminal.

M-40   Multiple Call Forwarding - All Calls - CCIS

General Description

This service feature permits all calls destined for a particular station in a CCIS network to be routed to another station or to the attendant multiple times, regardless of the busy or idle status of the called station.

With CALL FORWARDING-ALL CALLS [C-5] (CF-A):
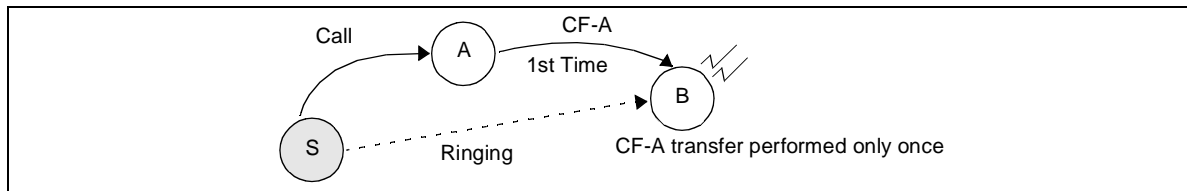
With MULTIPLE CALL FORWARDING-ALL CALLS [M-44] service:
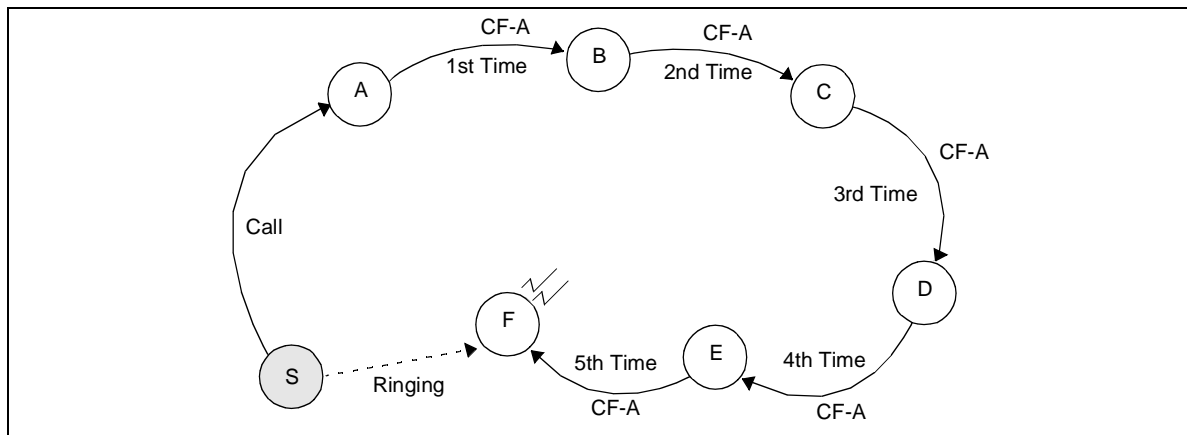
Operating Procedure

1. Station A is set for Call Forwarding-All Calls to Station B. Station B is set for Call Forwarding-All Calls to Station C. Station C is set for Call Forwarding-All Calls to Station D.

2. When a call is directed to Station A, it is forwarded first to Station B, then to Station C, and then to Station D. The calling party receives ringback tone and ringing starts at Station D.

3. Station D lifts the handset to answer and is connected to the calling party.

Service Conditions

1. The service conditions within the node comply with those of MULTIPLE CALL FORWARDING-ALL CALLS [M-44].

2. A call can be forwarded by CALL FORWARDING a maximum of one time between nodes in a CCIS network.

Service Conditions (cont'd)

3. When CALL FORWARDING is performed in a CCIS network, the following services are not available at a forwarded-to station:

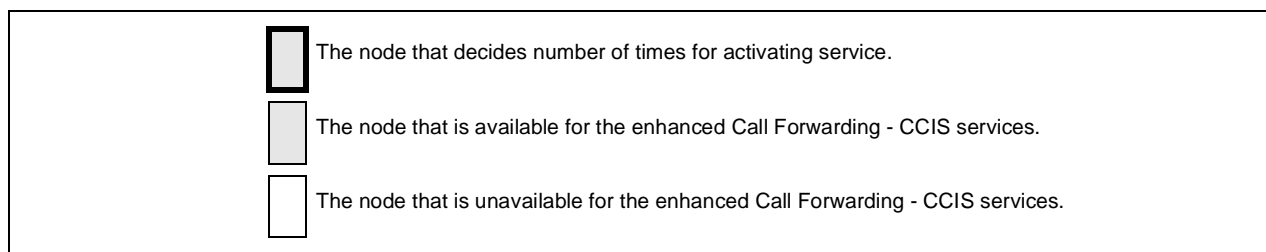|	
CALL FORWARDING-ALL CALLS-OUTSIDE	[C-28]
CALL FORWARDING-BUSY LINE-OUTSIDE	[C-60]
CALL FORWARDING-DON'T ANSWER-OUTSIDE	[C-74]

LEGEND
- CF-A: Call Forwarding -All Calls
- CF-A - CCIS: Call Forwarding -All Calls - CCIS
- CF-A-Outside: Call Forwarding -All Calls-Outside
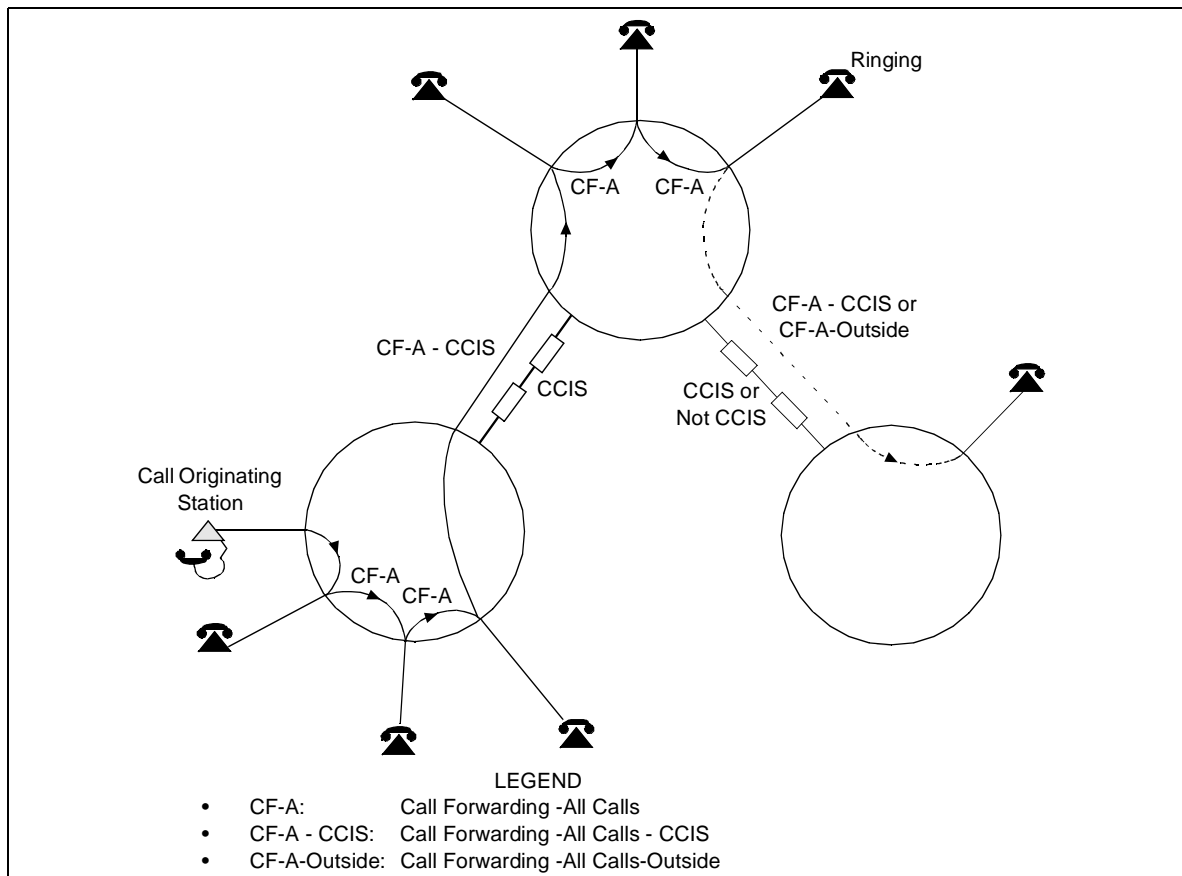
4. When a call is forwarded to the calling party by CALL FORWARDING-ALL CALLS - CCIS [M-40], the calling party hears a busy tone.
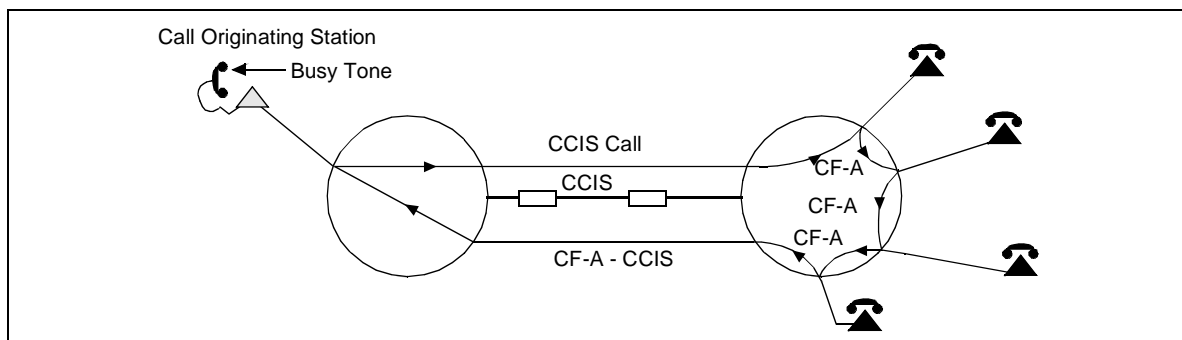
Service Conditions (cont'd)

5. SERVICE DISPLAY - CCIS [S-53] is available at the terminating node. The type of forwarding to be displayed is CF ALL.

Call Originating Station
S: 2000
820
A: 4211
CF-A
CF-A
B
C
CCIS
CF-A - CCIS
822
CF-B
Busy D
Ringing
E: 4020

Calling Party (S)		Called Party (E)	
4211		CF ALL	8202000
Dialed Number		Type of Forwarding	Calling Station Number
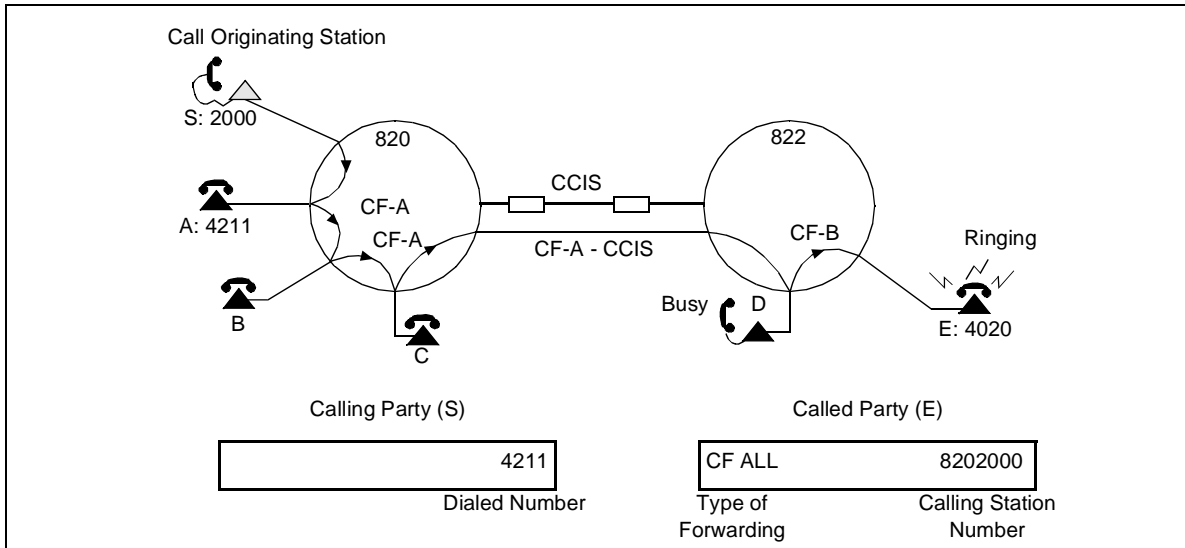
6. When a call is terminated to an ATTENDANT CONSOLE [A-3] by MULTIPLE CALL FORWARDING- ALL CALLS - CCIS [M-40], the call type is ATND.

7. The system data (ASYD, SYS1, INDEX 486, bit 0-2) decides the maximum number of times for activating a call forwarding service between nodes through CCIS. The number of times is selected in the range of 1 time to 7 times (ASYD, SYS1, Index 486, bit 0-2 = 0 means the enhanced feature is not available).

8. The number of times for activating this service between CCIS nodes is decided by system data programmed at the node that has the station operating the first Call Forwarding service through CCIS link. However, when the node that accommodates the station operating the service first has not been programmed, the number of times is decided at the node that accommodates the destination of the first Call Forwarding - CCIS service.

9. When Multiple Call Forwarding - CCIS is activated and the last intermediate party forwards (returns) the call to the first calling party, the calling party may hear either ringback tone or busy tone.

   The Calling party hears ringback tone when the forwarding destination number, assigned to the last intermediate party (intermediate party 2 in the example below), and the calling party number sent from the calling party are identical.

Node A
Node B
2nd C.F. (All Calls/Busy)
Ringback Tone
Calling Party
Intermediate Party 1
1st C.F. (All Calls)
Ringing
Intermediate Party 2

Service Conditions (cont'd)

The Calling party hears busy tone when the forwarding destination number, assigned to the last intermediate party (intermediate party 2 in the example below), and the calling party number sent from the calling party are not identical.

10. When Call Forwarding is restricted because the number of times data or the service restriction data, the call is terminated to the station that is restricted Multiple Call Forwarding - CCIS service.

    Example 1: Multiple Call Forwarding - CCIS is restricted because the service has already been activated the preassigned maximum number of times. A maximum of three times is available for Call Forwarding through CCIS.
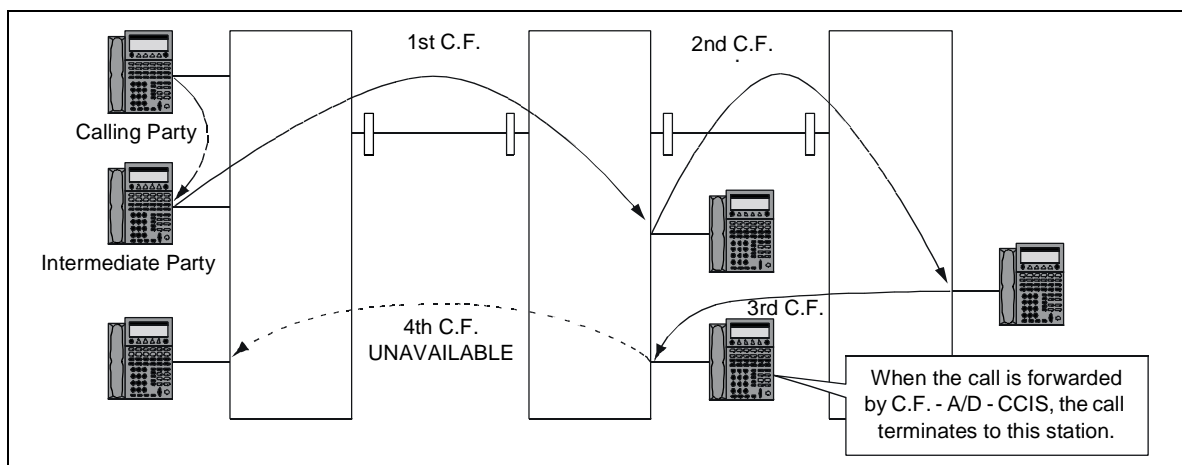
Service Conditions (cont'd)

Example 2: Multiple Call Forwarding - CCIS service is restricted because the service is not effective at the node.

11. Even if Call Forwarding is set from the forwarded station to the forwarding station, the Call Forwarding service is effective, as shown in the example below:

    When Office A selects the number of times for Call Forwarding for 5 times, five times of Call Forwarding are executed as Call Forwarding 1 to Call Forwarding 2 to Call Forwarding 3 to Call Forwarding 2 to Call Forwarding 3.

12. The following services set to the forwarded destination are not available with Multiple Call Forwarding - CCIS services, except when the services below are activated through CCIS link:

CALL FORWARDING - ALL CALLS - OUTSIDE	[C-28]
CALL FORWARDING - BUSY LINE - OUTSIDE	[C-60]
CALL FORWARDING - DON'T ANSWER - OUTSIDE	[C-74]

Service Conditions (cont'd)

13. The following services are activated within one node, therefore, the number of times for these services are independent. The maximum number of times for activating this feature is the same as previous software releases:

MULTIPLE CALL FORWARDING - ALL CALLS [M-44]: 5 times
MULTIPLE CALL FORWARDING - BUSY LINE [M-24]: 5 times
MULTIPLE CALL FORWARDING - DON'T ANSWER [M-25]: unlimited

14. The following are detailed examples of Call Forwarding - CCIS activation. These examples are activated under the conditions below:

- The maximum number of times to activate the service is three (programmed in Office A and Office B).
- The last call forwarding is operated by Call Forwarding - All Calls/Don't Answer service.
- Any kind of D^{term}, ISDN terminal, PHS, etc. is available to be used for the calling/intermediate party.
- Any kind of Call Forwarding service (All Calls/Busy Line/Don't Answer) is available to be set at the calling/intermediate terminal.

The node that decides number of times for activating service.

The node that is available for the enhanced Call Forwarding - CCIS services.

The node that is unavailable for the enhanced Call Forwarding - CCIS services.

a.) The service is restricted because the terminating Office B is unavailable for enhanced Call Forwarding - CCIS service.

Service Conditions (cont'd)

b.) The service is restricted because the service has already been activated the predetermined number of times.

c.) When Office A is not available for the enhanced Call Forwarding feature, the number of times the service is activated is decided by Office B (three times are effective in this example). Note that Call Forwarding service from Office A to Office B is included in the number of times service is activated.

Service Conditions (cont'd)

d.) The Call Forwarding service is activated four times, because the call is forwarded from Office D to Office E through FCCS link:

Note: *Call Forwarding service activated through FCCS link (Call Forwarding*) is not included in the number of times that the Multiple Call Forwarding - CCIS service is activated.*

e.) When the trunk/station incoming call terminates through FCCS link, the number of times for the service activation is decided by the FCCS node. This condition is also applied when the call is forwarded from Office A to Office B through FCCS link.

a. When a call terminates through FCCS link, the number of times is decided by Office A (the FCCS node has the calling party) in this case.

b. When a call forwarded through FCCS link, the number of times is decided by Office A (the FCCS node has the forwarding party) in this case.

f.) This service is restricted when a call from the CCIS line is forwarded to other lines except CCIS (for example: C.O. line).

Interactions

When a calling party sets the services shown below while the destination party is in busy status, the services are performed to the first forwarded party.

1. In the case of Busy Verification - CCIS [B-9] or Executive Right-of-Way - CCIS [E-8], the service is effective to Station B in Office B. The service is invalid to station D.

   a.) When Station B is in busy status, Busy Verification - CCIS [B-9] and Executive Right-of-Way - CCIS [E-8] are activated.

   b.) When Station B is in idle status, Station B is rung.

2. In the case of Message Reminder - CCIS [M-34, 34D], service is performed to Station B in Office B. The service is invalid to station D.

Interactions (cont'd)

3. In the case of Call Back - CCIS [C-44], service is effective to Station B in Office B. The service is invalid to station D.

4. In the case of Step Call - CCIS [S-59], the service is valid to Station B in Office B. The service is invalid to station D.

M-41   Multiple Call Forwarding - Busy Line - CCIS

General Description

This service feature permits a call to a busy station to be forwarded in a CCIS network, multiple times, to a predesignated idle station.

1. With existing CALL FORWARDING-BUSY LINE [C-2] (CF-B) service:
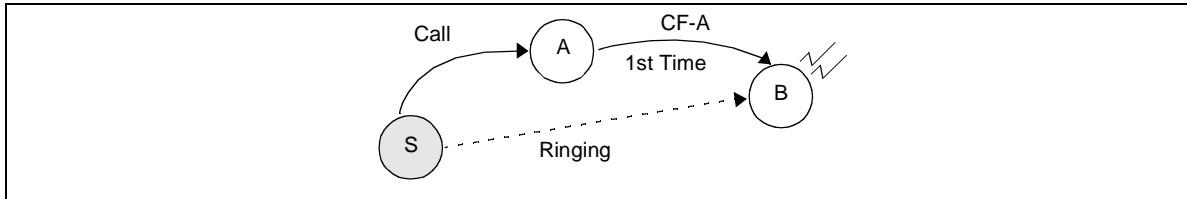
2. With MULTIPLE CALL FORWARDING-BUSY LINE [M-24] service:
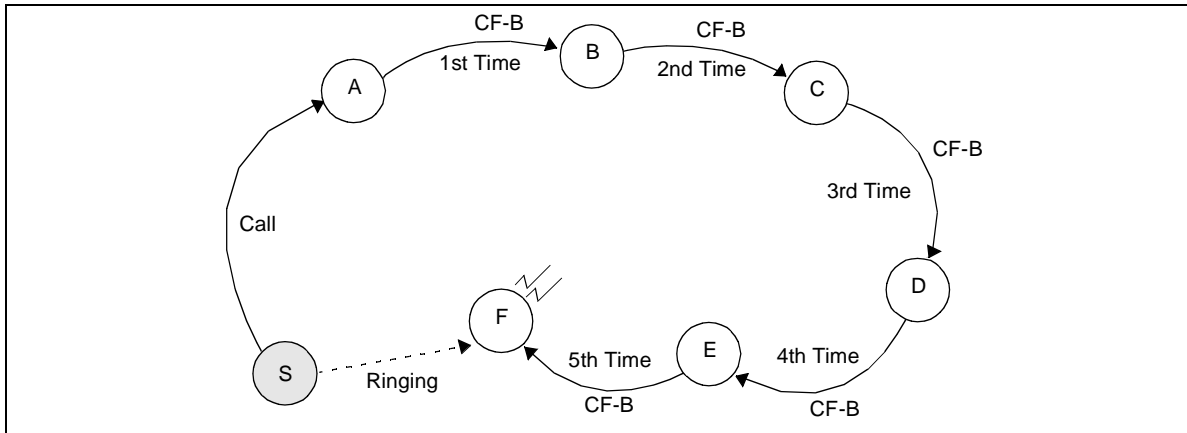
Operating Procedure

1. Station A sets Call Forwarding-Busy Line to Station B. Station B sets Call Forwarding-Busy Line to Station C. Station C sets Call Forwarding-Busy Line to Station D.
2. Stations A, B, and C are busy when an incoming call is directed to Station A. The call is forwarded to Station B first, then to Station C, and on to Station D. The calling party receives ringback tone, and ringing starts at Station D.
3. Station D lifts the handset to answer and is connected to the calling party.

Service Conditions

1. The service conditions within the node comply with those of MULTIPLE CALL FORWARDING-BUSY LINE [M-24].
2. A call can be forwarded by CALL FORWARDING a maximum of one time between nodes in a CCIS network.

Service Conditions (cont'd)

3.   When CALL FORWARDING is performed in a CCIS network, the following services are not available at a forwarded-to-station:

CALL FORWARDING-ALL CALLS-OUTSIDE	[C-28]
CALL FORWARDING-BUSY LINE-OUTSIDE	[C-60]
CALL FORWARDING-DON'T ANSWER-OUTSIDE	[C-74]

LEGEND
*   CF-B: Call Forwarding -Busy Line
*   CF-B - CCIS: Call Forwarding -Busy Line - CCIS
*   CF-B-Outside: Call Forwarding -Busy Line-Outside
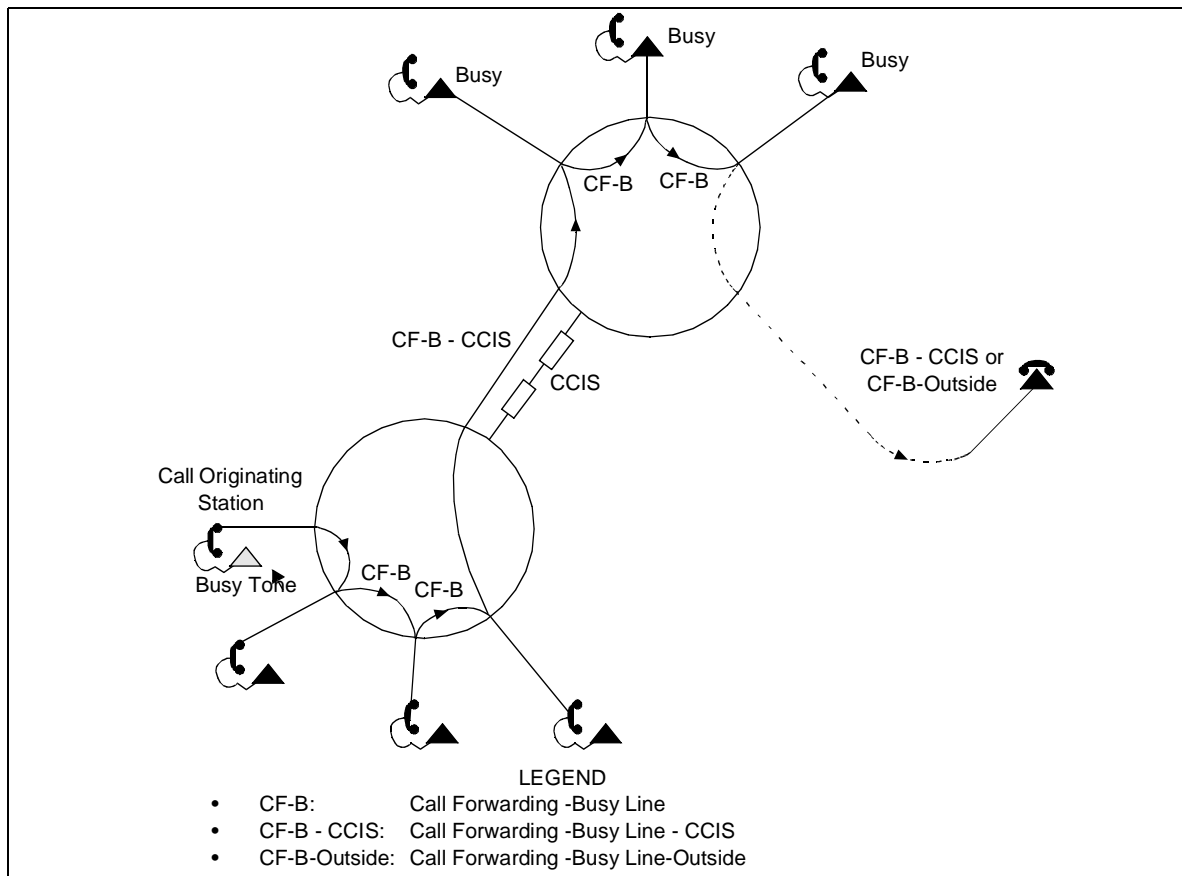
4.   When a call is forwarded to the calling party by CALL FORWARDING-BUSY LINE - CCIS [M-41], the calling party hears busy tone.
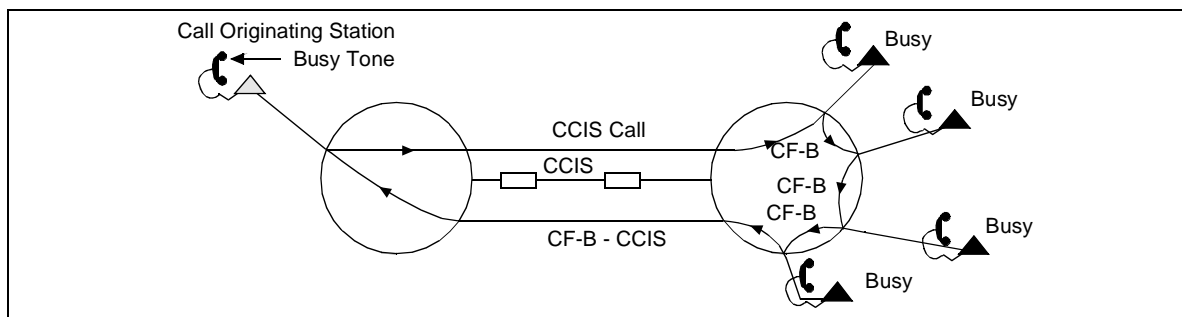
Service Conditions (cont'd)

5. SERVICE DISPLAY - CCIS [S-53] is available at the terminating node. The type of forwarding to be displayed is CF BUSY.
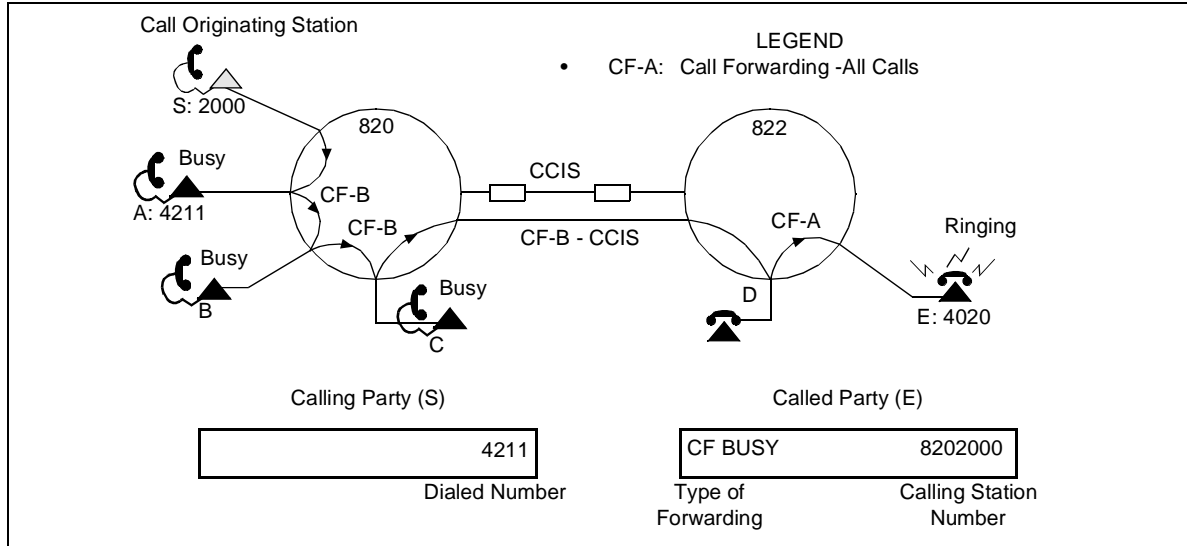
6. When a call is terminated to an ATTENDANT CONSOLE [A-3] by the MULTIPLE CALL FORWARDING-BUSY LINE - CCIS [M-41], the call type is BUSY.

7. The system data (ASYD, SYS1, Index 486, bit 0-2) decides the maximum number of times for activating a call forwarding service between nodes through CCIS. The number of times is selected in the range of 1 time to 7 times (ASYD, SYS1, Index 486, bit 0-2 = 0 means the enhanced feature is not available).

8. The number of times for activating this service between CCIS nodes is decided by system data programmed at the node that has the station operating the first Call Forwarding service through CCIS link. However, when the node that accommodates the station operating the service first has not been programmed, the number of times is decided at the node that accommodates the destination of the first Call Forwarding - CCIS service.

9. When Multiple Call Forwarding - CCIS is activated and the last intermediate party forwards (returns) the call to the first calling party, the calling party may hear either ringback tone or busy tone.

    The Calling party hears ringback tone when the forwarding destination number, assigned to the last intermediate party (intermediate party 2 in the example below), and the calling party number sent from the calling party are identical.

Service Conditions (cont'd)

The Calling party hears busy tone when the forwarding destination number, assigned to the last intermediate party (intermediate party 2 in the example below), and the calling party number sent from the calling party are not identical.
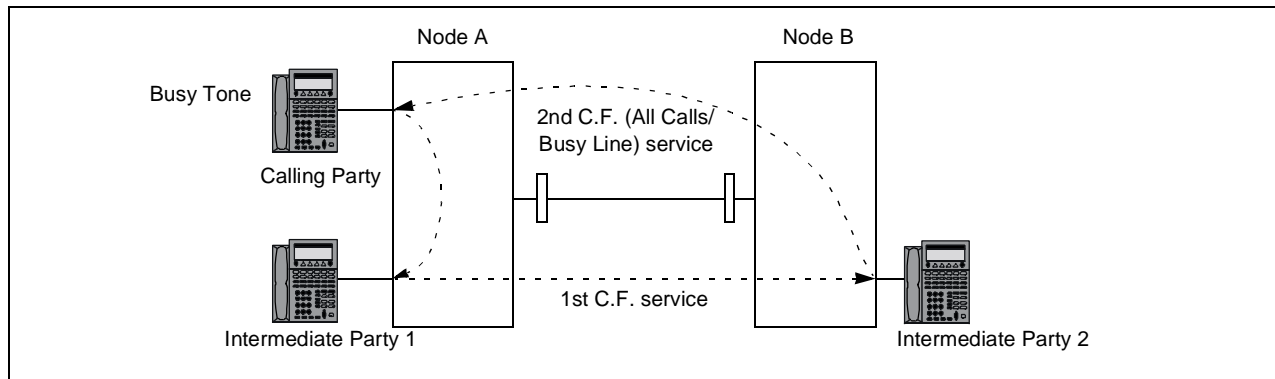
10. When Call Forwarding is restricted because the number of times data or service restriction data, the caller hears busy tone.

11. Even if Call Forwarding is set from the forwarded station to the forwarding station, the Call Forwarding service is effective, as shown in the example below:

    When Office A selects the number of times for Call Forwarding for 5 times, five times of Call Forwarding are executed as Call Forwarding 1 to Call Forwarding 2 to Call Forwarding 3 to Call Forwarding 2 to Call Forwarding 3.

12. The following services set to the forwarded destination are not available with Multiple Call Forwarding - CCIS services, except when the services below are activated through CCIS link:

    CALL FORWARDING - ALL CALLS - OUTSIDE   [C-28]
    CALL FORWARDING - BUSY LINE - OUTSIDE   [C-60]
    CALL FORWARDING - DON'T ANSWER - OUTSIDE   [C-74]

Service Conditions (cont'd)

13. The following services are activated within one node. The maximum number of times for activating this feature is the same as previous software releases:

    MULTIPLE CALL FORWARDING - ALL CALLS [M-44]:   5 times
    MULTIPLE CALL FORWARDING - BUSY LINE [M-24]:   5 times
    MULTIPLE CALL FORWARDING - DON'T ANSWER [M-25]: unlimited

14. The following are detailed examples of Call Forwarding - CCIS activation. These examples are activated under the conditions below:

    • The maximum number of times to activate the service is three (programmed in Office A and Office B).
    • The last call forwarding is operated by Call Forwarding - All Calls/Don't Answer service.
    • Any kind of D^{term}, ISDN terminal, PHS, etc. is available to be used for the calling/intermediate party.
    • Any kind of Call Forwarding service (All Calls/Busy Line/Don't Answer) is available to be set at the calling/intermediate terminal.

    a.) The service is restricted because the terminating Office B is unavailable for enhanced Call Forwarding - CCIS service.

Service Conditions (cont'd)

b.) The service is restricted because the service has already been activated the predetermined number of times.

c.) When Office A is not available for the enhanced Call Forwarding feature, the number of times the service is activated is decided by Office B (three times are effective in this example). Note that Call Forwarding service from Office A to Office B is included in the number of times service is activated.

Service Conditions (cont'd)

d.) The Call Forwarding service is activated four times, because the call is forwarded from Office D to Office E through FCCS link:

Note: *Call Forwarding service activated through FCCS link (C.F.*) is not included in the number of times that the Multiple Call Forwarding - CCIS service is activated.*

e.) When the trunk/station incoming call terminates through FCCS link, the number of times for the service activation may vary, depending on the kind of Call Forwarding service (All Calls/Busy Line/Don't Answer) set to the station in the terminated node. This condition is also applied when the call is forwarded from Office A to Office B through FCCS link.

a. Call Forwarding - All Calls/Busy Line.
    • When the station that forwards an incoming call first (the station in Office B) is set Call Forwarding - All Calls/Busy Line, the number of times is decided by the data in Office A (the node has the calling party).

b. Call Forwarding - Don't Answer
    • When the station that forwards an incoming call first (the station in Office B) is set Call Forwarding - Don't Answer, the number of times is decided by the data in Office B (the node has the terminal that activates Call Forwarding service first).

Service Conditions (cont'd)

      f.) This service is restricted when a call from the CCIS line is forwarded to other lines except CCIS (for example: C.O. line).
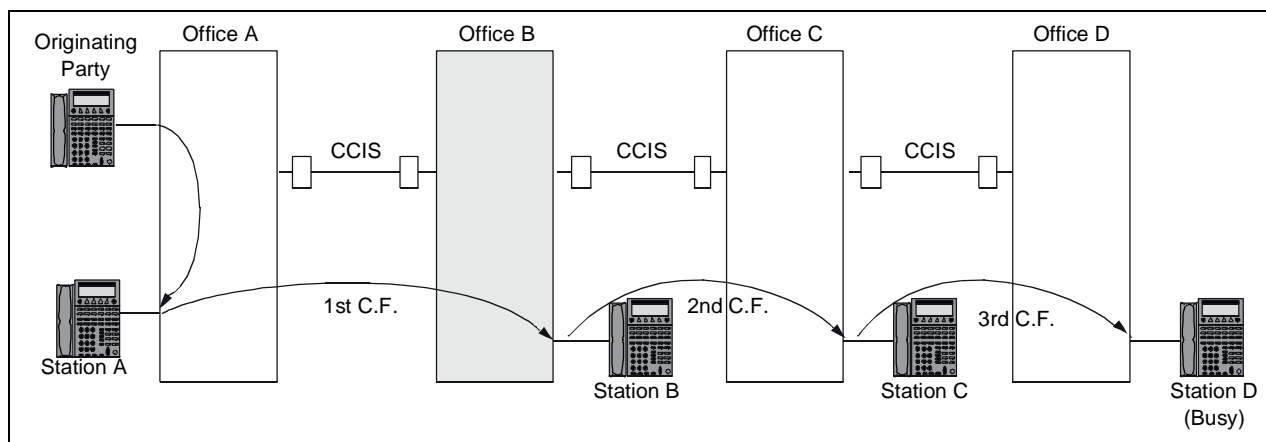
Interactions

When a calling party sets the services shown below while the destination party is in busy status, the services are performed to the first forwarded party.

1. In the case of Busy Verification - CCIS [B-9] or Executive Right-of-Way - CCIS [E-8], the service is effective to Station B in Office B. The service is invalid to station D.

      a.) When Station B is in busy status, Busy Verification - CCIS [B-9] and Executive Right-of-Way - CCIS [E-8] are activated.

      b.) When Station B is in idle status, Station B is rung.

2. In the case of Message Reminder - CCIS [M-34, 34D], service is performed to Station B in Office B. The service is invalid to station D.

Interactions (cont'd)

3. In the case of Call Back - CCIS [C-44], service is effective to Station B in Office B. The service is invalid to station D.

4. In the case of Step Call - CCIS [S-59], the service is valid to Station B in Office B. The service is invalid to station D.
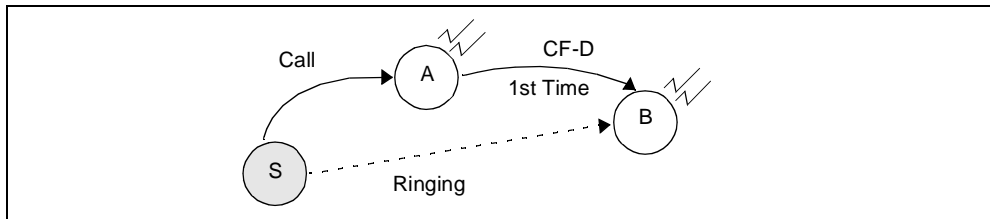
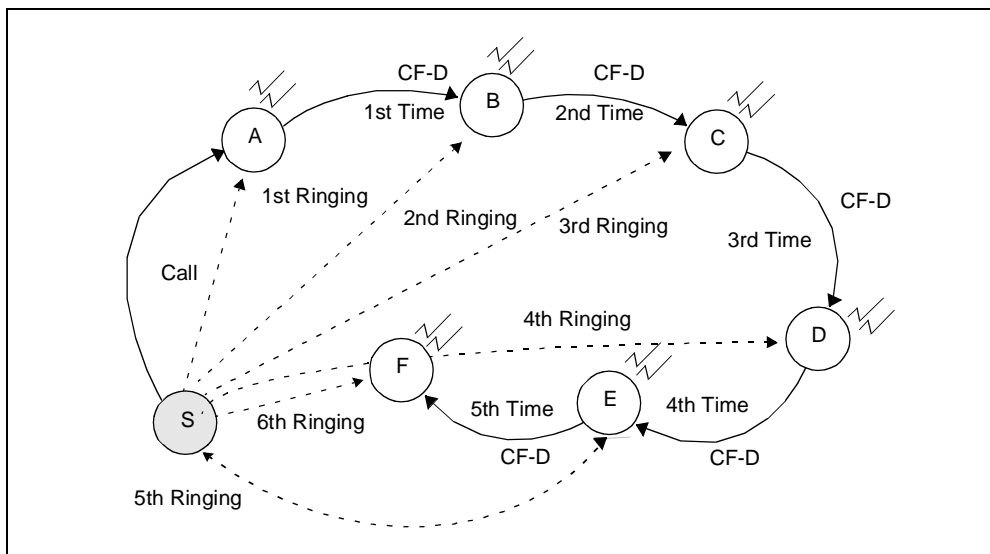# M-42 Multiple Call Forwarding - Don't Answer - CCIS

General Description

This service permits a call to an unanswered station to be forwarded, multiple times, to a predesignated station that does not have CALL FORWARDING-DON'T ANSWER [C-3] service set, or to the ATTENDANT CONSOLE [A-3] in a CCIS network.

With existing CALL FORWARDING-DON'T ANSWER [C-3] (CF-D) service:

With MULTIPLE CALL FORWARDING-DON'T ANSWER [M-25] service:

Operating Procedure

1. Station A sets Call Forwarding-Don't Answer to Station B. Station B sets Call Forwarding-Don't Answer to Station C. Station C sets Call Forwarding-Don't Answer to Station D.
2. A call is directed to Station A. The calling party receives ringback tone, and ringing starts at Station A.
3. The call is not answered within a predetermined amount of time and is forwarded to Station B. Ringing stops at Station A and starts at Station B.
4. The call is not answered within a predetermined amount of time and is forwarded to Station C. Ringing stops at Station B and starts at Station C.
5. The call is not answered within a predetermined amount of time and is forwarded to Station D. Ringing stops at Station C and starts at Station D.
6. Station D lifts the handset and is connected to the calling party.

Service Conditions

1. The service conditions within the node comply with those of MULTIPLE CALL FORWARDING-DON'T ANSWER [M-25].

2. A call can be forwarded by CALL FORWARDING a maximum of one time between nodes in a CCIS network.

3. When CALL FORWARDING is performed in a CCIS network, the following services are not available at a forwarded-to station:

   CALL FORWARDING-ALL CALLS-OUTSIDE   [C-28]
   CALL FORWARDING-BUSY LINE-OUTSIDE   [C-60]
   CALL FORWARDING-DON'T ANSWER-OUTSIDE   [C-74]

LEGEND
- CF-D: Call Forwarding - Don't Answer
- CF-D - CCIS: Call Forwarding - Don't Answer - CCIS
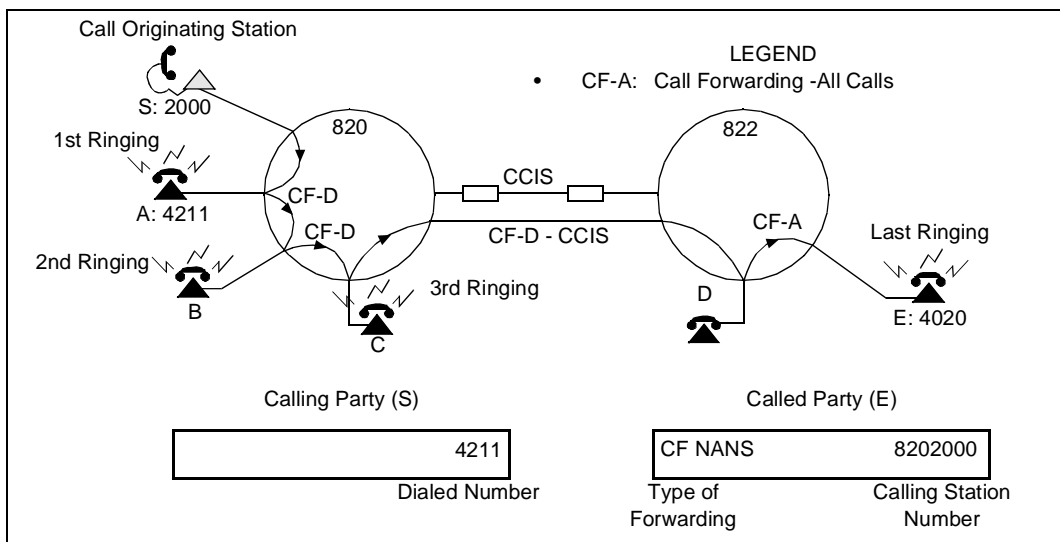- CF-D-Outside: Call Forwarding - Don't Answer-Outside
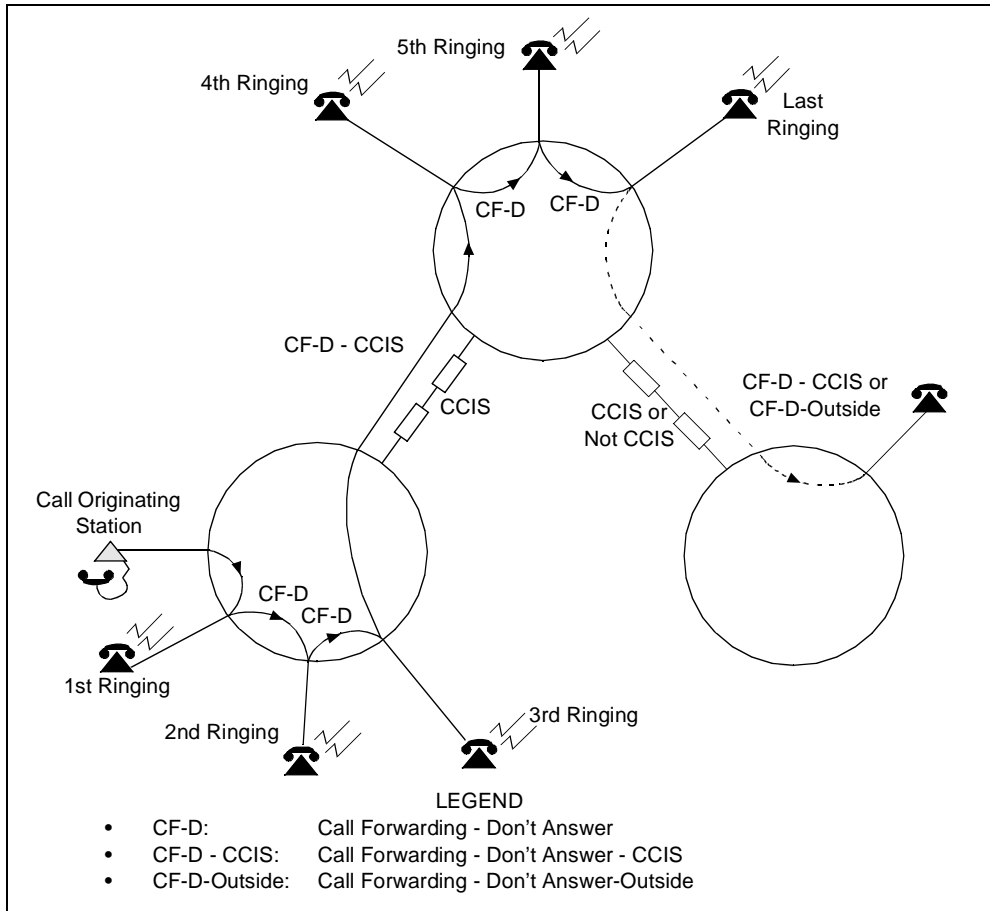
Service Conditions (cont'd)

4. When a call is set to be forwarded to a calling party by CALL FORWARDING-DON'T ANSWER - CCIS [M-42], the call forwarded to the calling party is ignored and the last station keeps ringing.
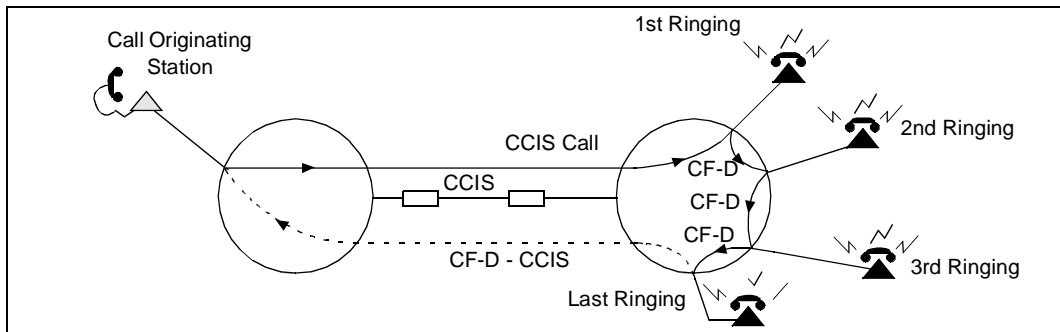
5. The type of forwarding to be displayed is CF NANS at the terminating node.

6. When a call is terminated to an ATTENDANT CONSOLE [A-3] by the MULTIPLE CALL FORWARDING-DON'T ANSWER - CCIS [M-42], the call type is NANS.

7. There is no limit to the number of jumps for MULTIPLE CALL FORWARDING-NO ANSWER.

8. The system data (ASYD, SYS1, Index 486, bit 0-2) decides the maximum number of times for activating a call forwarding service between nodes through CCIS. The number of times is selected in the range of 1 time to 7 times (ASYD, SYS1, Index 486, bit 0-2 = 0 means the enhanced feature is not available).

9. The number of times for activating this service between CCIS nodes is decided by system data programmed at the node that has the station operating the first Call Forwarding service through CCIS link. However, when the node accommodating the station operating the service first has not programmed, the number of times is decided at the node that accommodates the destination of the first Call Forwarding - CCIS service.

Service Conditions (cont'd)

10. When the destination is the calling party:
    a.) CALL FORWARDING - DON'T ANSWER: the call continues to place at the station that forwards the call to the caller.
   In this case, the calling party hears ringback tone:
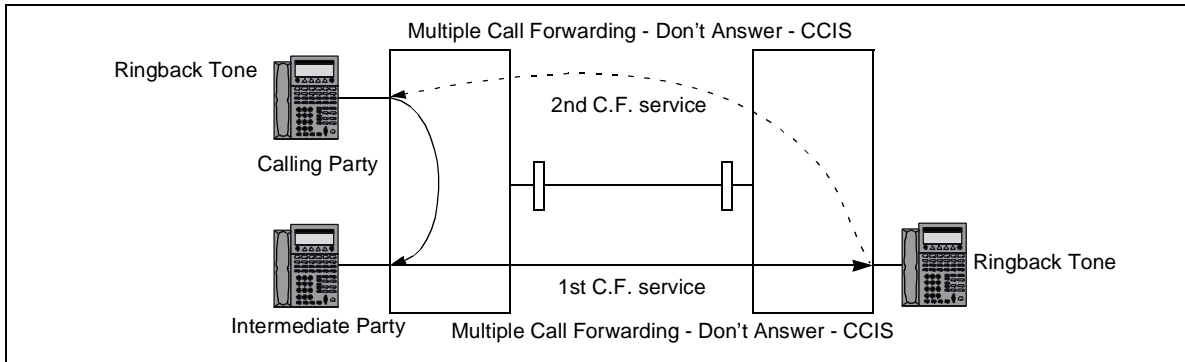
11. When Call Forwarding is restricted because the number of times data or service restriction data, the call continues to ring at the station that has restricted the service.
    Example 1: Multiple Call Forwarding - CCIS is restricted because the service has already been activated the preassigned maximum number of times. A maximum of three times is available for Call Forwarding through CCIS.
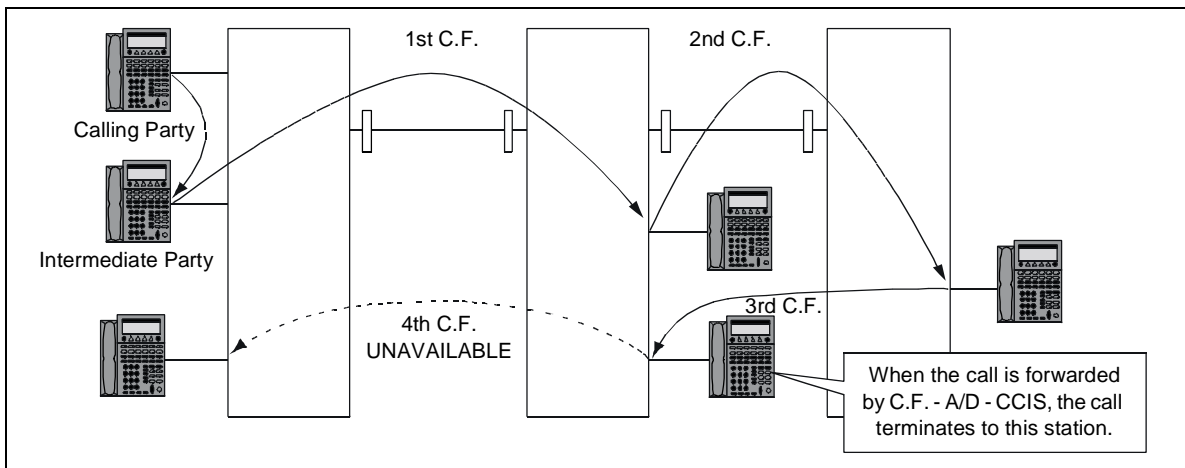
Service Conditions (cont'd)

Example 2: Multiple Call Forwarding - CCIS service is restricted because the service is not effective at the node.
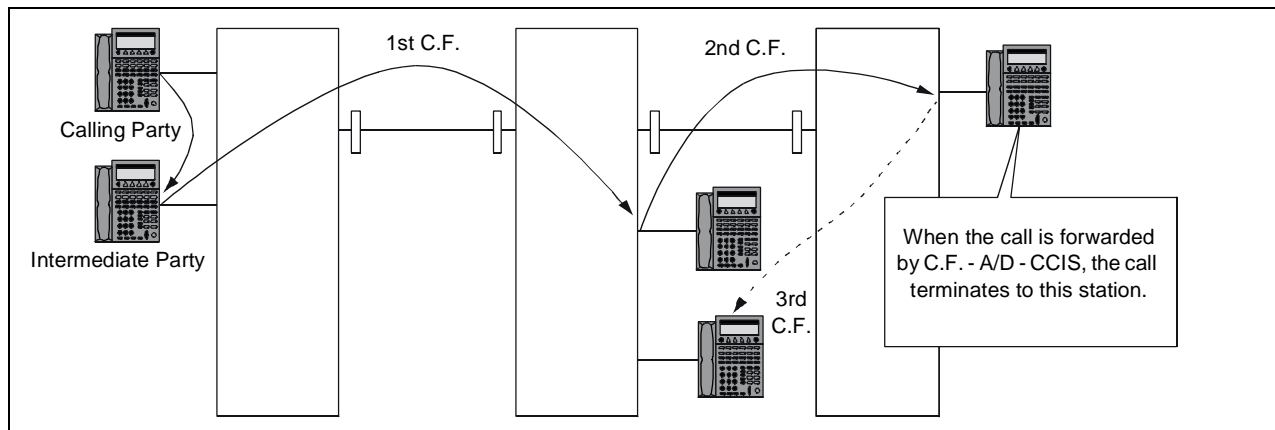
12.   Even if Call Forwarding is set from the forwarded station to the forwarding station, the Call Forwarding service is effective, as shown in the example below:

When Office A selects the number of times for Call Forwarding for 5 times, five times of Call Forwarding are executed as Call Forwarding 1 to Call Forwarding 2 to Call Forwarding 3 to Call Forwarding 2 to Call Forwarding 3.
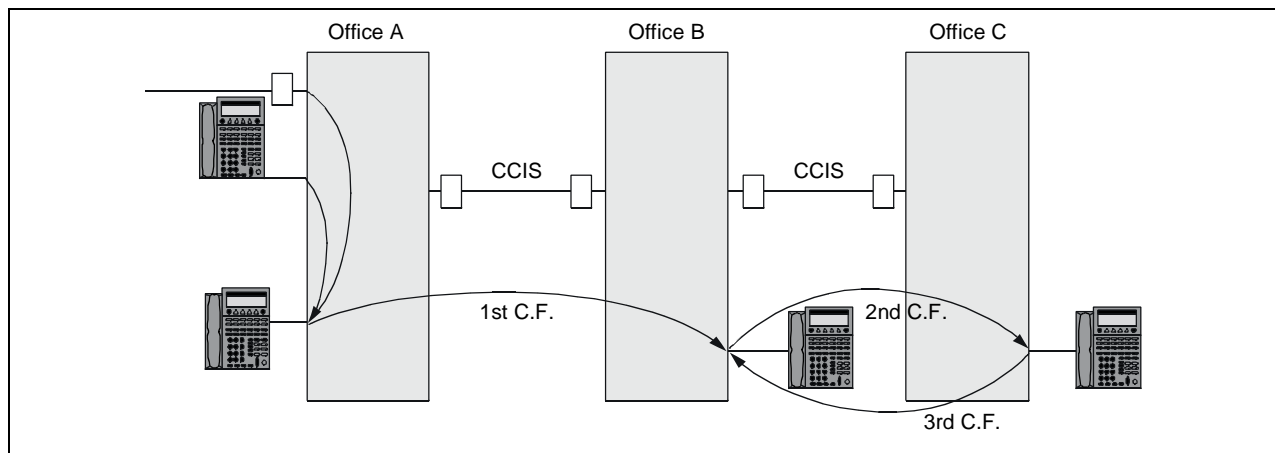
13.   The following services set to the forwarded destination are not available with Multiple Call Forwarding - CCIS services, except when the services below are activated through CCIS link:

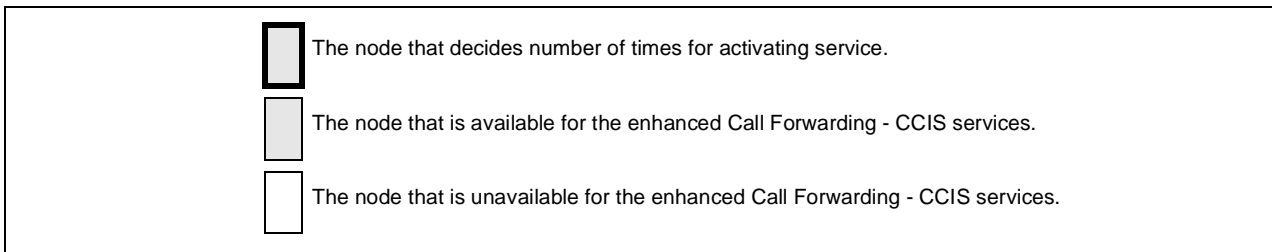|	
CALL FORWARDING - ALL CALLS - OUTSIDE	[C-28]
CALL FORWARDING - BUSY LINE - OUTSIDE	[C-60]
CALL FORWARDING - DON'T ANSWER - OUTSIDE	[C-74]

14.   The following services are activated within one node. The maximum number of times for activating this feature is the same as previous software releases:

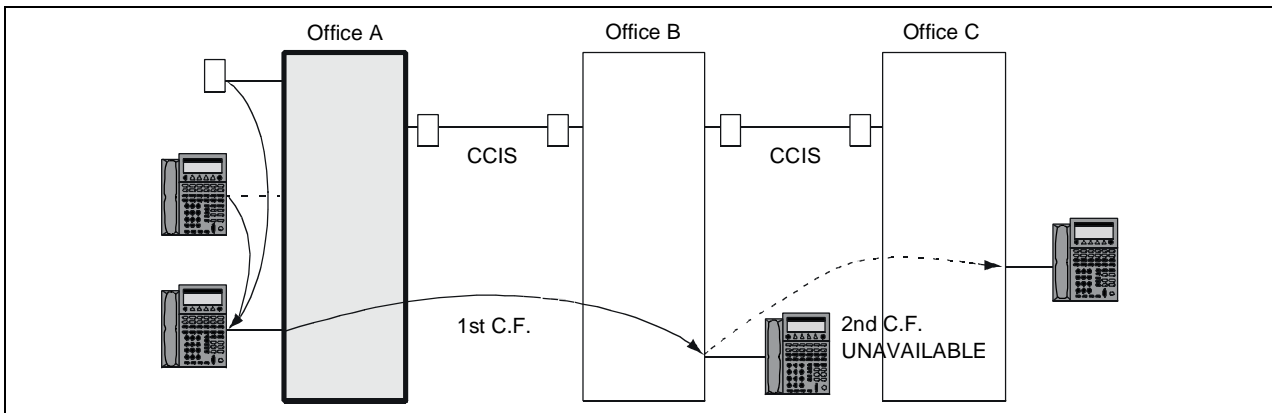|	
MULTIPLE CALL FORWARDING - ALL CALLS [M-44]:	5 times
MULTIPLE CALL FORWARDING - BUSY LINE [M-24]:	5 times
MULTIPLE CALL FORWARDING - DON'T ANSWER [M-25]:	unlimited

Service Conditions (cont'd)

15. The following are detailed examples of Call Forwarding - CCIS activation. These examples are activated under the conditions below:

    • The maximum number of times to activate the service is three (programmed in Office A and Office B).
    • The last call forwarding is operated by Call Forwarding - All Calls/Don't Answer service.
    • Any kind of D^{term}, ISDN terminal, PHS, etc. is available to be used for the calling/intermediate party.
    • Any kind of Call Forwarding service (All Calls/Busy Line/Don't Answer) is available to be set at the calling/intermediate terminal.

The node that decides number of times for activating service.

The node that is available for the enhanced Call Forwarding - CCIS services.

The node that is unavailable for the enhanced Call Forwarding - CCIS services.
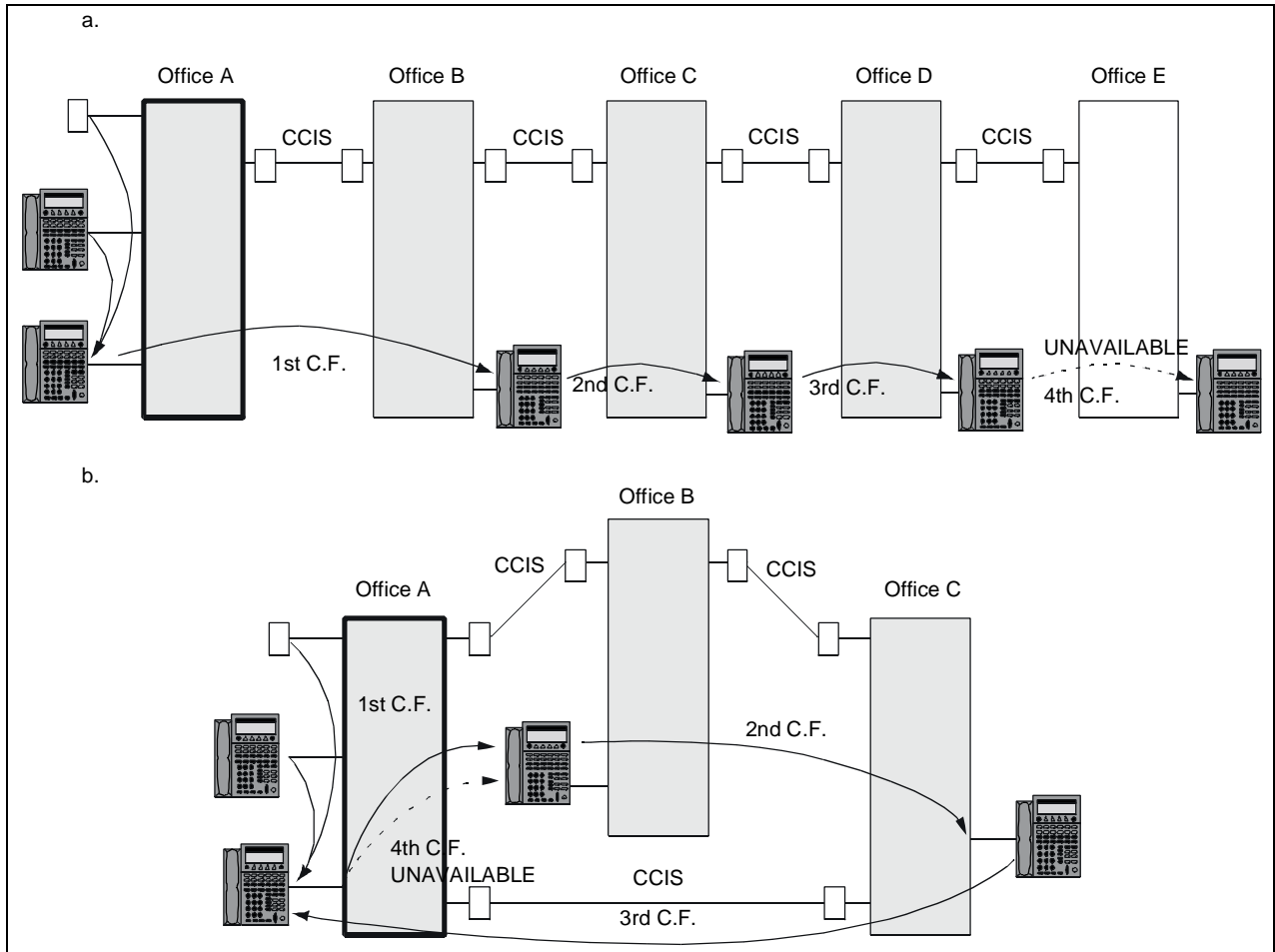
a.) The service is restricted because the terminating Office B is unavailable for enhanced Call Forwarding - CCIS service.
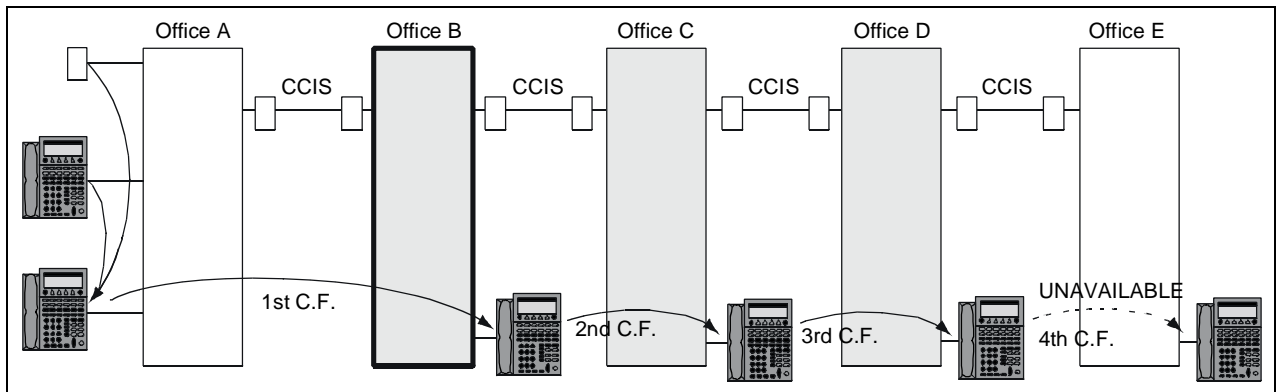
Service Conditions (cont'd)

b.) The service is restricted because the service has already been activated the predetermined number of times.
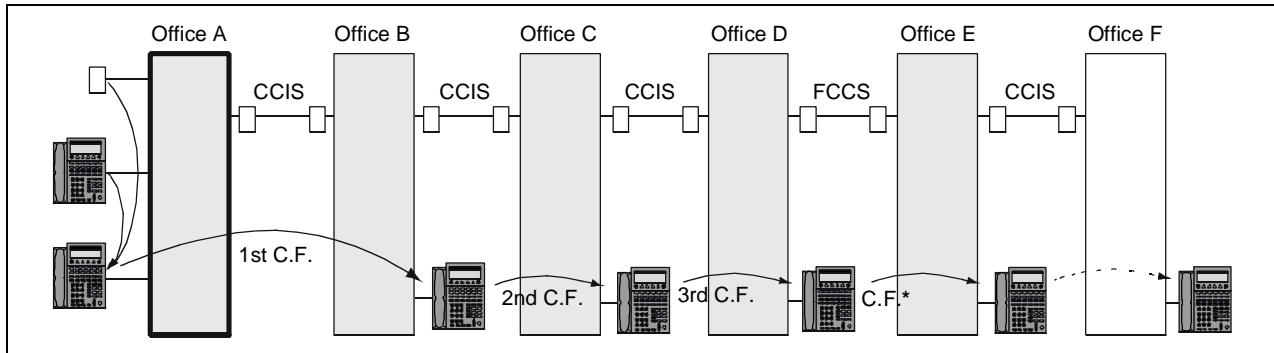

c.) When Office A is not available for the enhanced Call Forwarding feature, the number of times the service is activated is decided by Office B (three times are effective in this example). Note that Call Forwarding service from Office A to Office B is included in the number of times service is activated.

Service Conditions (cont'd)

d.) The Call Forwarding service is activated four times, because the call is forwarded from Office D to Office E through FCCS link:
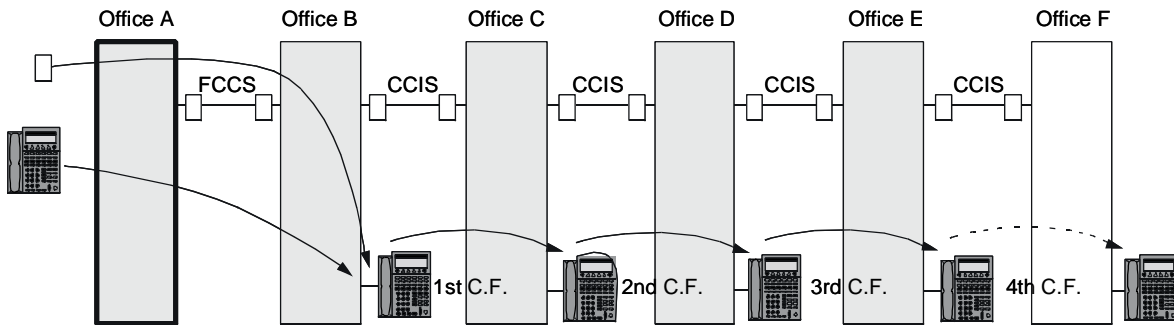

Note: *Call Forwarding service activated through FCCS link (C.F.*) is not included in the number of times that the Multiple Call Forwarding - CCIS service is activated.*

e.) When the trunk/station incoming call terminates through FCCS link, the number of times for the service activation may vary, depending on the kind of Call Forwarding service (All Calls/Busy Line/Don't Answer) set to the station in the terminated node. This condition is also applied when the call is forwarded from Office A to Office B through FCCS link.

a. Call Forwarding - All Calls/Busy Line.
   • When the station that forwards an incoming call first (the station in Office B) is set Call Forwarding - All Calls/Busy Line, the number of times is decided by the data in Office A (the node has the calling party).
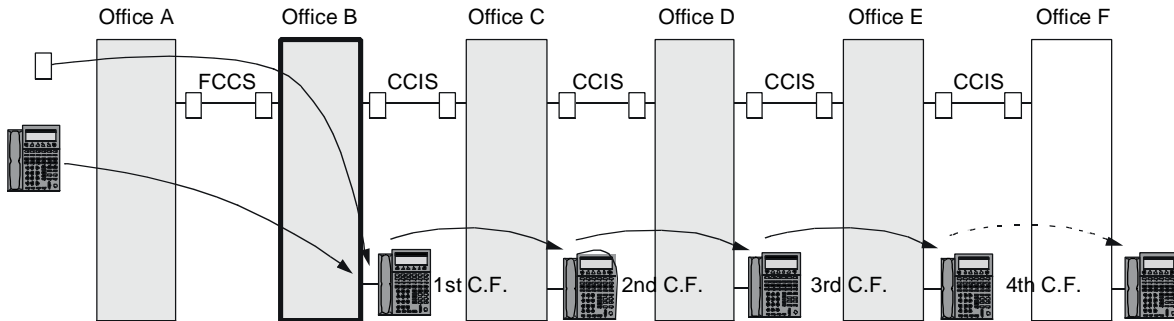

b. Call Forwarding - Don't Answer
   • When the station that forwards an incoming call first (the station in Office B) is set Call Forwarding - Don't Answer, the number of times is decided by the data in Office B (the node has the terminal that activates Call Forwarding service first).
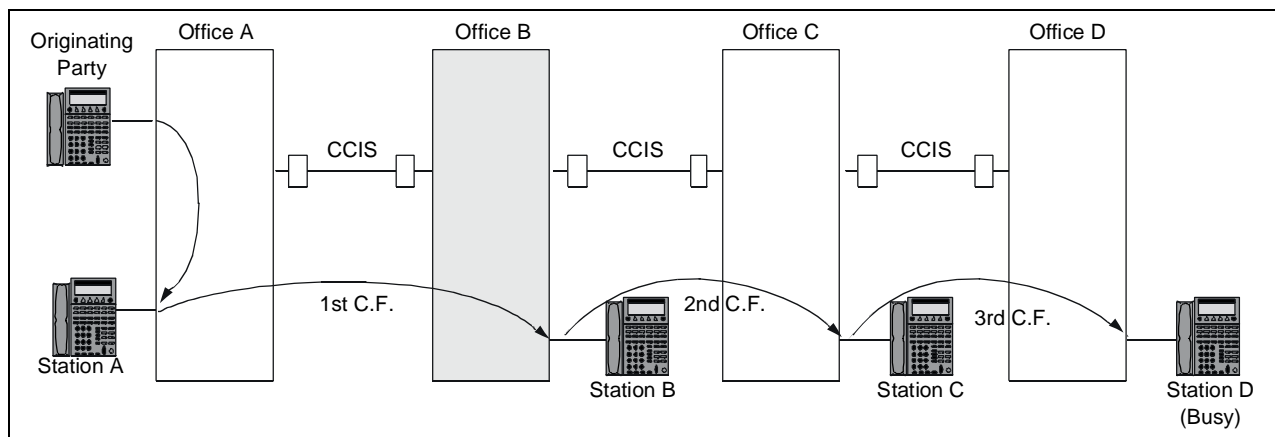
Service Conditions (cont'd)

f.) This service is restricted when a call from the CCIS line is forwarded to other lines except CCIS (for example: C.O. line).

Interactions

When a calling party sets the services shown below while the destination party is in busy status, the services are performed to the first forwarded party.

1. In the case of Busy Verification - CCIS [B-9] or Executive Right-of-Way - CCIS [E-8], the service is effective to Station B in Office B. The service is invalid to station D.

    a.) When Station B is in busy status, Busy Verification - CCIS [B-9] and Executive Right-of-Way - CCIS [E-8] are activated.

    b.) When Station B is in idle status, Station B is rung.

2. In the case of Message Reminder - CCIS [M-34, 34D], service is performed to Station B in Office B. The service is invalid to station D.

Interactions (cont'd)

3. In the case of Call Back - CCIS [C-44], service is effective to Station B in Office B. The service is invalid to station D.

4. In the case of Step Call - CCIS [S-59], the service is valid to Station B in Office B. The service is invalid to station D.

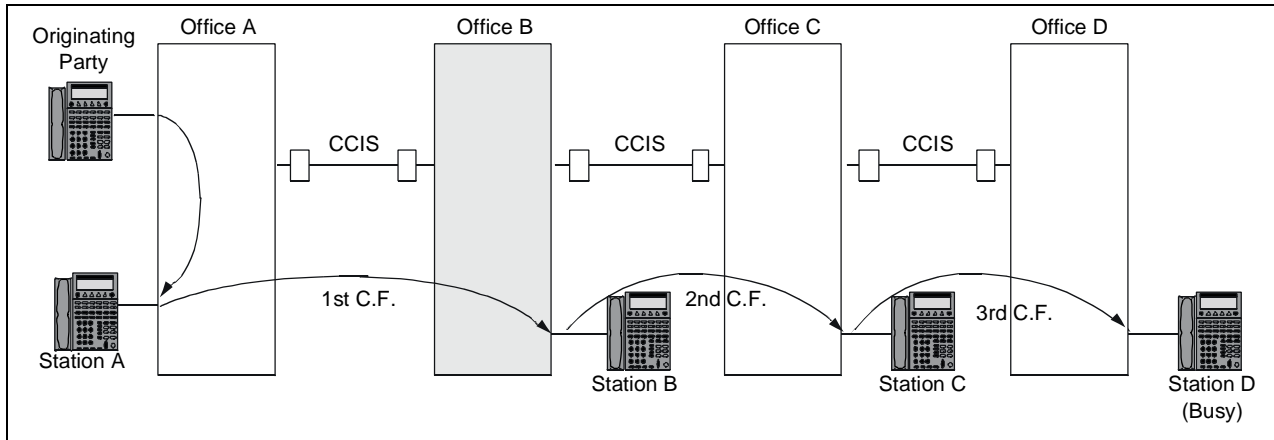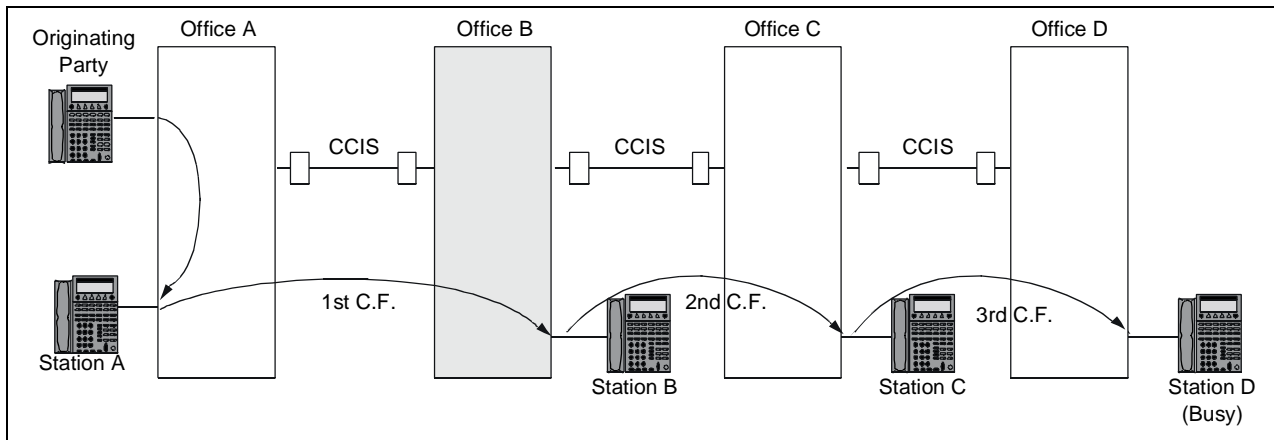# M-43   Multiple Console Operation - CCIS

General Description

This feature provides console operation where ATTENDANT CONSOLEs [A-3] are installed in more than one node in the CCIS network.

Operating Procedure

No manual operation is required.

Service Conditions

1. Call transfer among ATTENDANT CONSOLEs [A-3] in different nodes is possible, but call identification information cannot be transferred from one node to another.

2. When ATTENDANT CONSOLEs [A-3] are installed in multiple nodes, Day/Night mode changeover is controlled independently in each node.

3. The following types of calls on the CCIS network are identified by the lamps on the ATTENDANT CONSOLE [A-3]:
    - LDN
    - FX
    - WATS
    - CCSA
    - TIE
    - ATND

4. When ATTENDANT CONSOLEs [A-3] are installed in multiple nodes, an incoming call is only indicated at the terminating ATTENDANT CONSOLE [A-3]. No indication is given on the ATTENDANT CONSOLEs [A-3] at the other nodes.

5. The maximum number of consoles per unit is two.

6. The maximum number of consoles allowed per system is 16 for 1 IMG and 60 for 4 IMGs/IPX-U.

7. Each incoming call is displayed on a console whether idle or busy. If all Attendants are involved in processing calls when another Central Office call arrives, the Call Waiting Lamp will light on all consoles. This is Switched-Loop Attendant Operation.

8. If one of the consoles enters the Night mode, all calls addressed to the Attendant will be directed to the other consoles. However, the console which has entered the Night mode must complete processing of all calls already connected to its loop.

9. A station can be connected to only one Attendant loop at a time. Any attempt at establishing multiple connections will result in reorder tone being sent to the Attendant.

10. The NEAX2400 IPX operates only on a switched-loop basis. Fixed-loop operation is not available.

Interactions

1. See ATTENDANT CONSOLE [A-3] for information regarding a single ATTENDANT CONSOLE [A-3] and system features provided to the ATTENDANT CONSOLE [A-3]. The ATTENDANT CONSOLE [A-3] must be provided first.

2. For each tenant, only one type of ATTENDANT CONSOLE [A-3] system can be assigned, either normal or Primary ATTENDANT CONSOLE [A-3] system.

3. ASAT must be programmed for INTERPOSITION TRANSFER [I-5].

Interactions (cont'd)

4. ATTENDANT CONSOLEs [A-3] may not dial another console directly. Talk path will occur only during INTERPOSITION TRANSFER [I-5].

5. When more than one ATTENDANT CONSOLE [A-3] is installed, a Primary ATTENDANT CONSOLE [A-3] may be assigned (AMAT command). This ATTENDANT CONSOLE [A-3] will control the implementation of DAY/NIGHT CLASS OF SERVICE [D-15].

M-67 Message Center Interface - CCIS

General Description

This service feature provides an INTERFACE to the external CPU for MESSAGE CENTER information when a specific UCD group or console in a CCIS network is called. This interface allows external control of Message Waiting Lamp (MWL) indications on equipped PBX stations.

Message Center Interface can also be provided in a network established with FCCS groups (networks where multiple NEAX2400 IPXs are connected via FCCS link) and NEAX2000 IVS^2 using CCIS link. When used as such, this feature is called Centralized Message Center Interface.

Note: *MCI message can be transmitted to the Centralized MCI via NEAX2000 IVS^2. In the case of connection between FCCS groups, MCI message can be transmitted only when a call is terminated to any UCD station within the Center FCCS group.*

Operating Procedure

The Message Center Interface (MCI) can provide one of two modes of operation. These modes are described as Feature 1 and Feature 2:

Feature 1

- Incoming call information is sent to the MCI when an attendant answers.
- Control of MWLs is based on data from the external CPU.

Feature 2

- Incoming call information is sent to the MCI when a UCD station answers.
- Dual call forwarding service is possible.
- Control of MWLs is based on data from the external CPU.

Procedures

Feature 1

1. When the attendant answers a call, the PBX transmits a call handling record to the MCI. The external CPU, based on the received data, will display a profile of the station/trunk being handled by the attendant on the monitor.
2. MWL control is based on data from the external CPU. Through the external CPU terminal, when information is registered, the Host/CPU system forwards MWL control data according to the MWL On/ Off control information sent.
3. The PBX, upon receiving this control data from the MCI, will extinguish or illuminate the MWL, depending on the subscriber displayed on the attendant's monitor/display.
4. The called station will be able to receive a message from the attendant by dialing "0", or from a computer terminal by entering his/her identification number.
5. The external CPU, upon retrieval of message information, will transmit a data record requesting the PBX to extinguish the MWL of the corresponding station.

Feature 2

1. The purpose of this MCI is to provide an interface to a Voice Mail System, or a Message Center Computer which is capable of sending MWL control data to the PBX.
2. In order to perform the data transfer to the external CPU, a station/trunk is connected to a designated UCD group. These stations in the UCD group are connected to the Voice Mail System/Message Center System to collect call connection status of MWL control information. Refer to the following block diagram.

Operating Procedure (cont'd)

3. The PBX, upon receiving this control data from the MCI, will extinguish or illuminate the MWL depending on the subscriber displayed on the attendant's monitor/display.

4. The user at the called station will be able to receive a message from the system by dialing the Pilot number of the UCD station group connected to the Voice Mail System.

5. The external CPU, upon retrieval of message information, will transmit a data record requesting the PBX to extinguish the MWL of the corresponding station.
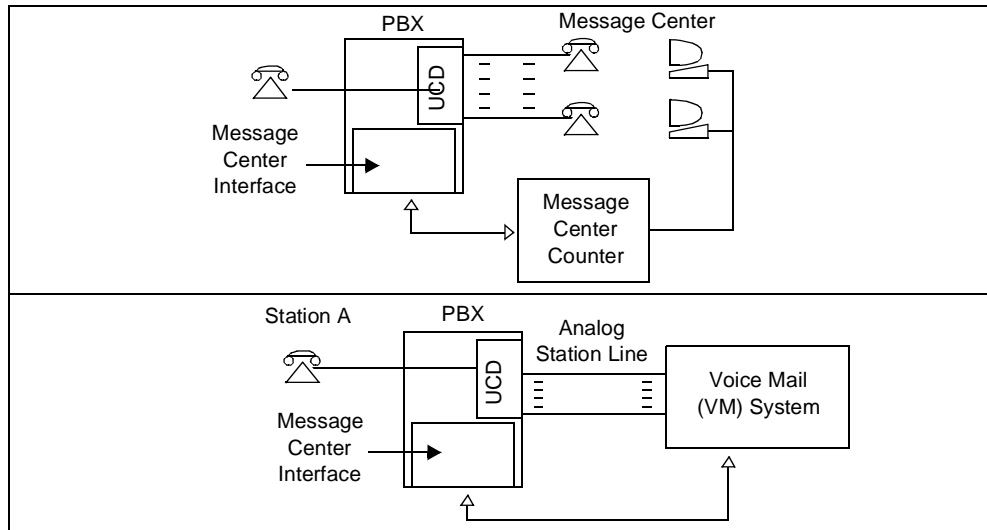
Service Conditions

1. The call type is sent to the external CPU via the MCI interface. This call record will pertain to the following services:

Feature 1:

- CALL FORWARDING-DON'T ANSWER [C-3] from Internal Call
- CALL FORWARDING-DON'T ANSWER [C-3] from External Call
- CALL FORWARDING-DON'T ANSWER - CCIS [C-47] from Internal Call
- CALL FORWARDING-DON'T ANSWER - CCIS [C-47] from External Call
- CALL FORWARDING-BUSY LINE [C-2] from Internal Call
- CALL FORWARDING-BUSY LINE [C-2] from External Call
- CALL FORWARDING-BUSY LINE - CCIS [C-46] from Internal Call
- CALL FORWARDING-BUSY LINE - CCIS [C-46] from External Call
- CALL FORWARDING-ALL CALLS [C-5] from Internal Call
- CALL FORWARDING-ALL CALLS [C-5] from External Call
- CALL FORWARDING-ALL CALLS - CCIS [C-45] from Internal Call
- CALL FORWARDING-ALL CALLS - CCIS [C-45] from External Call
- MULTIPLE CALL FORWARDING-DON'T ANSWER - CCIS [M-42] from Internal Call
- MULTIPLE CALL FORWARDING-DON'T ANSWER - CCIS [M-42] from External Call
- MULTIPLE CALL FORWARDING-BUSY LINE - CCIS [M-41] from Internal Call
- MULTIPLE CALL FORWARDING-BUSY LINE - CCIS [M-41] from External Call
- MULTIPLE CALL FORWARDING-ALL CALLS - CCIS [M-40] from Internal Call
- MULTIPLE CALL FORWARDING-ALL CALLS - CCIS [M-40] from External Call
- ATTENDANT CAMP-ON WITH TONE INDICATION [A-1]

Service Conditions (cont'd)

- ATTENDANT CAMP-ON WITH TONE INDICATION - CCIS [A-45]
- AUTOMATIC RECALL [A-8]
- Call Return from Hold
- Operator Call
- LDN Call

Feature 2:

- Station dials Message Center Number Directory.
- Direct Trunk Call to Message Center.
- Trunk Call to Message Center extended by ATTENDANT
- Station Call is FORWARDED-ALL CALLS to Message Center.
- Trunk Call is FORWARDED-ALL CALLS to Message Center.
- Station Call is FORWARDED-BUSY LINE to Message Center.
- Trunk Call is FORWARDED-BUSY LINE to Message Center.
- Station Call is FORWARDED-DON'T ANSWER to Message Center.
- Trunk Call is FORWARDED-DON'T ANSWER to Message Center.

2. The PBX MCI can control the display of a 16-Button D^{term} for Message Indication. One of four applications of the MCI can be displayed. The four applications are as follows: MW in a Message Center system, VMM in a Voice Mail system, TMM in a Text Mail system, and FMM in a Fax Mail system.

3. If an ATTENDANT CONSOLE [A-3] calls a UCD group directly for Feature 2, the PBX will not generate a call record to the MCI.

4. If the Host/CPU malfunctions and stops collecting call records, the PBX can store up to 16 call records. If the maximum of 16 call records is stored and a 17th is generated, the system will overwrite the oldest stored record, thus giving the stack the most recently generated call records.

5. The PBX connected to a Message Center CPU in a CCIS network forms a Message Center Node. In the CCIS network, one Message Center Node can be provided.

6. The maximum number of remote nodes where the Message Center CPU sends the OFF command for MWLs of all the stations is 32.

7. This service is used together with CALLED NUMBER DISPLAY-ATTENDANT [C-59].

Centralized Message Center Interface function in the network through FCCS groups and NEAX2000 IVS^2

1. For general information of this network, refer to "Network Through FCCS Groups and NEAX2000 IVS^2", in the NEAX2400 IPX No. 7 CCIS System Manual.

2. Maximum 8-digit telephone numbers (assigned in AELGN command) are available for MCI message by system data assignment. At this time, the MCI equipment should be adapted to 8-digit telephone numbers. When the Centralized Office adopts the ICS format method, the receiving message field is output as it is. In case of IMX format method, the originating information field is also output to the telephone number field.

Service Conditions (cont'd)

3. The centralized MCI function is activated by assigning MCI equipment and UCD group at the Center FCCS group. (The MCI message cannot be transmitted to the Centralized MCI between FCCS groups.)
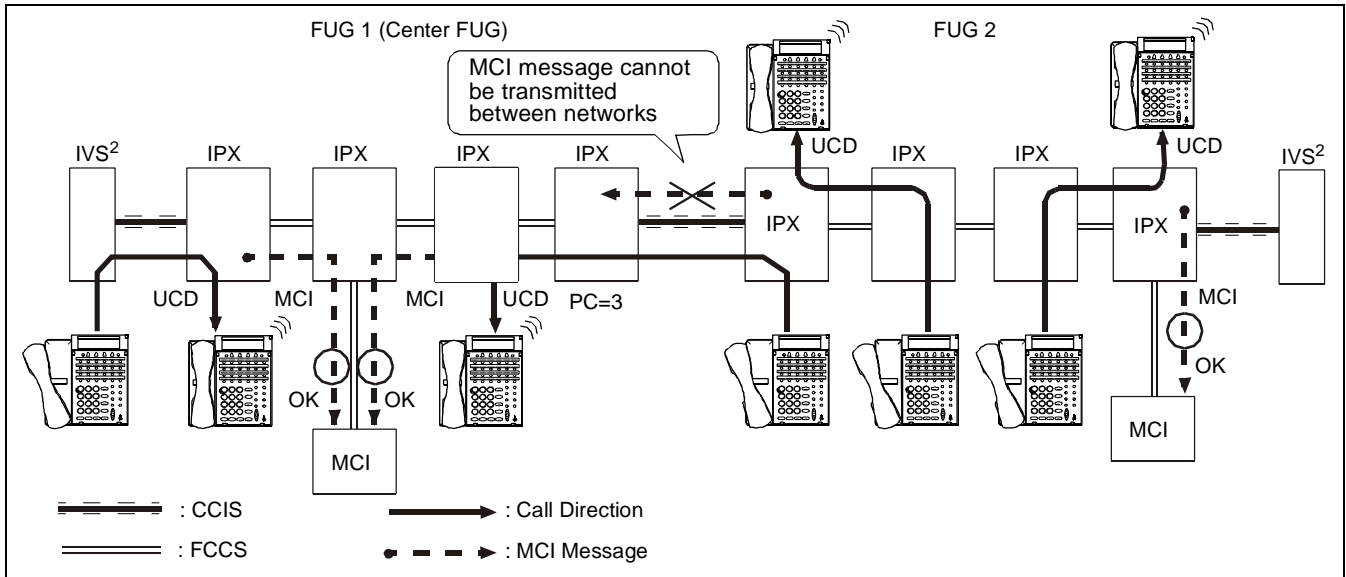
4. The signal of Call Waiting Lamp Controlling is sent from the MCI within the Center FCCS group to the other FCCS groups and the NEAX2000 IVS^2 system.
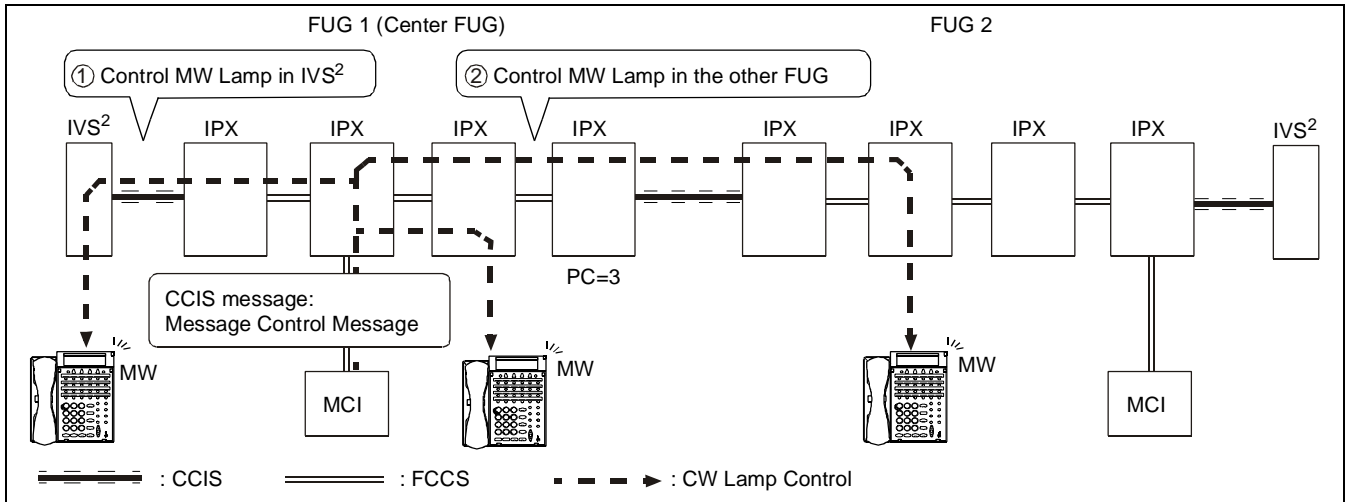
N-15   Night Connection - Fixed - CCIS

General Description

When the Night mode has been entered, this service feature routes calls, normally directed to the ATTENDANT CONSOLE [A-3], to a preselected station in another node through CCIS.

Operating Procedure

1. The Night lamp illuminates, when the Attendant in Node A sets Night mode with the NITE key pressed.
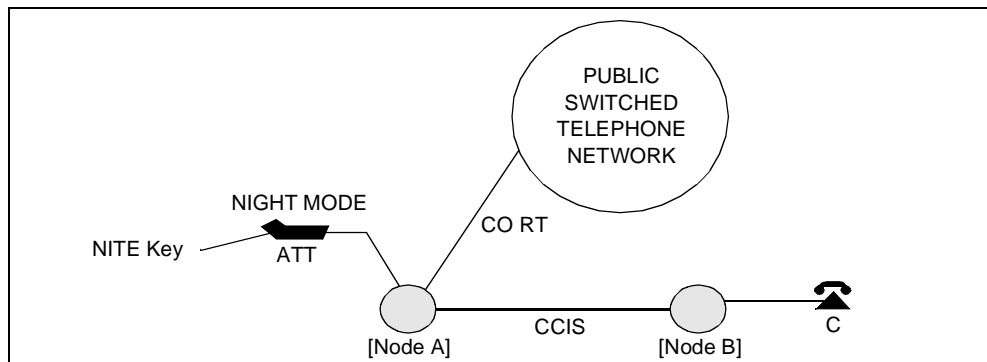
2. An incoming call from the CO RT to the Attendant in Night mode. The CO RT is automatically connected to Station C for night connection and receives ringback tone. Station C is rung.
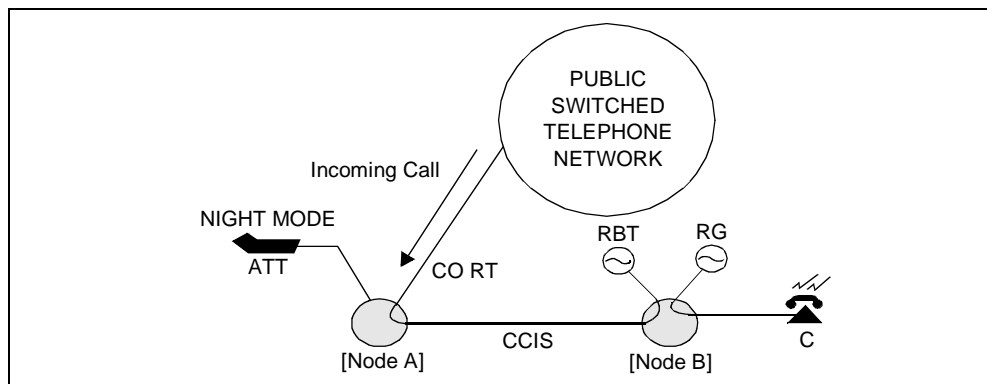
Operating Procedure (cont'd)

3. Station C answers and is connected with the CO RT. If necessary, the call can be transferred to another station by means of Call Transfer-All Calls service.
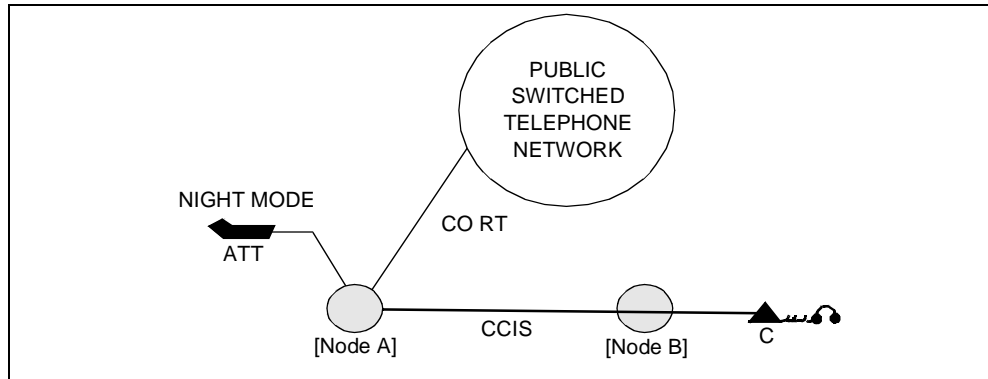
Service Conditions

1. Calls that are being processed, or are in the Hold state when the NIGHT mode is entered, will be disconnected after the mode changeover has been completed.
2. If the NIGHT CONNECTION station to which an incoming call has been directed is busy, the calling party will hear ringback tone until the station becomes idle.
3. This service feature may be provided with NIGHT CONNECTION-FLEXIBLE [N-2] and TRUNK ANSWER FROM ANY STATION [T-8] in the same system.
4. If the NIGHT CONNECTION station is set for CALL FORWARDING-ALL CALLS [C-5], incoming Central Office trunk calls terminated to that station will be forwarded to the designated station.
5. Incoming calls that will be routed to NIGHT CONNECTION stations are limited to Ring Down trunks.
6. Such calls programmed in the ALDN command should use LDN NIGHT CONNECTION - CCIS [L-29].

N-16 Night Connection - Flexible - CCIS

General Description

This feature provides inter-office flexible Night Connection service through the CCIS network, when the NIGHT CONNECTION-FIXED - CCIS and NIGHT CONNECTION-FLEXIBLE - CCIS stations are located in different nodes.

Operating Procedure

To set

1. The NIGHT CONNECTION-FIXED - CCIS station in the destination office sets CALL FORWARDING-ALL CALLS - CCIS [C-45] to a station in another node.

To answer

1. In the Night mode, an incoming call to the Attendant Console is automatically routed through CCIS to a NIGHT CONNECTION-FIXED - CCIS station located in another node. This station is then forwarded to a NIGHT CONNECTION-FLEXIBLE - CCIS station in a different node.
2. The calling party hears ringback tone.
3. Ring signal is sent to the NIGHT CONNECTION-FLEXIBLE - CCIS station.
4. The NIGHT CONNECTION-FLEXIBLE - CCIS station goes off-hook to answer the incoming call.

Service Conditions

1. Destination stations are assigned on a flexible basis using CALL FORWARDING-ALL CALLS - CCIS [C-45].
2. For NIGHT CONNECTION-FLEXIBLE - CCIS to function, a NIGHT CONNECTION-FIXED - CCIS [N-15] station must be assigned to the trunk via the Maintenance Administration Terminal (MAT).
3. The NIGHT CONNECTION-FLEXIBLE - CCIS destination station can be in the same node as the Attendant Console, which has set NIGHT CONNECTION-FIXED - CCIS [N-15].
4. If an incoming call has terminated to a flexible Night station and that station is busy, the call will queue to the Night station.
5. The destination telephone number at the distant office is stored in SPEED CALLING-SYSTEM [S-3] memory.

Interactions

1. NIGHT CONNECTION-FLEXIBLE - CCIS is the combination of CALL FORWARDING-ALL CALLS [C-5] and NIGHT CONNECTION-FIXED [N-1] or NIGHT CONNECTION-FIXED - CCIS [N-15].
2. CLASS OF SERVICE-INDIVIDUAL [C-15]: The station chosen as the NIGHT CONNECTION-FLEXIBLE - CCIS station should be assigned a class of service capable of performing the Night station functions.

N-37   Name Display - System - CCIS

General Description

In between CCIS networks, this service allows calling or called party information (user's name, telephone number, etc.) to be displayed on the LCD of the D^{term}.

Operating Procedure

No manual operation is required.

Service Conditions

1. When the called party is being rung, the LCD of the calling D^{term} displays the name of the called party.
2. When the caller or called party's name information is not available, name information is not displayed. Instead, the calling party's number/called party's number is displayed.
3. When both 8-digit display and 16-digit display are used for this Name Display - System - CCIS service, the calling party's/the called party's names are displayed as shown in the table below.

NAME DISPLAY - SYSTEM - CCIS ORIGINATING OFFICE → TERMINATING OFFICE	CALLING PARTY'S NAME DISPLAY (LCD 3-LINE DISPLAY D^{TERM})	CALLED PARTY'S NAME DISPLAY (LCD 3-LINE DISPLAY D^{TERM})
16 digits →8 digits	Middle Line: 16 digits (Right 8 digits: Blank)	Top Line: 8 digits (Front 8-character display)
8 digits →16 digits	Top Line: 8 digits (Front 8-character display)	Middle Line: 16 digits (Right 8 digits: Blank)
8 digits →16 digits →8 digits	Top Line: 8 digits	Top Line: 8 digits
16 digits →8 digits →16 digits	Middle Line: 16 digits	Middle Line: 16 digits

4. When a call from a D^{term} sub-line has terminated to the called side via a CCIS, the calling party's sub-line name information is displayed on the LCD of the called station.
5. Name display by both 8 digits and 16 digits at the call destination is made only for the My-Line.
6. ASCII characters can be displayed by this service.
7. Name information for this service is assigned by ANDD command on each station number basis.
8. The routes to the offices where this service is provided and the routes to the office where this service is not provided must be separated from each other.
9. The terminals subject to the Name Display service are limited only to the D^{term} equipped with LCD.
10. Office Code + Telephone Number is usually displayed. However, when use of a telephone number is specified, the telephone number is displayed. (A CCIS network is assigned only one telephone number.)

Service Conditions (cont'd)

11. When a call has been transferred by Call Forwarding-All Outside Line Calls or Call Forwarding-Busy Outside Line service, the LCD of the calling party's D^{term} displays the name information of the transfer destination instead of the name information of the originally dialed station.
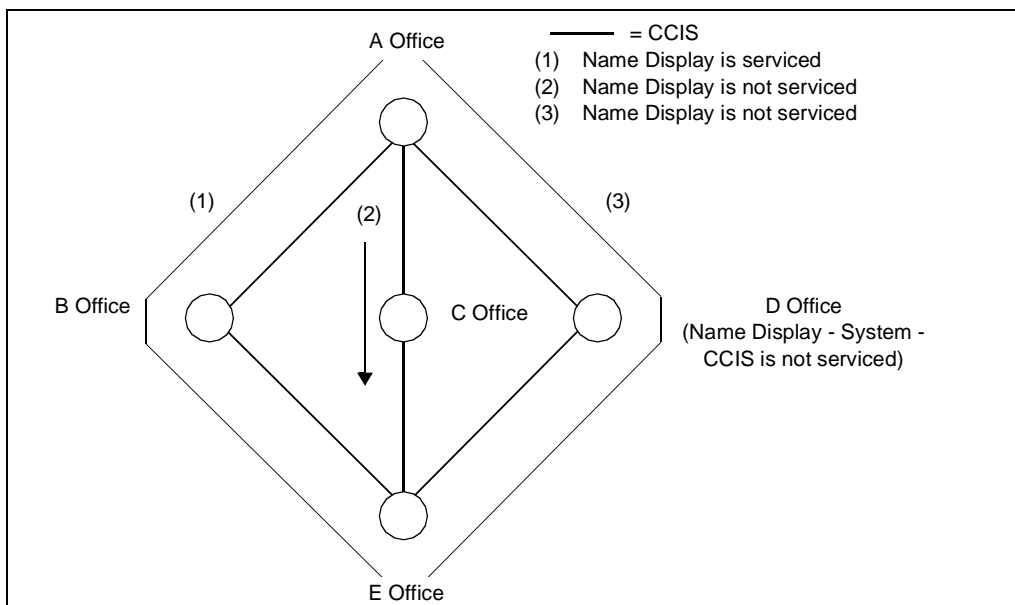
12. This service cannot be used in conjunction with ISDN Information Transfer - CCIS service.
13. When changing the Station Number of a station, be sure to change the user's information.
14. The CCIS services for which Name Display - System - CCIS can be valid are as follows:
    - Voice Call
    - Call Forwarding-All Calls - CCIS
    - Call Forwarding-Busy Line - CCIS
    - Call Forwarding-Don't Answer - CCIS
    - Camp On - CCIS (Ringing only)
    - Message Reminder (Outgoing call only)
15. The intra-office services, inclusive of CCIS trunks, for which Name Display - System - CCIS can be valid are as follows:
    - Call Pickup
    - Ringing for Call Hold
    - Answering of Call Park
    - Call Waiting
    - Call Termination from UCD Queuing
    - Message Reminder (Outgoing call only)

N-46 Number Portability - CCIS

General Description

This feature allows telephone number data in an FCCS group (a network where multiple NEAX2400 IPXs are connected via FCCS link) to be carried to another FCCS group. This feature also allows telephone number data to be carried in a NEAX2000 IVS^2 via CCIS link. This feature is available by simple command operation from the sole Centralized MAT. **Note 1**

Note 1: *See Centralized Maintenance - CCIS [C-167] for explanation of the Centralized MAT.*

Note 2: *Requires NEAX2000 IVS^2 Series 2000 or later software.*

Operating Procedure

Refer to the CCIS No.7 System Manual.

Service Conditions

1. The closed numbering network is recommended for the numbering plan.
2. Only telephone numbers (maximum of 8 digits) are allowed to be used as extension numbers in the network.
3. Telephone numbers used in the other FCCS groups and the connected NEAX2000 IVS^2 are managed by the NDM (Network Data Memory) separately from telephone numbers used in the self FCCS group.
   - a.) Telephone number data in a NEAX2000 IVS^2 is managed by the NDMs of NCNs (Network Center Nodes) within all FCCS groups and the NEAX2000 IVS^2.
   - b.) Telephone number data in a NEAX2400 IPX is managed by the NDMs of NCNs within all FCCS groups.
4. Up to 120,000 telephone numbers (including telephone numbers in the NEAX2000 IVS^2) can be assigned in the entire network, and up to 48,000 in one FCCS group.
5. Number Portability depends on which node requires data programming or data change.
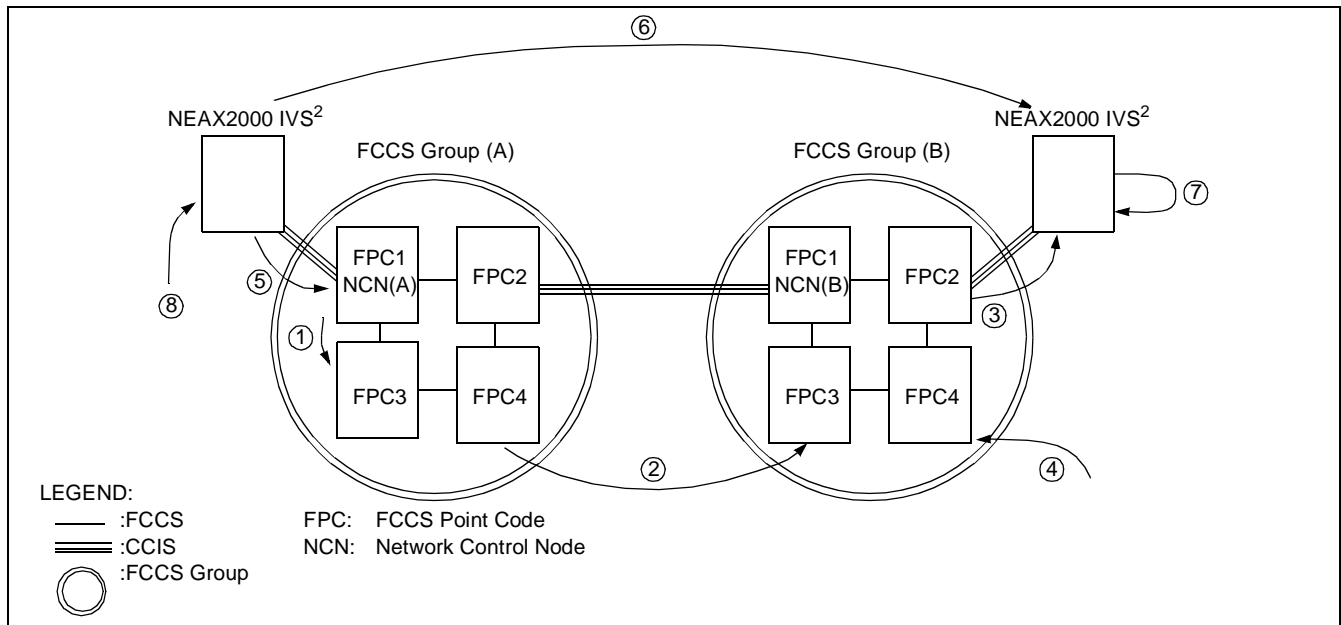
Service Conditions (cont'd)

NO.	PATTERN (TELEPHONE NUMBER IS MOVED FROM A TO B)	NODE REQUIRING DATA CHANGE
1.	Moving number within the same FCCS group.	NCN in Center FCCS group
2.	Moving number in FCCS group to another FCCS group.	NCN in Center FCCS group
3.	Moving number in FCCS group to NEAX2000 IVS^2	NCN in Center FCCS group + NEAX2000 IVS^2 *
4.	Adding new number to FCCS group	NCN in Center FCCS group + NEAX2000 IVS^2 **
5.	Moving number in NEAX2000 IVS^2 to FCCS group	NCN in Center FCCS group + NEAX2000 IVS^2 ***
6.	Moving number from NEAX2000 IVS^2 to another NEAX2000 IVS^2	NCN in Center FCCS group + NEAX2000 IVS^2 *** + another NEAX2000 IVS^2 *
7.	Moving number within the same NEAX2000 IVS^2	NEAX2000 IVS^2 *, ***
8.	Adding new number in NEAX2000 IVS^2	NCN in Center FCCS group + NEAX2000 IVS^2 *

Legend:

*   Destination node

**   Node to be connected to the FCCS group where the new number is added

***   Node where the telephone number is located before the Number Portability activation

O-11 Off-Hook Queuing - CCIS

General Description

This feature allows a user in a CCIS network to remain off-hook and automatically enter a first-in, first-out queue at the calling and distant nodes when an all-trunk-busy condition has been encountered. As soon as an outgoing trunk becomes available, the off-hook station is connected to that trunk through CCIS.

Operating Procedure

1. Dial the trunk access code and the desired number.
2. The distant PBX determines that no trunks are available and automatically places the call in an available queue slot.
3. The calling party receives service set tone and remains off-hook.
4. When a trunk becomes available, the dialed number is automatically forwarded.

Service Conditions

1. This feature is used in conjunction with LEAST-COST ROUTING-3/6 DIGIT (LCR) [L-5].
2. A maximum of 256 stations at each office can use OFF-HOOK QUEUING - CCIS simultaneously.
3. The queue slots for OFF-HOOK QUEUING - CCIS are used in common with OUTGOING TRUNK QUEUING [O-2] and OUTGOING TRUNK QUEUING - CCIS [O-12].
4. If no queue slots are available, the user will receive a Trunk Busy signal.
5. The LCR Route Restriction Class can provide the OFF-HOOK QUEUING - CCIS option.
6. OFF-HOOK QUEUING - CCIS and OUT-GOING TRUNK QUEUING [O-2, O-2D] services are mutually exclusive.
7. ACCOUNT CODE [A-18] and FORCED ACCOUNT CODE [F-7] information can be recorded on STATION MESSAGE DETAIL RECORDING [S-10] when used in conjunction with OFF-HOOK QUEUING - CCIS.
8. OFF-HOOK QUEUING - CCIS can be set concurrently to a maximum of eight connecting PBX systems (including the self node).
9. OFF-HOOK QUEUING - CCIS is, by definition, set to a connecting CCIS node.
10. A maximum of 1024 stations per system can use OFF-HOOK QUEUING - CCIS simultaneously.

Interactions

1. UNIVERSAL SENDER [U-3] must be provided first.
2. The PBX attempts trunk seizure every four seconds until the connection has been completed.
3. LEAST-COST ROUTING-3/6 DIGIT [L-5] information will be applied to these attempts. Therefore, OUTGOING TRUNK QUEUING [O-2, 12] will be set against all routes in the outgoing pattern routing (OPR).
4. If all queuing memory slots are in use, the user will receive a trunk busy signal.
5. The time a call may remain in queue is unlimited.

Interactions (cont'd)

6. The following features cannot be activated toward the busy station:

CALL WAITING-ORIGINATING	[C-31]
CALL WAITING-TERMINATING	[C-12]
ATTENDANT CAMP-ON WITH TONE INDICATION	[A-1, 45]
BUSY VERIFICATION	[B-3, 9]
EXECUTIVE RIGHT-OF-WAY	[E-1, 8]

7. To disable constant service set tone, change ASYD System Data 1, Index 42 Bit 7 to data "1". This changes constant service set tone to burst special dial tone, and special dial tone to burst special dial tone, followed by a constant dial tone.

O-12   Outgoing Trunk Queuing - CCIS

General Description

This service feature allows Inter-Office, On-Hook OUTGOING TRUNK QUEUING (OGQ) when an outgoing C.O. line call from a station in a PBX to another station in a different PBX, in the CCIS network, encounters an all C.O. Lines Busy.

Operating Procedure

    1.   Station (b) goes off-hook; receives dial tone.
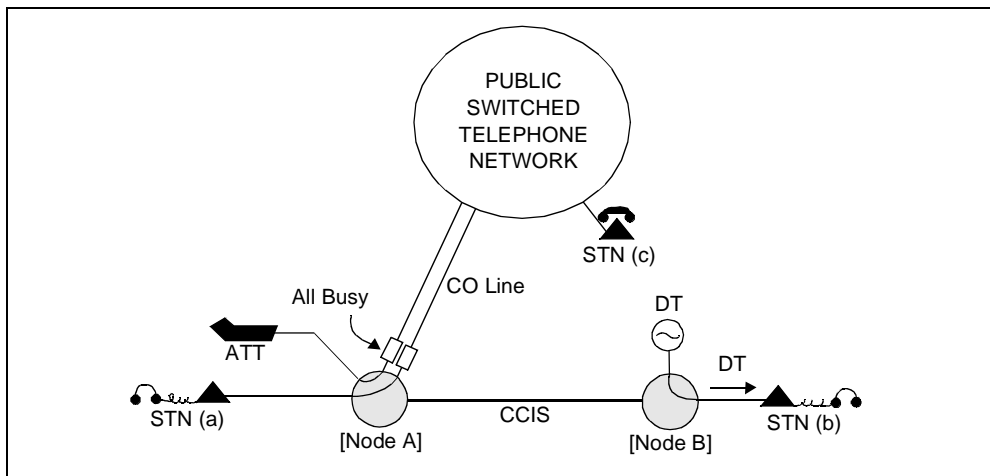
    2.   Station (b) dials the C. O. Line Outgoing Call Access Code; receives second dial tone.
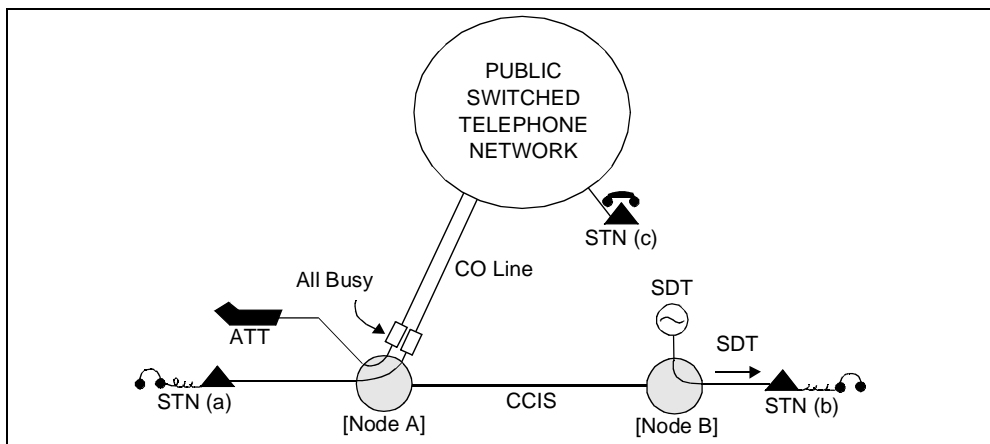
Operating Procedure (cont'd)

3. Station (b) dials Station (c) in the Center Office and receives a busy tone.
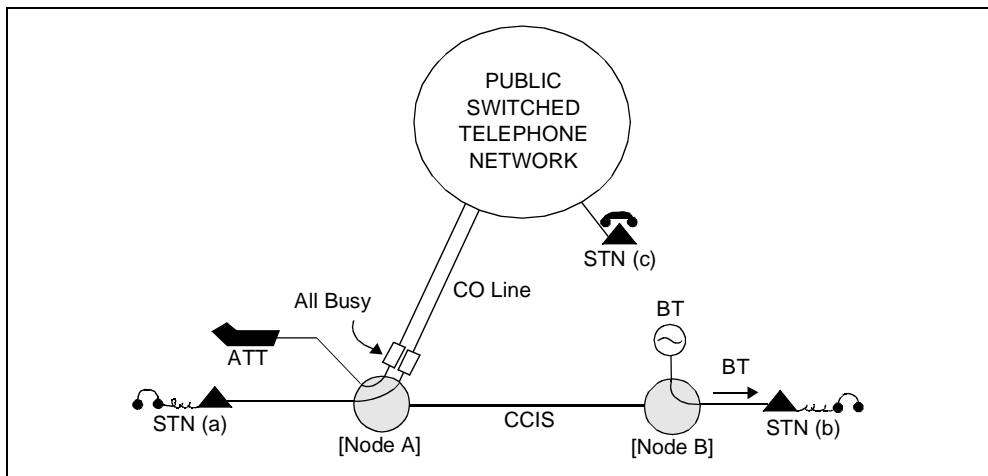
4. Station (b) switch hook flashes and receives the special dial tone.

Operating Procedure (cont'd)

5. Station (b) dials the OGQ Access Code and receives a service set tone.
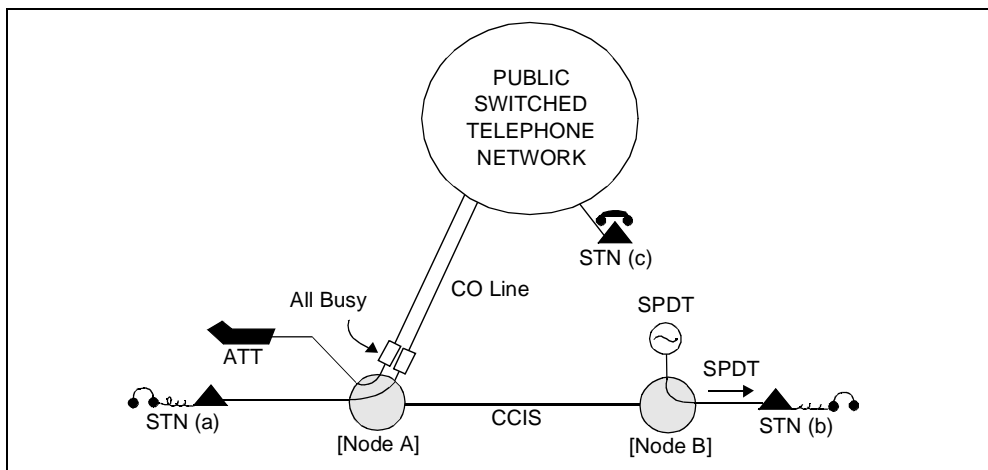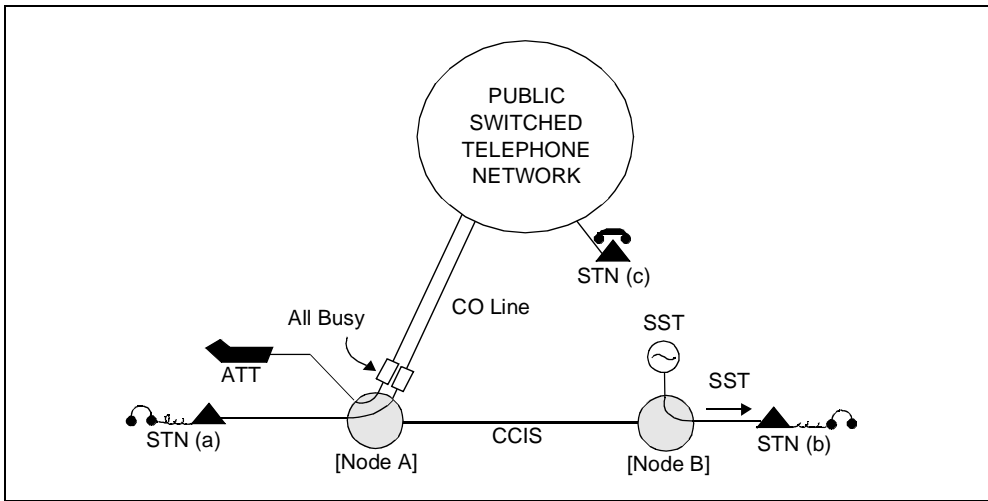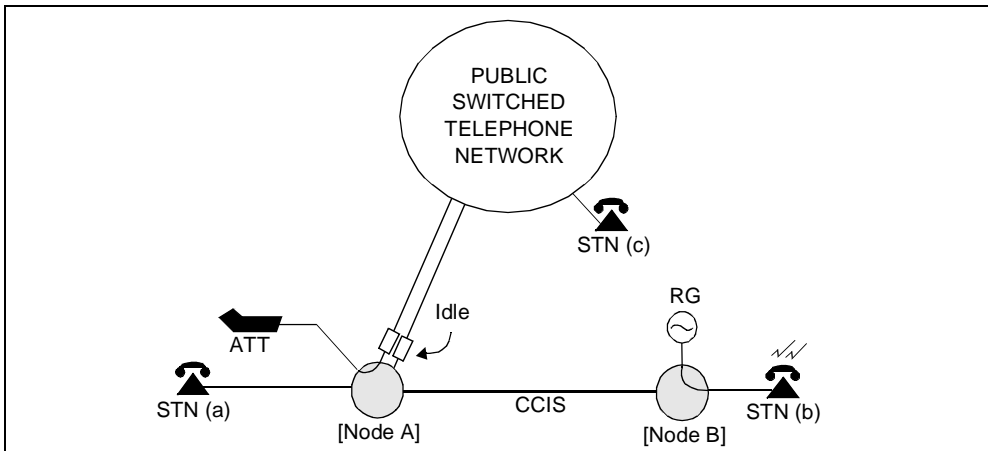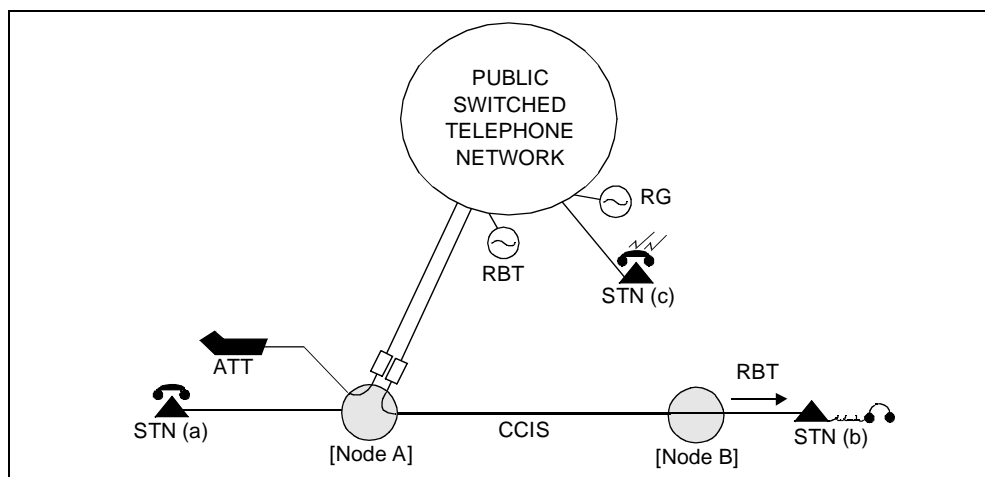

6. Station (b) hangs up. Outgoing Trunks become available for processing the call from Station (b). Station (b) is rung.

Operating Procedure (cont'd)

7. Station (b) goes off-hook and is connected to the Public Switched Telephone Network. Station (b) receives ringback tone while Station (c) is rung.

Service Conditions

1. After an OUTGOING TRUNK becomes available, the user's station will ring for 20 seconds. If not answered within that time, the station will be automatically dropped from the queue.

2. When this feature is used in conjunction with SPEED CALLING-SYSTEM [S-3] or LEAST COST ROUTING-3/6-DIGIT [L-5] if a sender is involved, the sender will automatically dial out the called subscriber number when the handset is lifted.

3. If the user wishes to remove himself from the queue prior to being rung, the specified cancel code must be dialed.

4. Individual stations may only initiate one OGQ at a time. Subsequent attempts will result in a Reorder tone.

5. This feature is not available for an ATTENDANT CONSOLE [A-3].

6. The OGQ is common to all Central Office type groups (DDD, FX, WATS, etc.) in the system.

7. The OGQ call back will return to the originating station, not the CALL FORWARDING terminating station.

8. OGQ is denied to a station line when the CALL BACK [C-1] or CALL HOLD [C-6] feature is already activated.

9. If a user goes on-hook within 6-8 seconds after encountering all trunks busy, OGQ can be set automatically to the station.

10. The station is set for OGQ for a maximum of 30 seconds to one hour. This time is adjustable through the system data. After this timing, OGQ will be cancelled automatically.

11. ACCOUNT CODE [A-18] and FORCED ACCOUNT CODE [F-7] information can be recorded on SMDR when used in conjunction with OGQ.

P-28 **Paging Access - CCIS**

General Description

This feature provides dial access to paging equipment from an ATTENDANT CONSOLE [A-3] or station through the CCIS network.

Operating Procedure

To access Paging through CCIS

1. Lift the handset and receive dial tone.
2. Dial the office code and the Paging access code.
3. Connection to paging equipment is established.

Service Conditions

1. Paging equipment must be provided by the customer.
2. One trunk circuit is required for each PAGING ACCESS.
3. If TENANT SERVICE [T-12] is provided, separate access codes and hardware should be provided for each TENANT.
4. A maximum of three digits can be used for the PAGING ACCESS code.
5. The DIGITAL DISPLAY - TRUNK - CCIS [D-73] at the ATTENDANT CONSOLE [A-3] shows the Route and Trunk Number of the CCIS trunk.
6. Following services are not available when this service is activated:

ALL ZONE PAGING	[A-53]
MEET-ME PAGING	[M-1]
PAGING TRANSFER	[P-10]
Paging Answer	

Interactions

1. MEET ME PAGING and PAGING ACCESS [P-1] can be provided simultaneously in the same system.
2. To directly answer PAGING ACCESS by the ATTENDANT CONSOLE [A-3], the Paged party should use the INDIVIDUAL ATTENDANT ACCESS [I-4] feature.
3. Paging is limited to stations, ATTENDANT CONSOLES [A-3], or Tie Trunks. Other parties (CO trunk calls) must have the ATTENDANT CONSOLE [A-3] or user perform the PAGING operation.
4. BUSY VERIFICATION [B-3], EXECUTIVE OVERRIDE [E-1] - These features will be denied if the Paging route has been assigned for Privacy. Verify the data in the Assignment of Route Data command, ARTD, CDN 44:PRV. If CDN 6:TCL is assigned as data "8", CDN 44:PRV is not required.
5. For simple PAGE ACCESS, assignments in ASFC are not required. Refer directly to the other Paging service features such as PAGING TRANSFER [P-10].
6. The ATTENDANT CONSOLE [A-3] can dial Priority Page access code and release a station.
7. When disconnecting from a Paging trunk, the trunk becomes idle immediately.
8. PAGING ACCESS is possible from CONSULTATION HOLD [C-17]. Therefore, Station A places party B on Soft hold and dials the access code to the Paging Trunk. Another switch hook flash disconnects the Page trunk immediately and reconnects party B to Station A.
9. CALL HOLD [C-6] - A Paging trunk cannot be placed on CALL HOLD.

Interactions (cont'd)

10. BUSY is displayed on the 16-button D^{term} LCD display when the paging trunk is busy. Reorder tone is returned.

11. If Priority Page is to be used with PAGE ACCESS; in ARTD, CDN 6:TCL must be assigned as Data 8, Page with ringback tone. SYS1, Index 73 affects the operation of page routes assigned Page with ringback tone. Therefore, if Priority Page is used with PAGE ACCESS then MEET ME PAGE [M-1, 11] and PAGING TRANSFER [P-10] are not available to the system.

12. Priority Page access will not disconnect an ATTENDANT CONSOLE [A-3] engaged in a paging trunk connection.

R-22   Restriction from Outgoing Calls - CCIS

General Description

This feature automatically restricts preselected stations from placing certain outgoing calls through CCIS without Attendant assistance.

Operating Procedure

No manual operation is required. Restricted stations will receive reorder tone when trying to place a restricted call.

Service Conditions

1. This feature is programmed in system data from the MAINTENANCE ADMINISTRATION TERMINAL (MAT) [M-18].
2. The Attendant can allow restricted stations to place outgoing calls via the ATTENDANT CONSOLE [A-3] using NON-DELAY OPERATION [N-3].
3. Restriction from particular trunk routes is determined by the station's Route Restriction Class.
4. If a restricted station calls another station, the called station cannot use the CALL TRANSFER - ALL CALLS - CCIS [C-50] feature to connect the calling station to a trunk route from which it is restricted. If transfer is attempted, it will recall to the called station.
5. THREE-WAY CALLING [T-2] is denied if a restricted station calls another station and the called station attempts to add on an outside party in a trunk route from which the calling station is restricted.
6. If a user accesses a Tie trunk to a PBX outside the CCIS network, access to outside exchanges is controlled by the outside PBX.
7. For a particular station, Day mode and Night mode restrictions can differ.
8. Non-restricted stations within the systems can CALL TRANSFER - ALL CALLS [C-11] outgoing calls to stations restricted by this feature.
9. Station line access to a given trunk group is controlled by assigning a Route Restriction class (RSC) to each line. There can be a maximum of 15 different RSCs per system, each of which can be programmed to restrict an assigned station from none, one or more than one trunk group (maximum 255 trunk groups on NEAX2400 IPX).
10. Two outgoing trunk group restriction tables are provided per system. The Direct Dial Access table is indexed when a user dials the trunk group access code, and the ATTENDANT CONSOLE [A-3] table is indexed on Attendant-completed calls. The restriction options per RSC can differ per table thus allowing Attendant-completion of outgoing calls for restricted stations.
11. TIE LINE ACCESS [T-3]: If the user accesses a Tie trunk to a distant PBX (outside the CCIS network), access to outside exchanges can only be controlled by the distant PBX.

Interactions

1. Transferring restrictions may not be desired for a restricted station.
2. CALL TRANSFER-ALL CALLS [C-11]: Station A is allowed access to outgoing on route 1. Station B is restricted access for outgoing on route 1 via RRI 2 & 3. The unrestricted Station A makes an outgoing call on Route 1 and cannot use the CALL TRANSFER - ALL CALLS feature to connect station B to Route 1, If CALL TRANSFER - ALL CALLS is attempted, station A is immediately rung back.
3. CONSULTATION HOLD [C-17]: Station A may consult with Station B when Route 1 is on soft hold.

Interactions (cont'd)

4. THREE-WAY CALLING [T-2]: Station A cannot include restricted Station B in a THREE-WAY CALLING connection with Route 1.

5. DAY/NIGHT CLASS OF SERVICE [D-15]: Restricted Station B may be allowed access to Route 1 when the system is placed in the Night mode. See DAY/NIGHT CLASS OF SERVICE [D-15].

6. RESTRICTION FROM OUTGOING CALLS are constructed on a per-route restriction basis. Two Route Restriction Indexes are constructed; RRI 2, Outgoing calls via the ATTENDANT CONSOLE [A-3] and RRI 3, Outgoing Call via Direct Dial Access.

S-52 Serial Call - CCIS

General Description

This service feature is the Inter-Office serial call service to be provided when the ATTCON and the called party respectively, belong to a different PBX (Main PBX Satellite PBX) in the CCIS network.

Operating Procedure

1. Station (c) in the Public Switched Telephone Network places a call to Node A and receives ringback tone. The Attendant in Node A receives an audible tone.
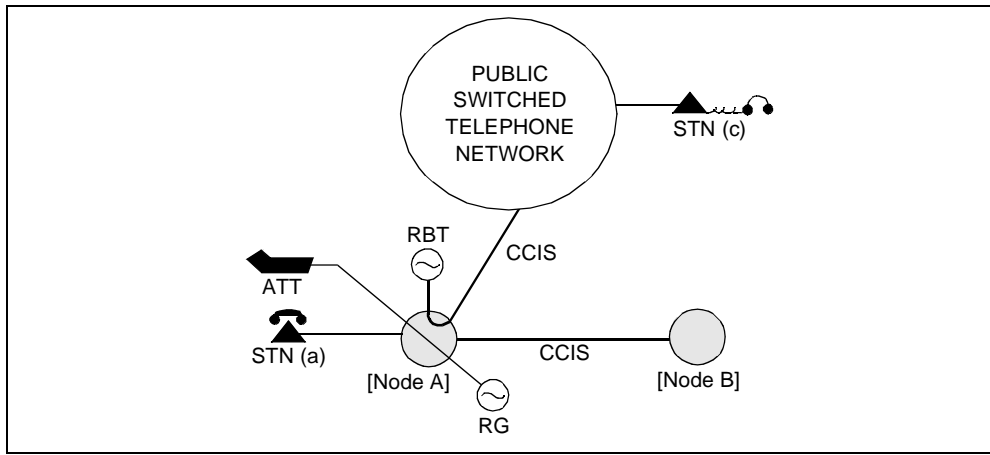
2. The Attendant presses the ANSWER key and is connected with Station (c). The user at Station (c) asks the Attendant to set up a connection first with Station (b1) and then with Station (b2) in Node B.
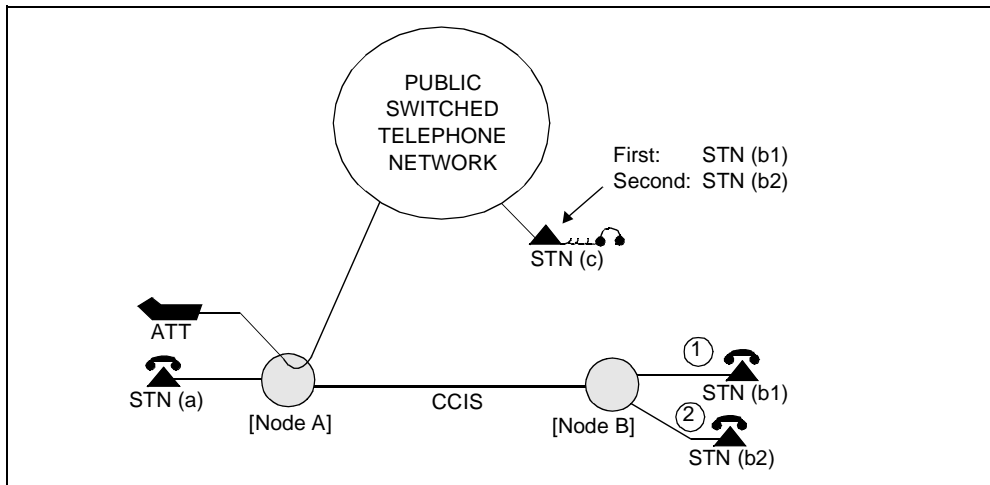
Operating Procedure (cont'd)

3. The Attendant dials Station (b1) in Node B; receives ringback tone. Station (b1) is rung and Station (c) receives Hold Tone.
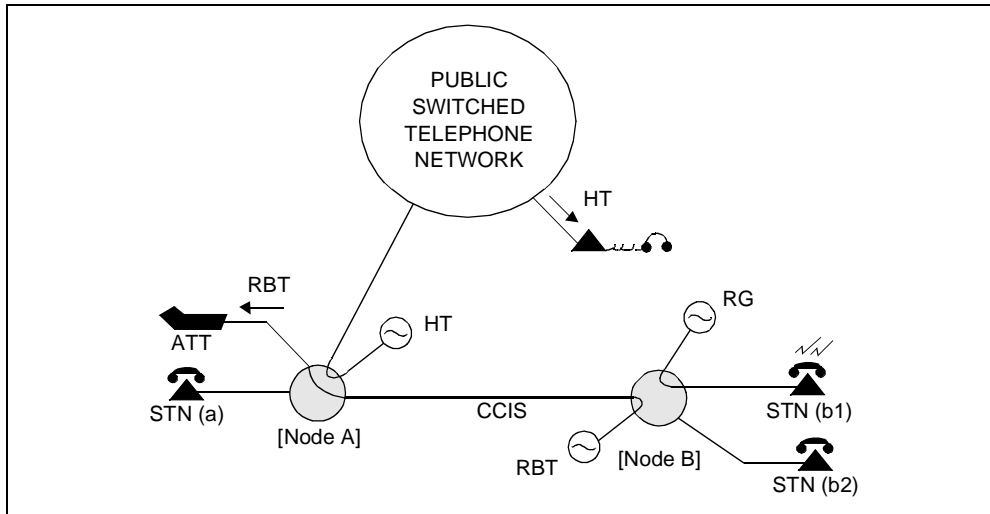
4. The Attendant presses the Serial Call (SC) key and Station (c) receives ringback tone. The HOLD and RING status are shown on the Attendant Console.
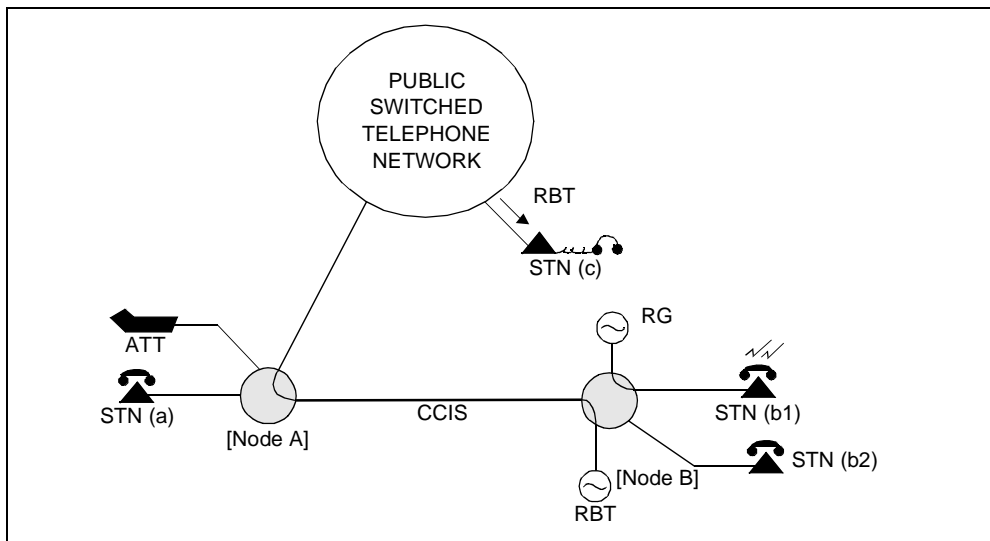
Operating Procedure (cont'd)

5. Station (b1) answers and is connected with Station (c). The HOLD status remains on the Attendant Console.
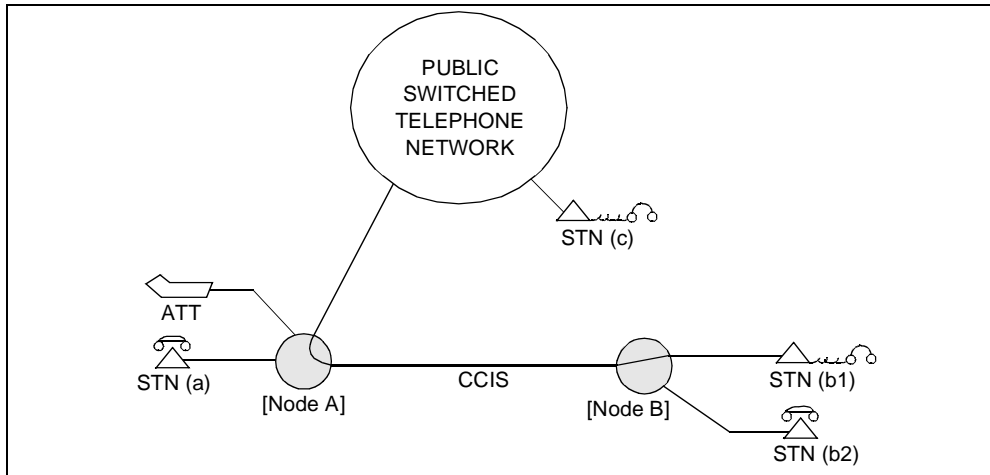
6. Station (b1) hangs up. On the Attendant Console, the lamps in the loop key section corresponding to the incoming call keep flashing at 60 ipm, and the bell rings. Station (c) receives ringback tone.
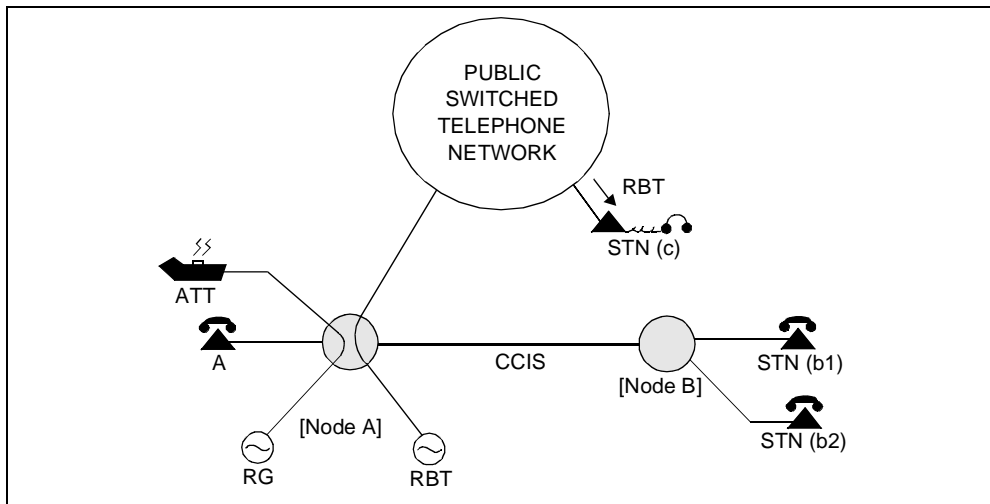
7. The Attendant presses the loop key corresponding to the flashing lamps. Station (c) and the Attendant are connected again. The Attendant assists the connection to the next station.

Service Conditions

1. If the attendant enters a loop that is already set up for a SERIAL CALL, the service is automatically cancelled.
2. SERIAL CALL is not provided for Station-to-Station calling.
3. SERIAL CALL can be provided on a TENANT [T-12] basis.

Service Conditions (cont'd)

4. A called station that has the SERIAL CALL feature activated will automatically recall the attendant if the station switch hook flashes.

5. This feature is not applicable for tandem connections.

6. The following services cannot be used while SERIAL CALL - CCIS is activated:

ATTENDANT CAMP-ON WITH TONE INDICATION - CCIS	[A-45]
BUSY VERIFICATION - CCIS	[B-9]
CALL HOLD - CCIS / CALL HOLD - D^{term}	[C-6/C-6D]
EXECUTIVE RIGHT-OF-WAY	[E-8]

S-53D   Service Display - D^{term} - CCIS

General Description

This feature allows a D^{term} user to receive LCD displays corresponding to the various features as they are initiated.

Operating Procedure

Each display is automatically generated when a service feature is initiated.

Service Conditions

1. Each display is controlled by system data and is produced accordingly. A display may be allowed or denied in system data programming on a per-system basis.
2. The contrast on the LCD display panel is controlled by the UP/DOWN key of the D^{term}. Press the UP key for a darker image or the DOWN key for a lighter image.

S-54   Simultaneous Voice and Data Transmission - CCIS

General Description

This feature allows a voice signal and a digital data signal of up to 56 Kbps to be transmitted simultaneously through CCIS, via a D^{term} equipped with a Data Adapter. Voice and data calls can be placed to different locations.

Operating Procedure

To place a data call to a terminal already connected by a voice call

1.   Press the DTX key on the D^{term}. The DTX lamp lights and the DATA lamp flashes. The LCD displays:

```
                              Data Port
  DATA                          XXXX
            (Time Display)
```

2.   When the data call is connected, the DATA lamp and DTX lamp will light steadily. The LCD displays:

```
                              Data Port
  READY D                       XXXX
            (Time Display)
```

To place a data call to a Data Adapter of Data Module when not connected to a voice call or to a different data station

1.   Press the DATA key. The DATA lamp lights steadily. The LCD displays:

```
  DATA
            (Time Display)
```

2.   Dial the desired number. The DATA lamp will flash. The LCD displays:

```
                            Called Number
  DATA                         XXXXXXX
            (Time Display)
```

3.   When the data call is answered, the DATA lamp will light steadily. The LCD displays:

```
                              Data Port
  READY D                       XXXX
            (Time Display)
```

Service Conditions

1.   An asynchronous Data Adapter and Data Module are available at speeds of up to 19.2 Kbps.
2.   The Data Adapter and Data Module require a 117V AC wall outlet.
3.   The Data Adapter mounts in the base of the D^{term} telephone set. Additional hardware is required.

Service Conditions (cont'd)

4. If the D^{term} DTX button is pressed when connected station-to-station within the CCIS network, the voice line connection is switched to MODEM POOLING - CCIS [M-39] from the D^{term} Data line.

Interactions

1. It is recommended that the numbering plan be set up so that voice numbers occupy one level and data levels occupy another. Therefore, a voice number of 310 can have a data number of 210.

2. The LEN of the data extension is assigned as TEC 13. The voice LEN is assigned as a TEC 12. The voice and data LENs are associated as follows:

		VOICE			DATA			
LEN	xx	x	xx	0	LEN	xx	x	xx	4
LEN	xx	x	xx	1	LEN	xx	x	xx	5
LEN	xx	x	xx	2	LEN	xx	x	xx	6
LEN	xx	x	xx	3	LEN	xx	x	xx	7
	MG	U	GP	LV		MG	U	GP	LV

3. The data extension number is automatically assigned to the key programmed as DATA.

4. For Data Terminals, assign RSCs that allow access to the routes to be used for data transmission, and the SFC or the data terminal should include SFI 11 = 0, Data Privacy.

5. Only DTE-to-DTE direct internal connections are possible. The DTE would then be set for AUTO answer and the DTX key could not be used.

6. This programming description is limited only to the station programming.

S-55   Single-Digit Station Calling - CCIS

General Description

This feature allows single-digit station numbers to be assigned.

Operating Procedure

1. Lift the handset; receive dial tone,
2. Dial the single-digit station code,
3. The called station will ring.

Service Conditions

1. The single-digit number must not duplicate the first digit of:
    a.) Trunk Access Codes
    b.) Feature Access Codes
    c.) Other Telephone Numbers
2. Timing Start is not available with this feature.

Interactions

1. An entire number level is eliminated for each station with one-digit access. Do not plan to have more than one or two such phones in a system.
2. The Attendant Console Busy Lamp Field (BLF) is not available for this feature.

S-56   Station-Controlled Conference - CCIS

General Description

This feature allows any PBX station to establish a conference through CCIS. The conference can be any combination of stations and trunks (on-network and off-network parties).

Operating Procedure

To establish a conference call

1. The user wishing to establish the conference (Conference Leader) calls each party to be included and advises them of the conference.
2. All participating stations then call the conference extension number or the Conference Leader, who will transfer them to the conference number.
3. The conferees are automatically connected.
4. Any push-button station within the conference can dial "9" to lock out additional parties using the MMCB model.

To release from a conference call

1. If any push button station in the conference dials "0", all conferees will be disconnected. Otherwise, the conference is terminated after all parties have hung up.
2. Any individual conferee can release from the conference call by hanging up. All other conferees will remain connected.

Using the PA-CFTB

1. The conference leader can dial "0" to lock out additional parties. Dialing "0" again will allow more parties to be connected. If the conference leader dials "#", all conferences will be disconnected. Otherwise, the conference is terminated after all parties have hung up.

Service Conditions

1. Conference Units are designed to provide adequate amplification, but the condition of the Central Office connections will affect transmission.
2. Conference Unit extension numbers should be placed in a STATION HUNTING-TERMINAL [S-9] group. Only the Pilot number of this group should be published.
3. Each Conference Unit can provide up to an eight-party conference.
4. Override services, such as BUSY VERIFICATION [B-3, B-9], ATTENDANT OVERRIDE [A-7], or EXECUTIVE RIGHT-OF-WAY [E-1, E-8], are denied to stations engaged in a conference call.
5. The following additional hardware is required:
    - External Conference Unit MMCB
    - PA-16LCQ or PA-16LCBE circuit card
6. The PA-CFTB may be used instead of the MMCB. The PA-16LCBE or PA-16LCQ is not required by the PA-CFTB.

Interactions

The PA-16LCBE or PA-16LCQ circuit card provides a momentary open for all 16 circuits. This is required to provide a release signal when line circuits are connected to external equipment such as conference and page units. This keeps reorder tone from being sent to the conference unit. This is not used in conjunction with a PA-CFTB.

S-57 Station-to-Station Calling - CCIS

General Description

This feature allows any user to dial another station directly, through CCIS, without operator assistance.

Operating Procedure

1. Lift the handset; receive dial tone.
2. Dial the desired telephone number.

Service Conditions

1. The maximum number of digits per telephone number is eight.
2. Either Calling-Party Release or First-Party Release can be selected on a system basis.
3. Inter-node STATION-TO-STATION CALLING - CCIS is based on the Route Restriction Class of the calling and called parties.

Interactions

1. The ATNR command is required for STATION-TO-STATION CALLING - CCIS.
2. The normal 5 dB PAD loss inserted for STATION-TO-STATION CALLING - CCIS may be eliminated on a per-station basis. For these stations, assign a Service Feature Class that allows SFI 50. Remove 5 dB pad for Off-Premises Extensions, OPX.

S-58 Station-to-Station Calling - Operator Assistance - CCIS

General Description

This feature allows a user to call another station, through CCIS, with the assistance of the Attendant Console operator.

Operating Procedure

To place a station-to-station call through the Attendant Console

1. Lift the handset; receive dial tone.
2. Dial the operator access code (normally "0").
3. Give the desired telephone number to the Attendant.
4. The Attendant dials the telephone number.
5. The calling and called parties are connected when the Attendant presses the RELEASE key.

Service Conditions

1. The Attendant can drop out of the connection before or after the called party has answered.
2. When Loop Release is in service, AUTOMATIC RECALL [A-8] will not be activated if the called station does not answer.
3. The Attendant can connect the calling party to a fully restricted station.
4. STATION-TO-STATION CALLING-OPERATOR ASSISTANCE - CCIS is based on the Route Restriction Class of the calling and called station.

Interactions

1. The ATNR command is required for STATION-TO-STATION CALLING-OPERATOR ASSISTANCE - CCIS.
2. The normal 5 dB PAD loss inserted for STATION-TO-STATION CALLING-OPERATOR ASSISTANCE - CCIS may be eliminated on a per-station basis. For these stations, assign a Service Feature Class that allows SFI 50. Remove 5 dB pad for Off-Premises Extensions, OPX.
3. The Attendant Console must first be provided.
4. ATTENDANT CAMP-ON WITH TONE INDICATION [A-1, 45]: The Attendant Console cannot camp-on a station-to-station call.
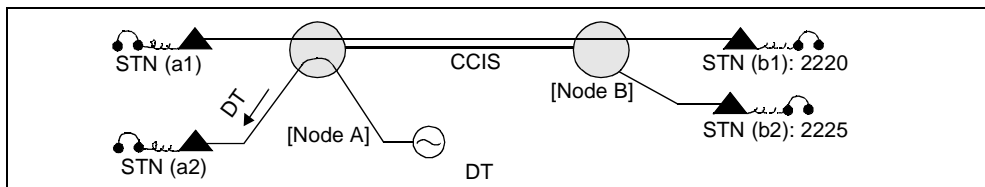
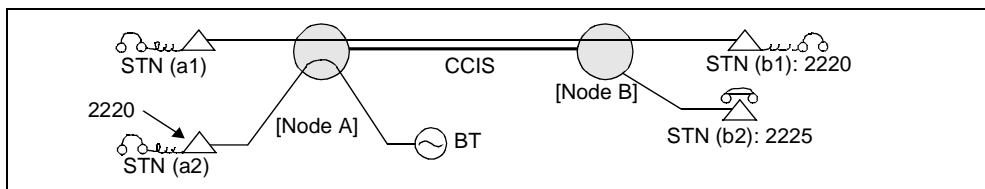# S-59   Step Call - CCIS

General Description

This service feature allows Inter-Office Step Call when the calling station and the called station belong to different PBX's in the CCIS network.

Operating Procedure

1.   While Station (a1) and (b1) are engaging in a call, Station (a2) goes off-hook and receives dial tone.

2.   Station (a2) dials No. 2220 for Station (b1) and receives busy tone.

3.   Station (a2) dials the lowest digit of the number ('5' of N= 2225) of Station (b2) and receives ringback tone while Station (b2) is rung.
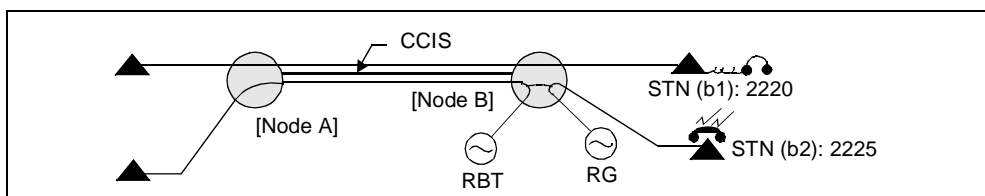
4.   Station (b2) answers and is connected with Station (a2).
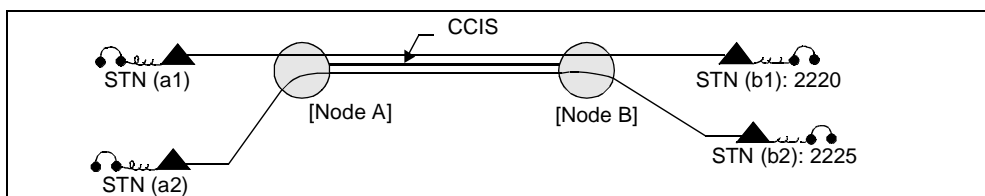
Service Conditions

1.   This service feature can be provided for all stations and the ATTENDANT CONSOLE(s) [A-3].
2.   STEP CALLING can be in any order, 1-9 or 9-1.

Service Conditions (cont'd)

3. If the second selected station is also busy, STEP CALLING can continue until a station rings.

4. If a station is set for any type of CALL FORWARDING-ALL CALLS, BUSY LINE, DON'T ANSWER, the CALL FORWARDING [C-2, C-3, C-5] will take effect.

S-60 Synchronous Data Switching - CCIS

General Description

This feature allows a synchronous data terminal connected to a D^{term}/Data Adapter to call a synchronous data terminal connected to a synchronous D^{term}/Data Adapter through the CCIS network.
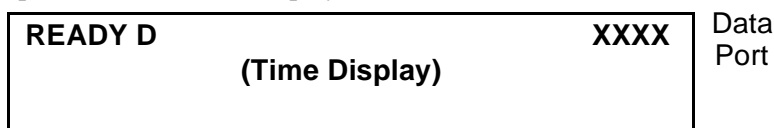
Operating Procedure

To originate a synchronous data call from a D^{term} equipped with a Data Adapter

1. Press the DATA key on the D^{term}. The DATA lamp lights steadily and the LCD displays:

DATA **(Time Display)**	Data Port

2. Dial the telephone number of the DTE.
3. The DATA lamp flashes. The LCD displays:

READY D **XXXX** **(Time Display)**	Data Port

4. When the DTE answers, a communication path is established and the DATA lamp lights steadily.

To release from a data call

1. Press the DATA key.
2. The LED of the DATA key is extinguished and the call is disconnected.

To receive a data call at a D^{term} equipped with a Data Adapter

1. When a data call is received, the DATA lamp flashes and the D^{term} rings.
2. Press the DATA key to answer the call.
3. The DATA lamp lights steadily.

Note: *If the Data Adapter is set for AUTOMATIC ANSWER [D-18], no manual operation is required.*

Service Conditions

1. SYNCHRONOUS DATA SWITCHING - CCIS supports transmission speeds of up to 56 Kbps.
2. A D^{term} or Data Module must be used.
3. A synchronous data terminal connected to a Data Module can originate a call by using CCITT X.21, or V.24 bis procedures, or by DATA HOT LINE [D-86]. Synchronous Data Modules can also be placed at both ends of a fixed (Nailed Down) connection.
4. The calling and called DTEs must be code and speed compatible.
5. Synchronous DTEs connected to NEAX2400 IPX Data Modules or Data Adapters receive their timing signals from the NEAX2400 IPX.

Interactions

1. When assigned, the DATA feature key acts as the telephone number of the data station.
2. The telephone number of the data station will only appear on one D^{term} set.
3. The telephone number of the data station may be used as a DID number.

Interactions (cont'd)

4. For greater detail, refer to ETI: 010, D^{term} IV, V Asynchronous Data Adapter - Installation and Programming.

5. Switched Synchronous Communication Using The DT-003 Data Module:

    Typically, switched (dialed) synchronous connections are attached to computers using Half Duplex protocols. In most cases where a Half Duplex protocol is used, the DM has to be set for Full Duplex (via SW0) because the NEAX2400 IPX provides a Full Duplex link. This will normally not affect the Half Duplex protocol handshaking.

    Internal: Internal switched synchronous connections can be provided up to 56 Kbps.

    T1:

    a.) Over T1, a switched synchronous speed of up to 48 Kbps can be provided using the 8DST (PA-8DSTB) circuit card.

    b.) With T1 synchronous communication between two NEAX2400's, one of the sites must be a Primary or Sub Primary (PLO-A); otherwise, slips will occur, increasing the Bit Error Rate.

    c.) At the NEAX2400 IPX secondary site, T1 (24DTI) cards are connected via a PLO card to derive Primary Clock from the network in priority order. If priority is set up incorrectly, or if two primary clocks are coming in, slips may occur which will not cause a T1 error, but will cause improper data synchronization. Also, Zero Suppression (ZCS) using the 24DTI switch setting must be turned ON (SW1-3UP).

    CCIS:

    a.) With CCIS, switched speeds up to 56 Kbps can be provided when bit stealing is not used by the 24 DTI and associated T1 facilities.

    b.) In order to have switched synchronous data at 56 Kbps with CCIS, a 24DTI (PA-24DTA-B or higher) circuit card is required. Switched synchronous data at 56 Kbps is not presently provided on the 8DST circuit card.

    Nailed Down Connection:

    Internal:

    a.) When the nailed down connection is within the NEAX2400 IPX, use the AFCD command to set EAD Data as follows:
    *   EAD-A: Originating Station - 00-DT-003 or DA-007
    *   EAD-B: Terminating Station - 00-DT-003 or DA-007

    Internal Nailed Down connections can be provided up to 56 Kbps **Note 2**.

    T1:

    a.) When the connection is over a T1 channel, use the AFCD command to set EAD Data as follows:
    *   EAD-A: Originating Station: 00
    *   EAD-B: Terminating Station (T1 channel): 05

    The above must also be programmed at the second site.

Note 1: *The AFCD command will not work unless SYS Data 1, Index 60, Bit 4 is set to 1 (Fixed Connection in service).*

Note 2: *Nailed Down connections up to 56 Kbps over T1 channels can be used, as long as the PAD selected in the AFCD command for the T1 channel is 5.*

    Switched Connection Via The 24 DIT:

    a.) The routes used for communication with the DT-003 Data Module via the 24DTI are programmed in ARTD:
    *   CDN 45:A/D = 1 (Digital Line Data)
    *   CDN 30:PAD = 5 (for Bit Stealing - reverses order of DO and S bits)

Interactions (cont'd)

Setting Attributes 02, 03, & 10 Via DTE Keyboard:

a.) Cable connections and switch settings on the PA-4DTLA card must be performed before these attributes are set.

b.) Voice and data must both be idle. Turn OFF power to the Data Module. Move the SW3 switch to the right (ON), then turn power back ON. The Data Module will enter Menu Mode.

c.) The initial menu will appear on the DTE display. Enter "5" (Attribute data) to the INPUT NO.? prompt. Input the parameter number (02, 03 or 10) when the INPUT NO.? prompt appears again, then enter the data for that parameter. After entering the required data, enter RETURN to go back to the menu display.

d.) To return the Data Module to the idle state, enter "0" (End) while in Menu mode, then move the TEST2 switch to the left (OFF).

S-73 Supervisory Call - CCIS

General Description

This feature allows an Attendant, in a CCIS network, to set Supervisory Call status before releasing a Central Office call to a station. When the call is extended to a station, the loop will remain up until the called station answers. This overrides ATTENDANT LOOP RELEASE [A-6] on a per call basis.

Operating Procedure

To activate a SUPERVISORY CALL - CCIS from the ATTENDANT CONSOLE [A-3]

1. The Attendant answers an incoming Central Office call.
2. The Attendant extends the call to the desired station.
3. The Attendant presses the SP SET key; the HOLD lamp corresponding to the loop will light.
4. The called station and incoming call are connected.
5. The called station switch hook flashes; the HOLD lamp on the ATTENDANT CONSOLE [A-3] flashes at 60 IPM. If an Attendant position is available, an audible indication will be provided.
6. The Attendant presses the associated loop key to return to the called station; the calling station is placed on hold (MUSIC ON HOLD [M-7]).

Service Conditions

1. If the Attendant enters a loop that is already set up for a SUPERVISORY CALL - CCIS, the service is automatically cancelled and a three-party connection is established.
2. SUPERVISORY CALL - CCIS is not provided for station-to-station intra-node calling.
3. SUPERVISORY CALL - CCIS can be provided on a TENANT [T-12] basis.
4. A station at which SUPERVISORY CALL - CCIS has been activated will automatically recall to the Attendant if that station switch hook flashes.
5. If the incoming Central Office call or the station releases during the SUPERVISORY CALL - CCIS, the loop becomes idle at the ATTENDANT CONSOLE [A-3].
6. When the Attendant answers a recalled SUPERVISORY CALL, the service is complete. If the call is to be extended to another station, SUPERVISORY CALL - CCIS can be re-established.
7. SUPERVISORY CALL - CCIS is provided for inter-node station-to- station calling in a CCIS network.
8. The SUPERVISORY CALL status will also provide simultaneous SERIAL CALL [S-15] [S-52] service.
9. The following services are restricted while this service is activated:
   AUTOMATIC CAMP-ON WITH TONE INDICATION - CCIS [A-45]
   BUSY VERIFICATION - CCIS   [B-9]
   CALL HOLD   [C-6]
   EXECUTIVE RIGHT-OF-WAY   [E-8]

Interactions

SUPERVISORY CALL - CCIS is normally used in a loop-release ATTENDANT CONSOLE [A-3] setup, so that calls that are normally released from the Attendant loop can be monitored on a per-call basis.

T-26 Toll Restriction - 3/6-Digit - CCIS

General Description

This feature allows the NEAX2400 IPX to restrict outgoing calls through CCIS according to specific Area and/or Central Office codes. This restriction is determined on the basis of a three-digit Area Code or six-digit Area and Office Code numbering plan.

Operating Procedure

No manual operation is required.

Service Conditions

1. The programmed restriction pattern can consist of codes to be allowed or codes to be restricted.
2. TOLL RESTRICTION - CCIS is assigned on a CLASS OF SERVICE - INDIVIDUAL [C-15] basis.
3. The system can be programmed to ignore digit "1" prefixing in an area code pattern.
4. When a toll call is denied, the calling party receives reorder tone. If desired, the calling party can be routed to the ATTENDANT CONSOLE [A-3].
5. A Restriction table is assigned to each trunk group.
6. Tandem calling does not override TOLL RESTRICTION - 3/6-DIGIT - CCIS.
7. TOLL RESTRICTION - 3/6-DIGIT - CCIS is assigned on a TENANT [T-12] basis.
8. Through Dialing Feature: The Through Dialing feature does not override the Toll Restriction feature.
9. The Toll Restriction feature is assigned on a per-line Class of Service basis. When provided, the feature is applicable on a per-trunk group basis.

Interactions

1. When Toll Restriction is specified in ARRC, all possible dialing patterns must be assigned in ATDP. If office codes within an area code do not need to be restricted, allow the area code only. Always provide the system with the most economical configuration of digits when constructing TOLL RESTRICTION tables.
2. In the ARRC command, ARI-A-RES must be programmed to allow two trunks and a station in a conference. ARI-D-RES is programmed if the two trunks are to remain connected after the station drops off or if TOLL RESTRICTION applies to a direct trunk-to-trunk connection such as a Tie line to DDD.
3. ROUTE ADVANCE [R-6] - Station A dials a toll call by accessing route 1. Route 1 is busy and advances to route 2. Station A is restricted from making this call on route 2. The call will be restricted.
4. PASSING DIAL TONE [P-2] - The ATTENDANT CONSOLE [A-3] cannot use the PASSING DIAL TONE feature to allow a TOLL RESTRICTED station to use a restricted route.
5. OUTGOING TRUNK QUEUING [O-2] - When a station is restricted from all other routes, a station may use this feature to queue a trunk to complete a call over the unrestricted route(s).
6. LEAST COST ROUTING [L-5] - Transactions in AFRS must be such that the digits dialed in the trunk-to-trunk connection should be recognizable in terms of choosing a route. If a route cannot be chosen, TOLL RESTRICTION 3/6-DIGIT cannot be applied.

T-27 Trunk Answer from Any Station - CCIS

General Description

This feature allows any station not restricted from incoming calls to answer incoming calls when the network is in Night mode.

When this feature is activated, incoming Central Office calls will activate a common TRUNK ANSWER FROM ANY STATION (TAS) signal. By dialing a specified code, any station may answer the call and extend it to any other station in the CCIS network using CALL TRANSFER - ALL CALLS - CCIS [C-50].

Operating Procedure

To answer an incoming call

1. The TAS signal sounds indicating an incoming call.
2. Lift the handset and receive dial tone.
3. Dial the TAS access code; the incoming call is connected.

Service Conditions

1. An incoming call terminating in the Night mode will be forwarded to the TAS equipment of the terminating node.
2. An incoming call to the main node in the Night mode will not be forwarded to TAS equipment in a satellite node through the CCIS network. Therefore, the main node must provide TAS equipment for incoming Central Office calls.
3. When Night mode is set at the main node, satellite nodes not equipped with an ATTENDANT CONSOLE [A-3] can automatically be set to the Night mode by CENTRALIZED DAY/NIGHT MODE CHANGE - CCIS [C-56] service.
4. A TAS indicator can be provided for each node's incoming trunks.
5. An incoming call terminating in the Night mode will have the following order of priority:
   a.) NIGHT CONNECTION - FLEXIBLE - CCIS [N-16],
   b.) NIGHT CONNECTION - FIXED - CCIS [N-15],
   c.) TRUNK ANSWER FROM ANY STATION - CCIS [T-27]. Incoming calls will overflow to TAS [T-27], if this feature is provided, when the NIGHT CONNECTION FIXED/FLEXIBLE [N-1] [N-2] [N-15] [N-16] stations are busy.
6. TAS indication will be activated for the LDN, WATS, FX, CCSA incoming calls.
7. TAS indication can be provided on a TENANT [T-12] basis.
8. Individual stations can be denied access to this feature via CLASS OF SERVICE - INDIVIDUAL [C-15].
9. If the system is changed to the Day mode while a TAS call is being indicated, a call terminating at a node without an ATTENDANT CONSOLE [A-3] will not be transferred through the CCIS network to an ATTENDANT CONSOLE [A-3].
10. This feature is also referred to as Universal Night Answer (UNA).
11. The TAS indicator must be locally provided.
12. All ATTENDANT CONSOLES [A-3] assigned to handle calls for a particular group of stations (whether or not they belong to the same TENANT [T-12]) must have NIGHT CONNECTION [N-15, 16] set before this feature will be activated.

Interactions

The system must be in the Night Mode for TAS to operate. Take into consideration the type of ATTENDANT CONSOLE [A-3] system that is in service. Take special care when setting the resistance value via switch settings on the PA-CS07 ATTENDANT CONSOLE [A-3] Circuit Card.

U-5 Uniform Numbering Plan - CCIS

General Description

In a CCIS network, a Uniform Numbering Plan enables a user to call any other station in the network using a Uniform Numbering system. Two alternative numbering plans are provided:

- In the first plan, the user dials a four or five-digit station number. The node in which the called station is located is identified by either the first digit or the first two digits of the station number. More than one location number can be assigned to a particular node.
- In the second plan, the user dials a single-digit access code, a three-digit code identifying the particular node in the CCIS network, and a two, three, or four-digit station code.

Operating Procedure

To call a station at another office using Numbering Plan 1:

1. Lift the handset; receive dial tone.
2. Dial the four or five-digit telephone number.
3. The call is routed to another node according to programmed routing information, and the called station rings.
4. The called station answers and the parties are connected.

To call a station at another office using Numbering Plan 2:

1. Lift the handset; receive dial tone.
2. Dial <u>access code + office code - station code</u>:

     X-XXX-XX, or
     X-XXX-XXX, or
     X-XXX-XXXX
3. The call is routed to the node designated by the Office Code. The called station rings.
4. The called station answers, and the parties are connected.

Service Conditions

1. Numbering Plan 1:
   a.) All telephone numbers must be four or five digit numbers.
   b.) The location of the PBX can be identified by either the first digit or the first two digits of the telephone number.
2. Numbering Plan 2:
   a.) The calling and called party's LCD can display the office and station codes or the station code only. This option is selected via the Maintenance Administration Terminal (MAT).
   b.) Within the same PBX, a station-to-station call is made by simply dialing the two, three, or four-digit telephone number.
3. The maximum number of digits per telephone number is eight.

Interactions

If seven-digit Uniform Numbering Plans are used, an access code to the CCIS network may be added. Thus, a total of eight digits will be dialed. For example, a user in Illinois wishes to reach a CCIS station number (753-4526) in New York. Two options exist for network setup. The digit 8 may be programmed as a CCIS network access code, such as a Least Cost Routing access code. The user then dials 8-753-4526. With this option, the 8 is assigned as the CCIS access code. Digits 8-753 and all other CCIS office codes must then be listed in the AFRS command. The second option is to program 753 as the CCIS access code, as in an LCR access code. If 753 is assigned as the CCIS access code, then 753 and all other CCIS office codes must be listed in the AFRS command. In this case, the user only dials 753-4526.
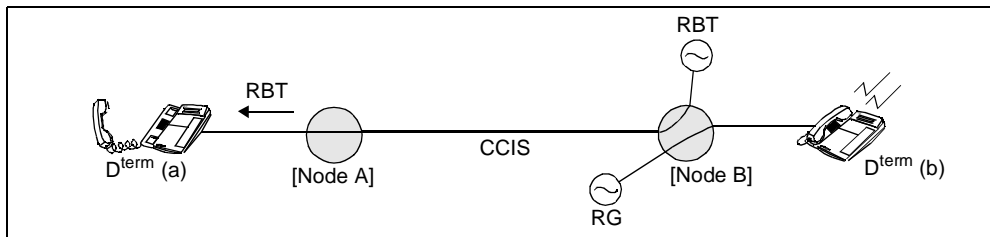
V-7   Voice Call - CCIS

General Description

This service feature allows Inter-office VOICE CALL when the calling D^{term}/Single-line Station and the called D^{term} belong to different PBX's in the CCIS network.

Operating Procedure

From a D^{term} to a D^{term}

1. D^{term} (a) places a call to D^{term} (b) through a CCIS line; receives ringback tone. D^{term} (b) rings.
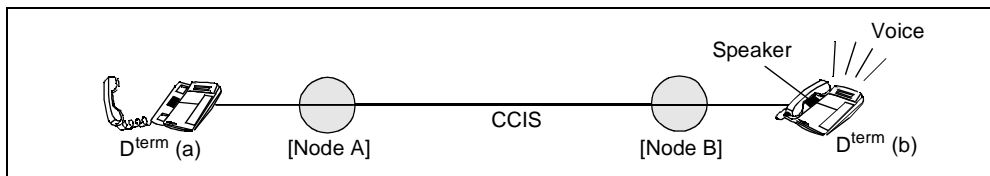

2. D^{term} (b) still does not answer. D^{term} (a), then presses the VOICE key and sends a tone to D^{term} (b). The LCD on D^{term} (a) displays:

VOICE XXXX

called D^{term}

Note: *If D^{term} (a) turns on MIC key on the D^{term}, D^{term} (a) can talk with D^{term} (b) hands-free.*
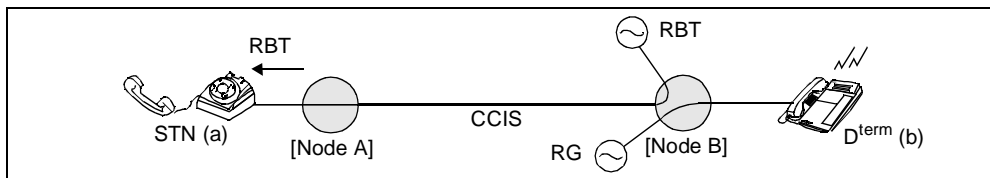
3. D^{term} (a) talks with D^{term} (b) via the speaker.

Note: *If D^{term} (b) turns on MIC key on the D^{term}, D^{term} (b) can talk with D^{term} (a) hands-free.*
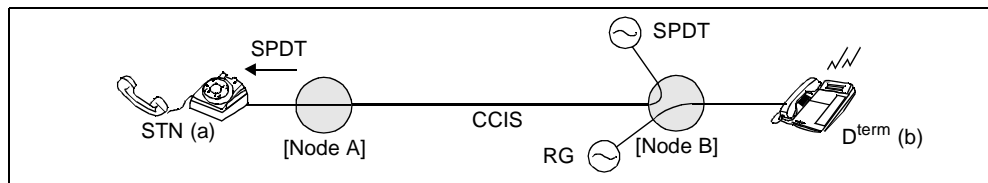
From a single-line station to a D^{term}

1. Station (a) places a call to D^{term} (b) through a CCIS line and receives ringback tone while D^{term} (b) is ringing.
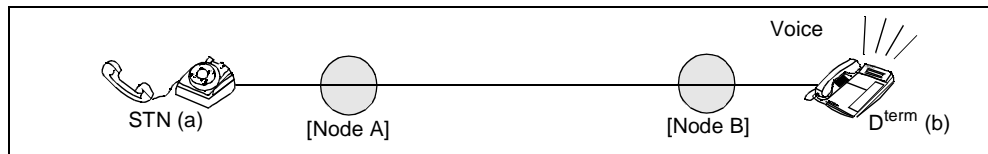
Operating Procedure (cont'd)

2. Station (a) switch hook flashes and receives special dial tone. D^{term} (b) still does not answer.

3. Station (a) dial the Access Code of VOICE CALL service and sends out a signal tone to D^{term} (b) via the speaker. D^{term} (b) talks with Station (a) via the speaker.

Service Conditions

1. Once a VOICE CALL is executed, the message "VOICE on multi-line set" is displayed on the called station.
2. Call Forwarding-All Calls/-Busy Line/-Don't Answer can be serviced by VOICE CALL.
3. VOICE CALL will terminate at the station whose My-line equals the extension called.

This page is for your notes.