To: Network Switching Forces
Training Time: 1 hour
Related Documents: None

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POINT OF CONTACT

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AM 270-800-951

                        AMERITECH CALL CONTROL (ACC)
                        (5ESS, DMS-1ØØ, EWSD MTCE)


1.      GENERAL


1.Ø1    ACC General Information

        ACC is an Advanced Intelligent Network (AIN) feature that provides a
        customer the ability to screen outgoing calls from their telephone
        line.  ACC screening allows outgoing calls to be completed or
        rejected.  The customer has the ability to restrict calls based on the
        number dialed, coupled with time of day (TOD), day of week (DOW) or
        day of year (DOY).

        The customer may activate or deactivate ACC either manually or
        automatically during specific time periods.  The customer may modify
        the parameters through the use of a DTMF or Touch Tone telephone.  ACC
        also allows the customer to dial an override code during an
        interactive announcement to override any call restriction.

1.Ø2    AIN Elements

        The AIN feature is designed to allow Ameritech to develop new services
        for customers without going through the process of having the switch
        vendors developing new feature packages.  Typically switch vendors
        require 18-24 months to develop new services.  Then all the switches

require the new software load. AIN allows Ameritech to greatly reduce
the time necessary to bring new products to our customers.

Service Control Point (SCP) is the AIN database that provides for how
the SSP should proceed with an AIN call. By keeping the database in
the SCP, there is no need to duplicate the information in each end
office.

Service Switching Points (SSP) are switching offices that are equipped
with the hardware and software to handle SS7 trunk signaling and
recognize AIN triggers. The SSP sends queries to an SCP and processes
responses from the SCP that control how the SSP should proceed with an
AIN call.

Service Management System (SMS) is an operation system for creating
and managing AIN services. Customers access SMS by a PC or from a
DTMF telephone to modify their parameters in the SCP.

There are two releases of AIN software. They are called AIN Release
Ø.Ø and AIN Release Ø.1. The SSP may have both releases working
simultaneously providing different services. ACC uses AIN Ø.1 only.

2.      SERVICE/FEATURE OPERATION

2.Ø1    The screening of outgoing calls are divided into three subsets:  1.
        The allow list - dialed numbers to be allowed.  2.  The reject list -
        dialed numbers to be restricted.  3.  All other numbers not on the
        allow or reject list.

        The screening list can be set up to allow/restrict all outgoing calls
        except to certain specified numbers, area codes or local prefixes.
        Entries on the screening list can reflect any single number or
        combination of numbers representing long distance and local calls.

        If the network determines that a call is to be rejected, the calling
        party will receive an interactive announcement. The customer (or
        authorized user) can override this rejection through the use of of an
        override code. This override code is customer changeable through a
        DTMF telephone.

        Customers have the opportunity to utilize the screening function in
        the way that best serves their needs. All calls, EXCEPT 911, can be
        restricted. All operator assisted calls (Ø+, Ø-, ØØ+, ØØ-) can either
        be allowed or rejected. ACC will not be offered where 911 is not
        available.

        The standard menu blocking choices include:

        Block all 9ØØ and 976 calls
        Block all long distance calls
        Block all operator assisted calls
        Block specific telephone number, prefix and/or area code - maximum of
        1Ø individualized entries Block all outgoing calls (except 911) Allow
        the following exceptions to blocked calls - maximum of 1Ø
        individualized entries.

A customer gains access to the Interactive Voice Response (IVR) unit
from their telephone by dialing *95.  The IVR unit interacts with the
AIN SMS to allow the customer to change or modify their screening
list.  If the customer wishes to modify their screening list remotely,
(i.e. from some telephone other than the line which has the ACC
service), the customer must dial a 7 or 10 digit number and follow the
prompts.

3.      TRIGGERS

3.01    Triggering is the process of identifing an AIN call to the SSP.  A
        trigger provides an indication to the SSP to suspend normal call
        processing and launch a query to the SCP.

        Trigger types for AIN 0.1 are:

        1.      Off-Hook Immediate
        2.      Off-Hook Delay
        3.      Shared Interoffice Trunk
        4.      3/6/10 Digit Public Office Dialing Plan
        5.      N11
        6.      Customized Dialing Plan
        7.      Automatic Flexible Routing
        8.      Termination Attempt

        The Off-Hook Delay trigger is used for ACC Service on POTS classes of
        service.

4.      MAINTENANCE RESPONSIBILITIES

4.01    This document mentions the following switching centers: Field Dispatch
        Center (FDC), Switching Technology Center (STC) and Centralized
        Translations Group (CTG).  If these centers are not yet established,
        assume the Switching Control Center (SCC) will perform most of the
        functions of these new centers.

4.02    The Maintenance Center (MC) or RECEIPT/SCREEN (RTS) Center will refer
        ACC trouble reports to the appropriate FDC for analysis.  WFA and LMOS
        should be used where possible for referring trouble reports.
        Beginning first quarter 1995 the RTS will refer missing/unwanted line
        triggers directly to the RCMAC groups.

        If the FDC determines the problem is not in the SSP, then the trouble
        report is referred to the (INAC) Intelligent Network Administration
        Center at (312) 424-2070.  If the INAC can find nothing wrong, they
        will request the FDC to contact their next tier of support.  The next
        tier of support for the FDC is the STC for the specific central office
        type.

5.      PROVISIONING

5.01    The CTG, the INAC and RCMAC groups are responsible for provisioning
        ACC service.  The CTG, or the group who writes the Translations
        Change

Notice (TCN)/MTS, is also responsibile for establishing the necessary
initial translations to provide AIN Ø.1 capabilities.

RCMAC will assign the Off Hook Delay trigger to the customer's line
from the service order. The balance of the translations are
provisioned at the INAC. The INAC work must be completed before RCMAC
adds the trigger to the line translations. Failure to do so will
results in all outgoing call attempts (except 911) being routed to an
announcement.

The CTG must define an escape trigger for code 911. The purpose of
the escape trigger is to tell the SSP not to send a query to the SCP
when dialing certain digits. This allows the 911 call to route
normally. Code 911 must be defined as an escape code to prevent a
customer from rejecting the 911 code. The escape trigger also
prevents code 911 from being routed to an announcement if the RCMAC
work is done first in error.

6.      AIN ANNOUNCEMENTS

6.Ø1    There are 255 AIN Ø.1 specific announcements possible. These
        announcements are standardized throughout all switch types. The SCP
        directs the switch via ID numbers which announcement to play.

        ACC Service uses announcement ID #3, ID #8 and ID #13. The
        announcement phrases are as follows:

        ID #3 (IDØ3WERSRRYAUTH) - "We're sorry the call you are attempting is
        not authorized".

        ID #8 (IDØ8AUTHCODENOT) - "The authorization code you have dialed is
        not valid. Please dial the authorization code again now".

        ID #13 (ID13REORDER) - Reorder tone.

6.Ø2    EWSD and 5ESS

        The AIN Ø.1 planners provided the Siemens and the 5ESS vendors with
        phrase lists necessary for the announcements. The AIN Ø.1
        announcement phrases are provided for the 5ESS and EWSD with the AIN
        Ø.1 announcement hardware. Translations are used to combine the
        phrases into complete announcements. The CTG provided these
        translations when AIN Ø.1 capability was established.

6.Ø3    DMS-1ØØ

        The phrase lists were not provided for the DMS-1ØØ. The central
        office personnel must record the announcements on specific DRAMS
        provided for the AIN Ø.1 service in the DMS-1ØØ switches. CTG
        provided the assignments for these announcements when establishing AIN
        Ø.1 capability. Cassette tapes with the complete announcements are
        located in each FDC.

7.      AIN TRANSLATIONS

7.Ø1    The translation material that follows for each switch type is for
        general information only. This information is intended only to be a

guideline to aid the FDC and STC trouble shooting ACC problems.

AIN 0.1 features are available with the following software releases:

DMS-100 - BCS 36
EWSD - Release 11.0
5ESS - 5E9.1 Generic

AIN 0.1 uses the SS7 network to launch queries to the SCP database. The Global Title Translations Number is 248 and the SubSystem Number is 248. The SSN and GTT must be assigned and activated before AIN 0.1 features can be used. These translations should be completed when the AIN 0.1 feature package is loaded.

The feature code *95 will be translated in each SSP end office to a number that routes to the IVR located in Elgin, Illinois.

7.02   5ESS Translations

The escape trigger for the emergency code 911 must be entered in the Recent Change/View 9.3 Local Digit (Office Dialing). Field 20 (ESC CODE) must be marked Y for all necessary LDIT's.

7.03   DMS-100 Translations

The Table TRIGESC must have the emergency code 911 defined as an escape code.

7.04   DMS Workarounds

The DMS-100 does not fully support AIN 0.1 when interacting with all possible agents. Basic Rate ISDN (BRI) is not supported with ACC service.

Primary Rate ISDN (PRI) trunk groups are looped back to back at the DSX bay to provide the work around. A loop-around outgoing and a loop-around incoming trunk group is used on a office wide basis for various AIN 0.1 services.

The Circuit Administration Center (CAC) issues message trunk orders to establish the PRI Loop-around trunk groups. This allows the traffic peg counts of PRI Loop-around trunks to be tracked like other message trunks. CAC will issue additional message trunk orders when overflows are detected on the PRI groups.

The following tables will have PRI trunk datafill information:

CLLI, TRKGRP, TRKSGRP  TRKMEM, LTDEF, LTDATA,
LTCALLS, LTMAP

Table TRKSGRP must be set up as "Network" for the Loop-around outgoing and as "User" for the Loop-around incoming group.

7.05    EWSD Translations

An escape trigger must be entered against the emergency code 911 using the
Enter Intelligent Network message (ENTRIN).


8.      VENDOR DOCUMENTATION FOR AIN 0.1

EWSD Release 11.0 Translations Guide - TG Book 770
EWSD Release 11.0 Command List - CML Book 1090
EWSD Release 11.0 Feature Descriptions Book 0625

5ESS Feature Document 235-190-126
5ESS Switch Advanced Service Platform, Release 0.1B
5ESS TG5 Translation Guide

DMS-100 NTP,297-5161-351 AIN Release 0.1 SSP Provisioning Cookbook

9.      LINE TRANSLATIONS

9.01    The following four pages are examples of the Off Hook Delay trigger
programmed against an EWSD, DMS-100 and 5ESS line.

~~For Siemens, the OHDTRIG Class Of Service (COS) is added.~~


DISPSUB:DN=3332135;

```
NPA      = 815       DN      = 3332135  EQN      =    30- 1- 5- 6      MASKNO:03800
         CAT         = MS                                             MASKNO:03774
         LTT         = COSLAC5                                        MASKNO:03789
         LNATT       = DTMF                                           MASKNO:03787
     CT       = VI                                                    MASKNO:04396
         CFRC        = 3                                              MASKNO:03798
         ORIG1       = 1
         PIC         = 2222                                           MASKNO:04398
         DIV         = ACTCFBL -3332136                               MASKNO:03780
                     & ACTCFDA -3332136
                     & CFBL
                     & CFDA
```

INTERRUPTION TEXT JOB   3372

CONTINUATION TEXT 0001

```
ASILB/APS11PS0202/USJCBL4N0010000/010                  94-10-04   07:48:01
3372           O&MADM02/AINTST          2816/03800

                    & CFV
                    & UPCFVDN
                    & NOCFIND
                    & RRNG
                    & CCAREQ
         CHRG       = FRSA1                                           MASKNO:03775
```

```
        COS      = TWC      &CW       &OHDTRIG        MASKNO:03777
        ADDINF   = CLASS                             MASKNO:03772
                                                     MASKNO:03770
        ABB      = SPD8
                 & UPSPD8
```

END JOB 3372 EXEC'D

For the DMS, the Option is added for AIN OHDTRIG using SERVORD.

)qdn 4422135

```
DN:      4422135
TYPE: SINGLE PARTY LINE
SNPA: 708    SIG: DT    LNATTIDX:      0
LINE EQUIPMENT NUMBER:     HOST  00 0 13 10
LINE CLASS CODE:       1FR
IBN TYPE: STATION
CUSTGRP:         POTSDATA     .SUBGRP: 0  NCOS: 0
LINE TREATMENT GROUP:      0
CARDCODE: 6X17AC    GND: N  PADGRP: STDLN  BNV: NL MNO: N
PM NODE NUMBER     :    18
PM TERMINAL NUMBER :    427
CFW INDEX: N/A
OPTIONS:
CWT 3WC DGT PIC 288 Y SC1 CFW C NSCR 10 I 13123422122 AIN OHDTRIG
RES OPTIONS:
CNDB NOAMA ACB NOAMA
```

)    ___  ____  __ ___  _____                 _ __              ___

For the 5ESS, the /ASPORIG service is added on the 1.8 view and
modified on the 1.64 view to have the OHD option set to 'Y'
and to the AIN0.1 Trigger number (3 in the SIL) from the
9.35 view.

```
                              5ESS  SWITCH  ATTD0
SCREEN 1 OF 6                 RECENT  CHANGE   1.8
                           ANALOG  LINE/BRCS  ASSIGNMENT

    (*)1. TN       3422135;     18. RAX     1       32. BUSY MONITORN
    (*)2. OE       _;_____   19. LCC     1FR     33. ATT MLHG _____
    (*)5. PTY      _            21. TTC     Y       34. RBV TGN  _____
    (*)6. MLHG     ____             HRI     0       35. CIDIAL   ALLOW
    (*)7. MEMB     ____         24. SERHLN _____ 36. PIC      0222
       9. CHNG TN  3422135      25. BCK LNK N       40. CID CW   N
      10. CHNG OE  L 00101003   26. SHARED  N
      13. CHNG PTY I            27. SAUTO   N
          CHNG MLHG 0           28. SUSO    N
          CHNG MEMB 0           29. SUST    N
      16. NEW TN   _____     30. ICP     N
      17. MFRI     N            31. PRIVACY N
Enter Review, Change-insert, Validate, screen#, or Print:
```

5ESS SWITCH ATTD0
RECENT CHANGE  1.8
ANALOG LINE/BRCS ASSIGNMENT

>47. BFGN _____ _          50. FEATURE LIST (FL)
                   A                      A                        A
          A
ROW FEATURE A P C R     FEATURE A P C R     FEATURE A P C R
FEATURE A P C R

| ROW | FEATURE | A | P | C | R | | FEATURE | A | P | C | R | | FEATURE | A | P | C | R | | FEATURE | A | P | C | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | /ASPORIG | Y | _ | N | N | 10 | _____ | _ | _ | _ | _ | 19 | _____ | _ | _ | _ | _ | 28 | _____ | _ | _ | _ | _ |
| 2 | /CWC1 | Y | _ | N | N | 11 | _____ | _ | _ | _ | _ | 20 | _____ | _ | _ | _ | _ | 29 | _____ | _ | _ | _ | _ |
| 3 | /MW3WC | Y | _ | N | N | 12 | _____ | _ | _ | _ | _ | 21 | _____ | _ | _ | _ | _ | 30 | _____ | _ | _ | _ | _ |
| 4 | /CFV | N | _ | N | N | 13 | _____ | _ | _ | _ | _ | 22 | _____ | _ | _ | _ | _ | 31 | _____ | _ | _ | _ | _ |
| 5 | /CFBLAC | Y | _ | N | N | 14 | _____ | _ | _ | _ | _ | 23 | _____ | _ | _ | _ | _ | 32 | _____ | _ | _ | _ | _ |
| 6 | /CFDAAC | Y | _ | N | N | 15 | _____ | _ | _ | _ | _ | 24 | _____ | _ | _ | _ | _ | 33 | _____ | _ | _ | _ | _ |
| 7 | _____ | _ | _ | _ | _ | 16 | _____ | _ | _ | _ | _ | 25 | _____ | _ | _ | _ | _ | 34 | _____ | _ | _ | _ | _ |
| 8 | _____ | _ | _ | _ | _ | 17 | _____ | _ | _ | _ | _ | 26 | _____ | _ | _ | _ | _ | 35 | _____ | _ | _ | _ | _ |
| 9 | _____ | _ | _ | _ | _ | 18 | _____ | _ | _ | _ | _ | 27 | _____ | _ | _ | _ | _ | 36 | _____ | _ | _ | _ | _ |

Enter Review, Change-insert, Validate, screen#, or Print:

---

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5ESS SWITCH ATTD0
RECENT CHANGE  9.35
NETWORK SERVICES TRIGGER DEFINITION

(5324)

*1. TRIG NBR          3
#2. APPLICATION       ASP
 3. ALT GBL TITLE    _____
 4. SERV KEY         ____
 5. STP TT NBR       ___
 6. ADM ST CD        ULK
 7. AIN REL          R0D1

Enter Review, Change-insert, Validate, or Print:

5ESS SWITCH ATTD0
RECENT CHANGE  1.64
ADVANCED SERVICES PLATFORM LINE PARAMETERS

(56322,56323)

  *1. FEATURE /ASPORIG; (*)3. OE  _;_____     (*)7. MLHG _____
(*)2. TN      3422135; (*)6. PTY _                 (*)8. MEMB _____

```
          ORIGINATING TRIGGERS                    TERMINATING TRIGGERS
   TRIG TYPE   TRIG NBR   TRIG ACT          TRIG TYPE   TRIG NBR   TRIG ACT
DFLT ROUTE
   9. OHI         ___         N          21. TA          ___          N
      N
  12. OHD          3          Y


   TRIG TYPE   ALLOWED   TRIG ACT          25. INTRA OFFICE FWD        ___
  15. FCD         N          N            26. INTER OFFICE FWD        ___
  18. CDP         N          N


Enter Review, Validate, or Print:
```

10.      GLOSSARY

| | |
|---|---|
| ACC | Ameritech Call Control |
| AIN Ø.1 | Advanced Intelligent Network Release Ø.1 |
| ASP | Advanced Service Platform |
| BRI | Basic Rate ISDN |
| CTG | Centralized Translation Group |
| DN | Directory Number |
| DOW | Day of Week |
| DOY | Day of Year |
| DSX | Digital Switch Crossconnect |
| DTMF | Dual Tone Multi-Frequency |
| FDC | Field Dispatch Center |
| INAC | Intelligent Network Administration Center |
| IVR | Interactive Voice Response Unit |
| LMOS | Loop Maintenance Operating System |
| MTS | Mechanized Translation System |
| NANP | North American Numbering Plan |
| RTS | Receipt/Screen |
| SCC | Switching Control Center |
| SCP | Service Control Point |
| SMS | Service Management System |
| SSP | Service Switching Point |
| STC | Switching Technology Center |
| STP | Signal Transfer Point |
| TCN | Translation Change Notice |
| TDP | Trigger Detection Points |
| WFA | Work and Force Administration |