

Account code

DESCRIPTION



## NOTICE

The information contained in this document is believed to be accurate in all respects but is not warranted by Mitel Networks™ Corporation (MITEL®). Mitel makes no warranty of any kind with regards to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The information is subject to change without notice and should not be construed in any way as a commitment by Mitel or any of its affiliates or subsidiaries. Mitel and its affiliates and subsidiaries assume no responsibility for any errors or omissions in this document. Revisions of this document or new editions of it may be issued to incorporate such changes.

No part of this document can be reproduced or transmitted in any form or by any means - electronic or mechanical - for any purpose without written permission from Mitel Networks Corporation.

## TRADEMARKS

The trademarks, service marks, logos and graphics (collectively "Trademarks") appearing on Mitel's Internet sites or in its publications are registered and unregistered trademarks of Mitel Networks Corporation (MNC) or its subsidiaries (collectively "Mitel") or others. Use of the Trademarks is prohibited without the express consent from Mitel. Please contact our legal department at [legal@mitel.com](mailto:legal@mitel.com) for additional information. For a list of the worldwide Mitel Networks Corporation registered trademarks, please refer to the website: <http://www.mitel.com/trademarks>.

© Copyright 2016, Mitel Networks Corporation

All rights reserved

# 1

## GENERAL

This document describes the feature Account code.

The primary purposes of the usage of account code with verification are:

- to charge a call to an account code, which may represent a particular project, department or client, instead of charging to the calling extension number.
- to prevent unauthorized telecommunication usage by forcing the extension to dial an account code before dialing an external number.

Account codes are available to extensions and PBX operators.

This function is supported in a H.323/mixed H.323 with ISDN network, and in homogeneous ISDN network permitting user-to user signaling, and the dialed destination is (located) in another node (set per destination, I/O). For VPN, see the function specification Virtual Private Network.

## 1.1

## GLOSSARY AND ACRONYMS

For a complete list of abbreviations and glossary, see the description for *ACRONYMS, ABBREVIATIONS AND GLOSSARY*.

## 2 FUNCTIONS

### 2.1 DEFINITIONS

#### 2.1.1 ACCOUNT CODE

The account code is represented by a string of digits in any length from one (1) through fifteen (15) digits of which each can be any value from zero (0) through nine (9) and is programmed only from the maintenance (I/O) terminal.

Leading zero is not permitted.

It is possible to assign account codes of different lengths in the same system.

One can set a fixed account code length with an AS parameter. If the length of the dialed account code is equal to the AS parameter, no verification is done, and the code is set to valid.

An account code can be tied to both incoming and outgoing calls.

Account code dialing can be optional or forced dependent upon the class of service of the originating extension and the type of call attempt. Optional entry applies to incoming or outgoing calls. Forced entry applies only to outgoing calls.

Account codes are not fixed to a particular extension. An account code can be entered from any extension.

#### 2.1.2 CLASS OF SERVICE

The account code category for an extension, COS, can have values from 0 to 2.

COS 0 = Forced ACO for calls not marked as exception in LCR data base (e.g Emergency number).

COS 1 = Forced ACO for calls not marked as exception for this COS in the LCR data base.

COS 2 = Forced account code is never required.

Together with the category for the dialed destination number it is possible to decide if the user shall have optional or forced account code dialing.

When a call is originated from a DTS, the COS used for Account Code is as follows:

From ODN - the ODN's COS.

From ADN - the ADN's COS.

From MDN - the ODN's COS of the DTS where the MDN key is located.

A TNS-key on a DTS can be programmed with an account code. Refer to the Digital Extension documents about TNS-keys.

### 2.2 DIALING AN ACCOUNT CODE

#### 2.2.1 GENERAL

The format is \*FC\* Account code #, where FC is the feature code for account code.

The account code may also be stored as an individual abbreviated number. The format is then \*\*D or D#, where D is the number of the individual abbreviated number.

The table below shows the permitted account code dialing methods versus the various types of extension/directory numbers (Y = Permitted, NP = Not permitted):

**Table 1**

	Forced/Optional dialing Before Speech State	Optional dialing In Speech State
DTS/ADN	Y	Y
ATS	Y	Y
MDN	Y	Y
DTS/ODN	Y	Y
GXN	Y	Y
OPI	Y	NP

## 2.2.2

### PRE-DIALING OF AN ACCOUNT CODE

When an account code is entered from an extension prior to dialing the destination number, the system will verify and accept the received account code if the code is valid. A call progress message is sent to the user as a verification of the dialed ACO. There are two different call progress messages, VALID ACO and INVALID ACO.

The subsequent destination number dialed by the user is then analyzed to determine if the call shall be restricted. If the call is not restricted, the system will examine the extension's COS, and check if the destination number requires an ACO to determine if the call shall be rejected or accepted.

The principle is that if the LCR category for the dialed number is equal or lower than the user's COS then the user has "Optional ACO dialing". If the LCR category is higher, the user has "Forced ACO dialing".

If the ACO is valid, the call will always be accepted. It is only when the ACO is valid that it will be tagged to the call in the CIL record.

How the system will act is described in the table below.

The first column shows an extension's ACO category, the second column the dialed LCR number's ACO category. If the calling user has not dialed any ACO, or an invalid one, and the user's COS is higher than or equal to the dialed LCR number's ACO category, then the call will be accepted, but the user can 'optionally dial ACO'.

**Invalid ACO or no ACO dialed:**

**Table 2**

COS	LCR	Action
0	0	Accept
0	1	Reject
0	2	Reject

1	0	Accept
1	1	Accept
1	2	Reject
2	0	Accept
2	1	Accept
2	2	Accept

### 2.2.3

### DIALING OF ACCOUNT CODE IN SPEECH

It is possible to associate an account code to an ongoing call, both incoming and outgoing.

Before entering any account code, the ongoing call has to be parked. The system will verify the entered account code and send the verification result to the extension.

When the user re-connects to the parked party, the system will re-establish the speech connection and distribute the new valid account code to CIL. If the parked call is a conference, and the requester is the conference leader, the account code will be distributed to all involved CIL records.

Note that PBX operator cannot enter ACO in speech.

### 2.2.4

### ACCOUNT CODE IN NETWORKS

A valid account code will, if it is a basic call via private network (ISDN/H.323), be forwarded at call setup. The code will be stored in a CIL record in all subsequent nodes in the network.

The account code will also be forwarded at execution of "Call back from busy route" and "On-/Off- hook queuing".

Only a pre-dialed account code will be forwarded.

In order for account codes in net-services to work, the optional feature Private Network Routing (PNR) must be loaded.

### 2.2.5

### SOME FEATURE INTERACTION ASPECTS

#### 2.2.5.1

#### *Last number redial*

The pre-dialed account code will be stored with the last external number.

#### 2.2.5.2

#### *Call Information Logging (CIL)*

The calls associated with account code entry are recorded in the same way as normal calls. The valid account code entered will be distributed to the relevant call record(s) and shown on the CIL output records.

Only a valid ACO will be stored.

The latest dialed valid ACO will always over-write the previous stored ACO in CIL.

If an extension has dialed an ACO and then parks the call and dials a valid ACO and no destination number the new valid ACO will over-write the old one in the CIL record.

If the extension completes the inquiry with dialing a destination number after dialing the ACO a new CIL record will be seized and the dialed ACO stored in it. The ACO in the old CIL record is not changed.

If the format used for CIL does not have the capability to record both ACO and the CIL code for Authorization code, and both have been entered for the call, the ACO shall have the priority.

For more detailed information, see the description for *CALL INFORMATION LOGGING, QUALITY OF SERVICE LOGGING* .

#### 2.2.5.3

##### *Inquiry*

A user may not enter an account code during speech state of an inquiry call.

When initiating an inquiry call, the account code must thus be dialed prior to the directory number, or, for an external inquiry call, after the external number.

#### 2.2.5.4

##### *Intrusion (executive override)*

An Account code cannot be entered in speech state while in a three party connection established by intrusion.

## **3 ADMINISTRATION, MANAGEMENT OF ACCOUNT CODE**

### **3.1 ACCOUNT CODE ADMINISTRATION COMMANDS**

Account Code Initiation/End/Print commands exist. These commands allow the administration personnel to initiate, delete and print account code(s) in the system.

In addition, Account Code Open/Close commands exist. These commands allow the administration personnel to specify and remove ranges of account codes that are accepted even if the individual account code is not stored in the account code database.

### **3.2 EXTENSION ADMINISTRATION COMMANDS**

By using the existing extension administration commands, the administration personnel are able to maintain (for example, set, terminate, and print) the account code category for the individual extension.

The administration personnel are able to program abbreviated number and the name selection number with the account code by using existing administration commands.

## 4

## CONFIGURATION OPTIONS

The following parameters are classified as application system parameters, that is, their values can be different for the different application systems.

- Feature code for account code dialing

**Range:** 0-999, (61 recommended)

- Fixed account code length

If the ACO length is equal to the AS parameter, it will be set to valid without verification.

If range = 0 there is no fixed ACO length

The ACO length can be changed by I/O-command.

**Range:** 0-15

- Action when LIM with ACO data base is isolated

**Range:** 0-1 0: Accept all ACO. 1: Reject all not verified ACO.

## 5

## CAPACITY AND LIMITATIONS

The maximum number of account codes is only limited by the account code length (15 digits) and the space of the hard-disc drives.

## 6

## LIM ISOLATION/BLOCKING

If a LIM that contains the account code database becomes isolated (and the database is not duplicated), then the account codes in the isolated data base cannot be accessed by the users outside of that LIM. That is, if a user tries to use an account code that is stored in an isolated data base, the validation request will be denied and a message will be generated.

An AS parameter decides if the ACO shall be set to valid or invalid when the validation request is denied at LIM isolation.

## **7**                      **HARDWARE**

There is no hardware for this facility.

## **8**                      **SUMMARY**

There are two ways to enter Account codes: by pre-dialing or in speech (after parking the call).

If a valid account code is dialed, the call is always accepted. Only a valid account code is sent to CIL for storage.