

ETSI EN 300 951 V7.0.1 (2000-01)

European Standard (Telecommunications series)

**Digital cellular telecommunications system (Phase 2+);
Line identification supplementary services;
Stage 3
(GSM 04.81 version 7.0.1 Release 1998)**



GSM®
GLOBAL SYSTEM FOR
MOBILE COMMUNICATIONS

ETSI 

Reference

REN/SMG-030481Q7

Keywords

Digital cellular telecommunications system,
Global System for Mobile communications
(GSM)

ETSI

Postal address

F-06921 Sophia Antipolis Cedex - FRANCE

Office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16
Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Internet

secretariat@etsi.fr
Individual copies of this ETSI deliverable
can be downloaded from
<http://www.etsi.org>
If you find errors in the present document, send your
comment to: editor@etsi.fr

Important notice

This ETSI deliverable may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2000.
All rights reserved.

Contents

| | |
|---|-----------|
| Intellectual Property Rights..... | 4 |
| Foreword..... | 4 |
| 0 Scope..... | 5 |
| 0.1 References..... | 5 |
| 0.2 Abbreviations..... | 6 |
| 1 Calling Line Identification Presentation (CLIP)..... | 7 |
| 1.1 Normal operation..... | 7 |
| 1.2 Interrogation..... | 7 |
| 1.3 Activation, deactivation, registration and erasure..... | 8 |
| 2 Calling Line Identification Restriction (CLIR)..... | 8 |
| 2.1 Normal Operation..... | 8 |
| 2.2 Requesting presentation of CLI..... | 8 |
| 2.3 Requesting restriction of CLI presentation..... | 8 |
| 2.4 Interrogation..... | 9 |
| 2.5 Activation, deactivation, registration and erasure..... | 9 |
| 3 Connected Line Identification Presentation (COLP)..... | 9 |
| 3.1 Normal operation..... | 9 |
| 3.2 Interrogation..... | 10 |
| 3.3 Activation, deactivation, registration and erasure..... | 10 |
| 4 Connected Line Identification Restriction (COLR)..... | 11 |
| 4.1 Normal operation..... | 11 |
| 4.2 Interrogation..... | 11 |
| 4.3 Activation, deactivation, registration and erasure..... | 11 |
| Annex A (informative): Change Request History..... | 12 |
| History..... | 13 |

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://www.etsi.org/ipr>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This European Standard (Telecommunications series) has been produced by the Special Mobile Group (SMG).

The present document specifies the procedures used at the radio interface for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of line identification supplementary services within the digital cellular telecommunications system.

The specification from which the present document has been derived was originally based on CEPT documentation, hence the presentation of the present document may not be entirely in accordance with the ETSI/PNE rules.

The contents of the present document is subject to continuing work within SMG and may change following formal SMG approval. Should SMG modify the contents of the present document it will be re-released with an identifying change of release date and an increase in version number as follows:

Version 7.x.y

where:

- 7 indicates Release 1998 of GSM Phase 2+.
- x the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- y the third digit is incremented when editorial only changes have been incorporated in the specification.

| National transposition dates | |
|--|-------------------|
| Date of adoption of this EN: | 31 December 1999 |
| Date of latest announcement of this EN (doa): | 31 March 2000 |
| Date of latest publication of new National Standard or endorsement of this EN (dop/e): | 30 September 2000 |
| Date of withdrawal of any conflicting National Standard (dow): | 30 September 2000 |

0 Scope

The present document specifies the procedures used at the radio interface for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of line identification supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In GSM 04.10 the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

GSM 04.80 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in GSM 02.04 and GSM 02.8x and GSM 02.9x-series. GSM 02.81 is related specially to line identification supplementary services.

Technical realization of supplementary services is described in GSM 03.11 and GSM 03.8x and GSM 03.9x-series. GSM 03.81 is related specially to line identification supplementary services.

The procedures for Call Control, Mobility Management and Radio Resource management at the layer 3 radio interface are defined in GSM 04.07 and GSM 04.08.

The following supplementary services belong to the line identification supplementary services and are described in the present document:

- Calling line identification presentation (CLIP) (clause 1);
- Calling line identification restriction (CLIR) (clause 2);
- Connected line identification presentation (COLP) (clause 3);
- Connected line identification restriction (COLR) (clause 4).

0.1 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.
- For this Release 1998 document, references to GSM documents are for Release 1998 versions (version 7.x.y).

- [1] GSM 01.02: "Digital cellular telecommunications system (Phase 2+); General description of a GSM Public Land Mobile Network (PLMN)".
- [2] GSM 02.04: "Digital cellular telecommunications system (Phase 2+); General on supplementary services".
- [3] GSM 02.81: "Digital cellular telecommunications system (Phase 2+); Line identification supplementary services - Stage 1".
- [4] GSM 02.82: "Digital cellular telecommunications system (Phase 2+); Call Forwarding (CF) supplementary services - Stage 1".
- [5] GSM 02.83: "Digital cellular telecommunications system (Phase 2+); Call Waiting (CW) and Call Hold (HOLD) supplementary services - Stage 1".

- [6] GSM 02.84: "Digital cellular telecommunications system (Phase 2+); MultiParty (MPTY) supplementary services - Stage 1".
- [7] GSM 02.85: "Digital cellular telecommunications system (Phase 2+); Closed User Group (CUG) supplementary services - Stage 1".
- [8] GSM 02.86: "Digital cellular telecommunications system (Phase 2+); Advice of Charge (AoC) supplementary services - Stage 1".
- [9] GSM 02.88: "Digital cellular telecommunications system (Phase 2+); Call Barring (CB) supplementary services - Stage 1".
- [10] GSM 02.90: "Digital cellular telecommunications system (Phase 2+); Unstructured Supplementary Service Data (USSD) - Stage 1".
- [11] GSM 03.11: "Digital cellular telecommunications system (Phase 2+); Technical realization of supplementary services".
- [12] GSM 03.81: "Digital cellular telecommunications system (Phase 2+); Line identification supplementary services - Stage 2".
- [13] GSM 03.82: "Digital cellular telecommunications system (Phase 2+); Call Forwarding (CF) supplementary services - Stage 2".
- [14] GSM 03.83: "Digital cellular telecommunications system (Phase 2+); Call Waiting (CW) and Call Hold (HOLD) supplementary services - Stage 2".
- [15] GSM 03.84: "Digital cellular telecommunications system (Phase 2+); MultiParty (MPTY) supplementary services - Stage 2".
- [16] GSM 03.85: "Digital cellular telecommunications system (Phase 2+); Closed User Group (CUG) supplementary services - Stage 2".
- [17] GSM 03.86: "Digital cellular telecommunications system (Phase 2+); Advice of Charge (AoC) supplementary services - Stage 2".
- [18] GSM 03.88: "Digital cellular telecommunications system (Phase 2+); Call Barring (CB) supplementary services - Stage 2".
- [19] GSM 03.90: "Digital cellular telecommunications system (Phase 2+); Unstructured supplementary services operation - Stage 2".
- [20] GSM 04.07: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface signalling layer 3; General aspects".
- [21] GSM 04.08: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification".
- [22] GSM 04.10: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3; Supplementary services specification; General aspects".
- [23] GSM 04.80: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 supplementary services specification; Formats and coding".

0.2 Abbreviations

Abbreviations used in the present document are listed in GSM 01.04.

1 Calling Line Identification Presentation (CLIP)

1.1 Normal operation

The calling line identity consists of a calling party BCD number and optionally, a calling party subaddress.

The calling party BCD number information element is made up of a number of information units as indicated in GSM 04.08.

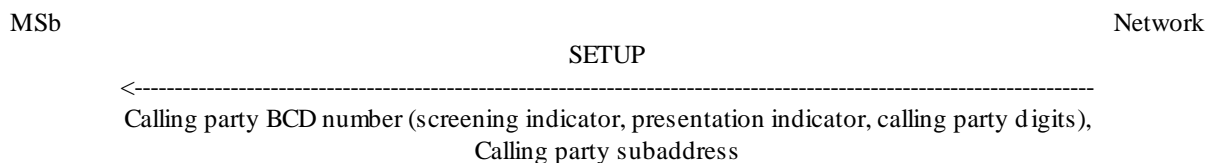
In addition to or instead of the calling party's digits, the subscriber may be given the following information:

- screening indicator;
- presentation indicator.

Indicator values are given in GSM 04.08.

The calling party subaddress information element is made up of a number of information units as indicated in GSM 04.08.

A called mobile subscriber subscribing to calling line identification presentation service receives the call with the information indicated above, see figure 1.1.



NOTE: The calling party subaddress is passed to MSb if it is received from the originating network.

Figure 1.1: Notification by the network to the called mobile subscriber

When the calling line identity is not available, the presentation indicator which is given to the called mobile subscriber takes the value of "number not available".

1.2 Interrogation

Status Check

The mobile subscriber can request the status of the supplementary service and be informed if the service is provided to him.

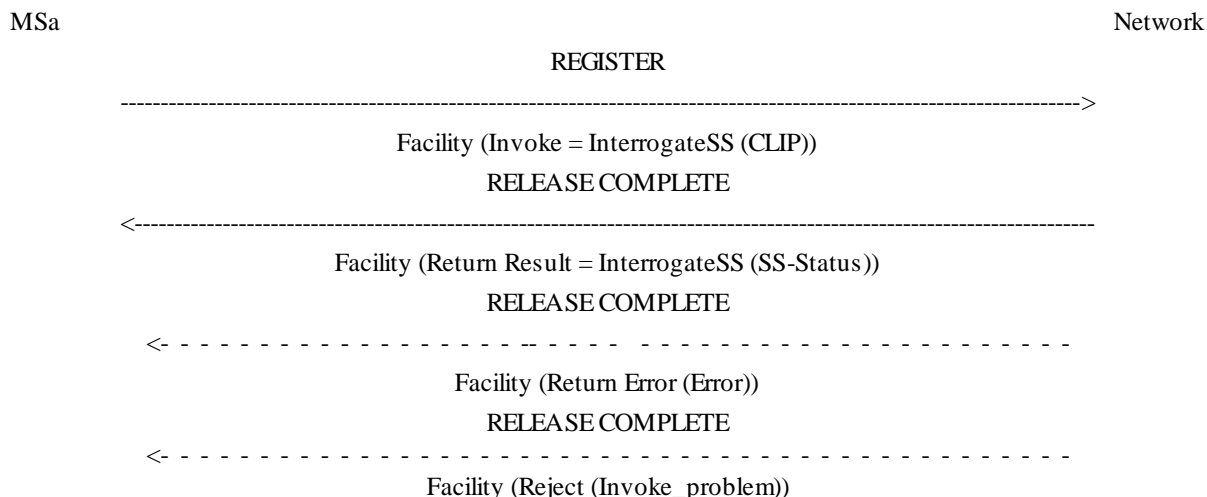


Figure 1.2: Interrogation of calling line identification presentation

1.3 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service calling line identification presentation are not applicable.

2 Calling Line Identification Restriction (CLIR)

2.1 Normal Operation

When calling line identification restriction is applicable, the originating network provides the destination network with a notification that the calling party's ISDN number, with possible additional address information, is not allowed to be presented to the called party.

If the called mobile user subscribes to calling line identification presentation and the calling party has calling line identification restriction applied, the called mobile party shall receive the presentation indicator showing "presentation restricted" in the calling party BCD field of the SETUP message, see figure 1.1. In this case, the calling party's number (digits) will not be sent towards the called subscriber.

2.2 Requesting presentation of CLI

When the CLIR presentation mode is temporary (presentation restricted), it is possible for the subscriber to present his CLI on a per call basis. The MS shall send a CLIR suppression information element to the network.

If the subscriber tries to override CLIR (i.e. requests that the CLI is displayed), when he has subscribed to permanent mode a NotifySS shall be sent to the MS in order to inform that the override has not been performed and the call set-up shall continue.

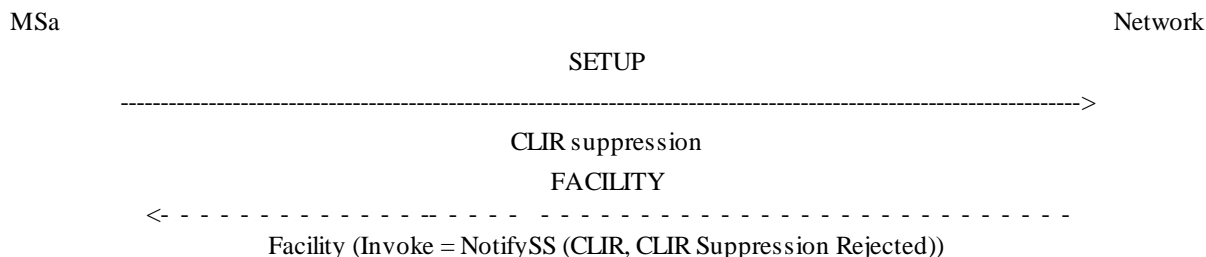


Figure 2.1: Requesting presentation of CLI

2.3 Requesting restriction of CLI presentation

When the CLIR presentation mode is temporary (presentation allowed), it is possible for the subscriber to restrict the CLI on a per call basis. The MS shall send a CLIR invocation information element to the network.

If the subscriber has not subscribed to CLIR and tries to invoke CLIR (i.e. requests that the CLI is not displayed), the SETUP shall be rejected. The MS and the network shall act in accordance with GSM 04.08 network initiated call clearing procedure, see figure 2.2.

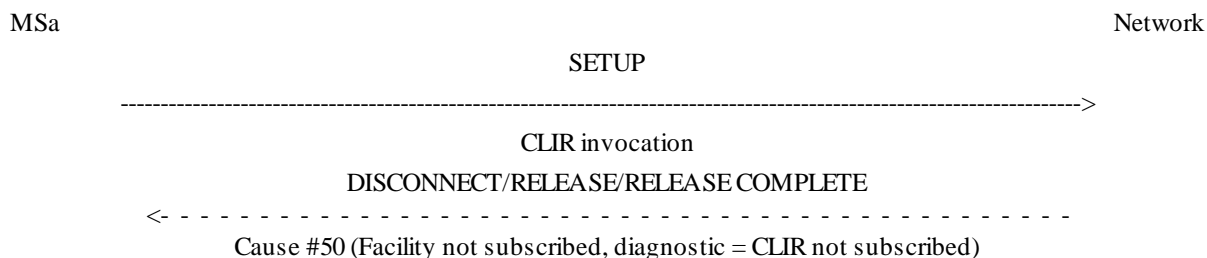


Figure 2.2: Requesting restriction of CLI presentation

2.4 Interrogation

Data request

The mobile subscriber can request the data of the supplementary service.

If the service is not provisioned the network shall sent a return result including the SS-Status parameter.

If the service is provisioned the network shall sent a return result including the SS-Status and the CLI Restriction Option parameters.

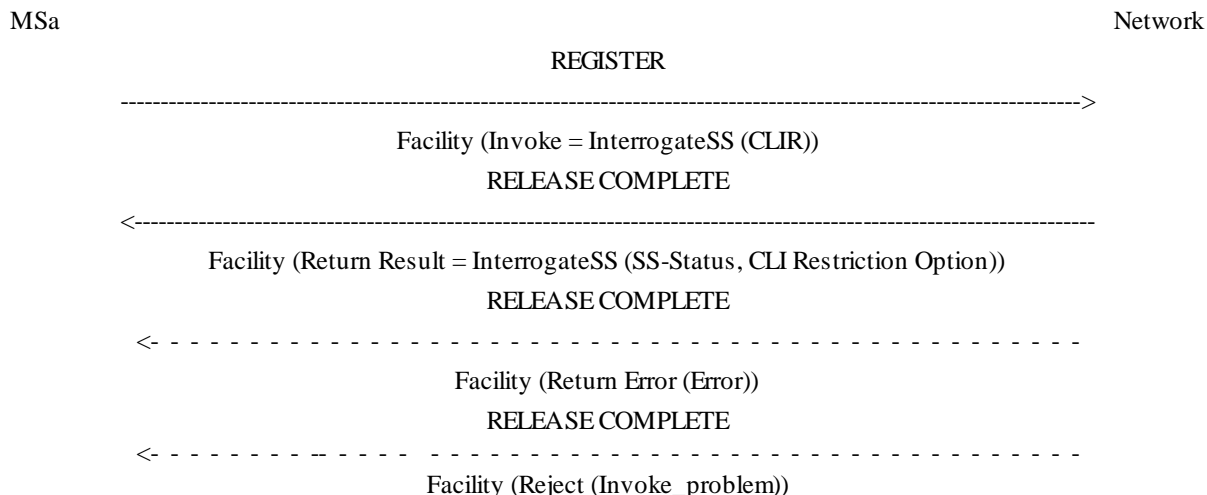


Figure 2.3: Interrogation of calling line identification restriction

2.5 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service calling line identification restriction are not applicable.

3 Connected Line Identification Presentation (COLP)

3.1 Normal operation

The connected line identity consists of a connected number and optionally, a connected subaddress.

The connected number is made up of a number of information units as indicated in GSM 04.08.

In addition to or instead of the connected number digits, the subscriber may be given the following information:

- screening indicator;

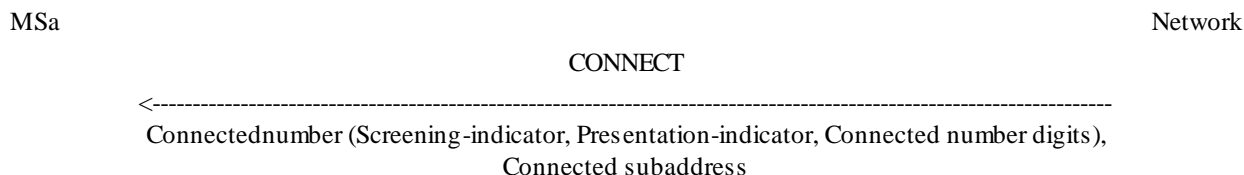
- presentation indicator.

Indicator values are given in GSM 04.08.

In the call set-up phase the calling mobile subscriber receives the information at the end of the call set-up.

The connected subaddress information element is made up of a number of information units as indicated in GSM 04.08.

A calling mobile subscriber subscribing to connected line identification presentation receives a message with the information indicated above, see figure 3.1.



NOTE: The connected subaddress is passed to MSa if it is received from the terminating network.

Figure 3.1: Notification by the network to the calling mobile subscriber

When the connected line identity is not available (due to interworking or presentation restrictions), appropriate indication information is given to the calling mobile subscriber.

3.2 Interrogation

Status Check

The mobile subscriber can request the status of the supplementary service and be informed if the service is provided to him.

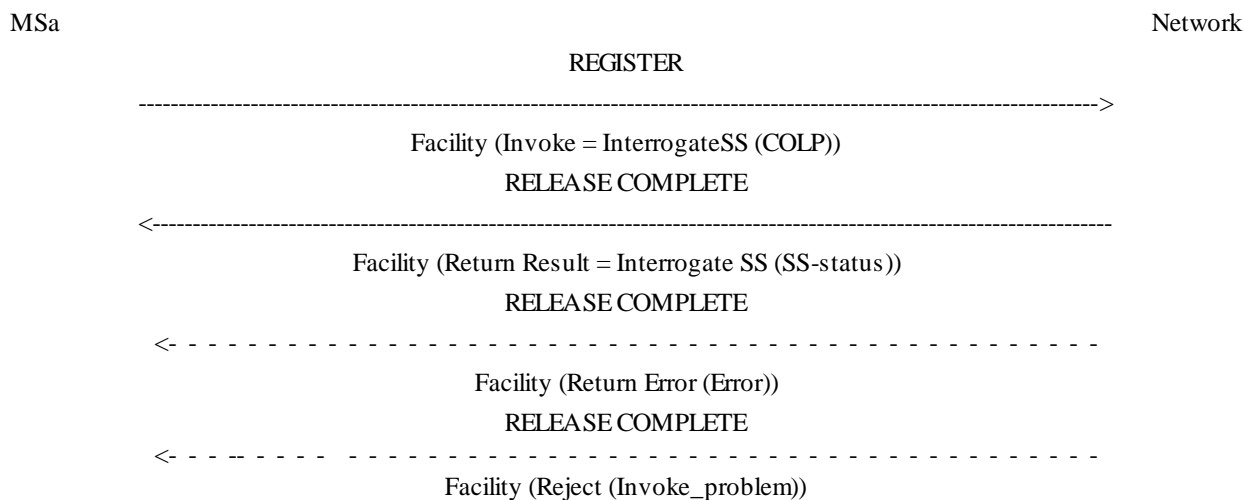


Figure 3.2: Interrogation of connected line identification presentation

3.3 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service connected line identification presentation is not applicable.

4 Connected Line Identification Restriction (COLR)

4.1 Normal operation

When connected line identification restriction is applicable the destination network provides the originating network with a notification that the connected party's ISDN number, with possible additional address information, is not allowed to be presented to the calling party.

If the calling mobile user subscribes to connected line identification presentation and the connected party has connected line identification restriction applied, the calling mobile party shall receive the presentation indicator showing "presentation restricted", see figure 3.1. In this case, the connected number will not be sent towards the calling subscriber.

4.2 Interrogation

Status Check

The mobile subscriber can request the status of the supplementary service and be informed if the service is provided to him.

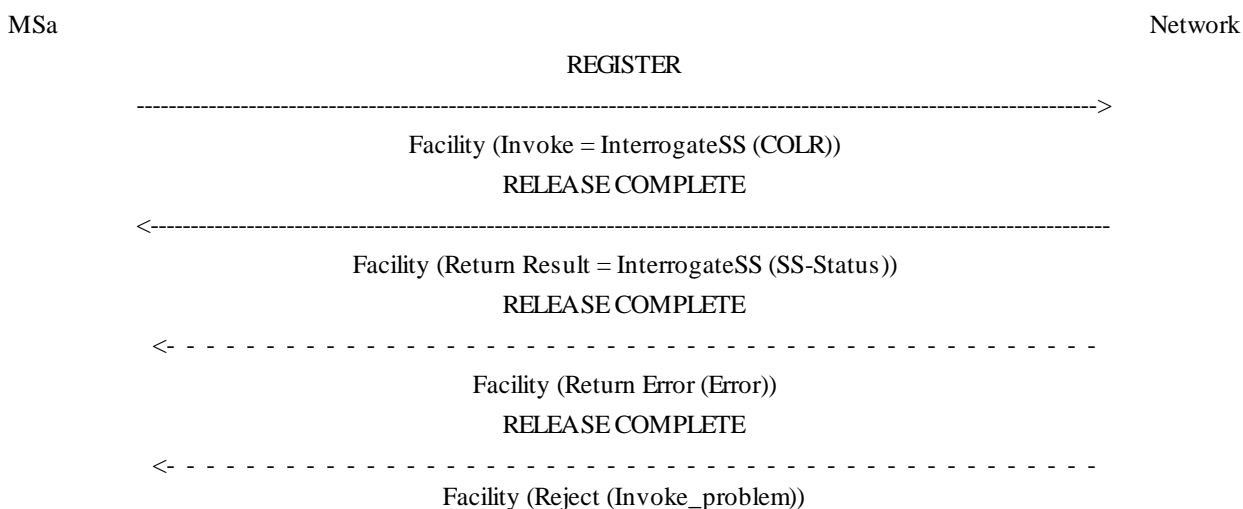


Figure 4.1: Interrogation of connected line identification restriction

4.3 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service connected line identification restriction are not applicable.

Annex A (informative): Change Request History

| Status of Technical Specification GSM04.81 | | |
|--|----------------|---|
| Date | Version | Remarks |
| | | No phase 1 version |
| January 1992 | version 4.0.0 | TS approved by SMG#01 |
| April 1992 | version 4.1.0 | Change request approved by SMG#02: CR 04.81-01 rev 1 (category C) |
| June 1992 | version 4.1.1 | Change request approved by SMG#03: CR 04.81-02 (category D) |
| January 1993 | version 4.1.2 | Change request approved by SMG#05: CR 04.81-03 (category D) |
| April 1993 | version 4.1.3 | Change request approved by SMG#06: CR 04.81-04 rev 1 (category D) Reference to MCI removed TS frozen for phase 2 by SMG#06 |
| June 1993 | version 4.2.0 | Change request approved by SMG#07: CR 04.81-05 (category F) |
| October 1993 | version 4.2.1 | TS changed to draft prETS 300 565 |
| April 1994 | version 4.3.0 | Change request approved by SMG#10: CR 04.81-06 rev 5 (category F) |
| October 1994 | version 4.4.0 | Change requests approved by SMG#12: CR 04.81-07 rev 1 (category F) TS changed to final draft prETS 300 565 |
| January 1995 | version 4.4.1 | TS changed to ETS 300 565 first edition |
| December 1996 | version 5.0.0 | GTS converted to draft prETS 300 951 for Release 96 |
| May 1997 | version 5.0.1 | ETS 300 951 first edition |
| January 1999 | version 6.0.0 | Release 1997 version |
| July 1999 | version 7.0.0 | Release 1998 version |
| January 2000 | version 7.0.1 | Version update to 7.0.1 for Publication |
| Text and figures : WinWord 6.0 Stylesheet: etsiw_70.dot | | |

History

| Document history | | |
|-------------------------|--------------|--|
| V7.0.0 | August 1999 | One step Approval Procedure OAP 9956: 1999-08-25 to 1999-12-24 |
| V7.0.1 | January 2000 | Publication |
| | | |
| | | |
| | | |