

ETSI TS 124 072 V15.0.0 (2018-07)



**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
Call Deflection (CD) supplementary service;
Stage 3
(3GPP TS 24.072 version 15.0.0 Release 15)**



Reference

RTS/TSGC-0424072vf00

Keywords

GSM,UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - 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

Important notice

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2018.

All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M logo is protected for the benefit of its Members.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables 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 ETSI 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 (<https://ipr.etsi.org/>).

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 ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	4
1 Scope	5
2 References	5
3 Definitions and abbreviations.....	5
3.1 Abbreviations	5
4 Call Deflection (CD)	5
4.1 Normal operation.....	5
4.1.1 Served mobile subscriber side	5
4.1.2 Deflected-to mobile subscriber side.....	6
4.1.3 Calling mobile subscriber side.....	7
Annex A (informative): Change history	8
History	9

Foreword

This Technical Specification has been produced by the 3GPP.

This TS describes procedures on the radio interface for the call deflection supplementary service within the 3GPP system.

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

Version 3.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 Indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the specification;

1 Scope

This Global System for Mobile communications Technical Specification specifies the procedures used at the radio interface (reference point Um as defined in 3GPP TS 24.002) for normal operation of Call Deflection (CD) supplementary service. 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.

2 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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 21.905: "Vocabulary for 3GPP Specifications".
 - [2] 3GPP TS 22.072: "Call Deflection (CD) supplementary service Stage 1".
 - [3] 3GPP TS 24.002: "GSM Public Land Mobile Network (PLMN) access reference configuration".
 - [4] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".
 - [5] 3GPP TS 24.080: "Mobile radio interface layer 3 supplementary services specification; Formats and coding".
-

3 Definitions and abbreviations

3.1 Abbreviations

Abbreviations used in this specification are listed in 3GPP TS 21.905.

4 Call Deflection (CD)

4.1 Normal operation

4.1.1 Served mobile subscriber side

The served mobile subscriber may invoke the call deflection supplementary service if an incoming call is offered. According to 3GPP TS 22.072 this may happen as an automatic response from the mobile station if the call is offered or as the result of a subscriber action.

The mobile station shall invoke the call deflection supplementary service by initiating call clearing with a DISCONNECT message including the call deflection request (refer to figure 4.1). The call deflection request shall contain the DeflectedToNumber which may be accompanied by a DeflectedToSubAddress.

The MS may invoke the call deflection supplementary service at every time after call confirmation until the call is accepted (refer to 3GPP TS 24.008). If the network accepts the call deflection request, it shall continue call clearing. The result indication shall be returned to the mobile station in the RELEASE message.

If the network cannot accept the call deflection request, it shall continue call clearing. The corresponding error indication shall be returned to the mobile station in the RELEASE message. Error values are specified in 3GPP TS 24.080.

During the call deflection request the MS shall run a timer TCD. This timer is started when the call deflection request is sent and stopped when a response is received from the network. If this timer expires the MS shall assume that the call deflection request has failed, locally release the invokeID, inform the user of the failure and continue call clearing as defined in 3GPP TS 24.008.

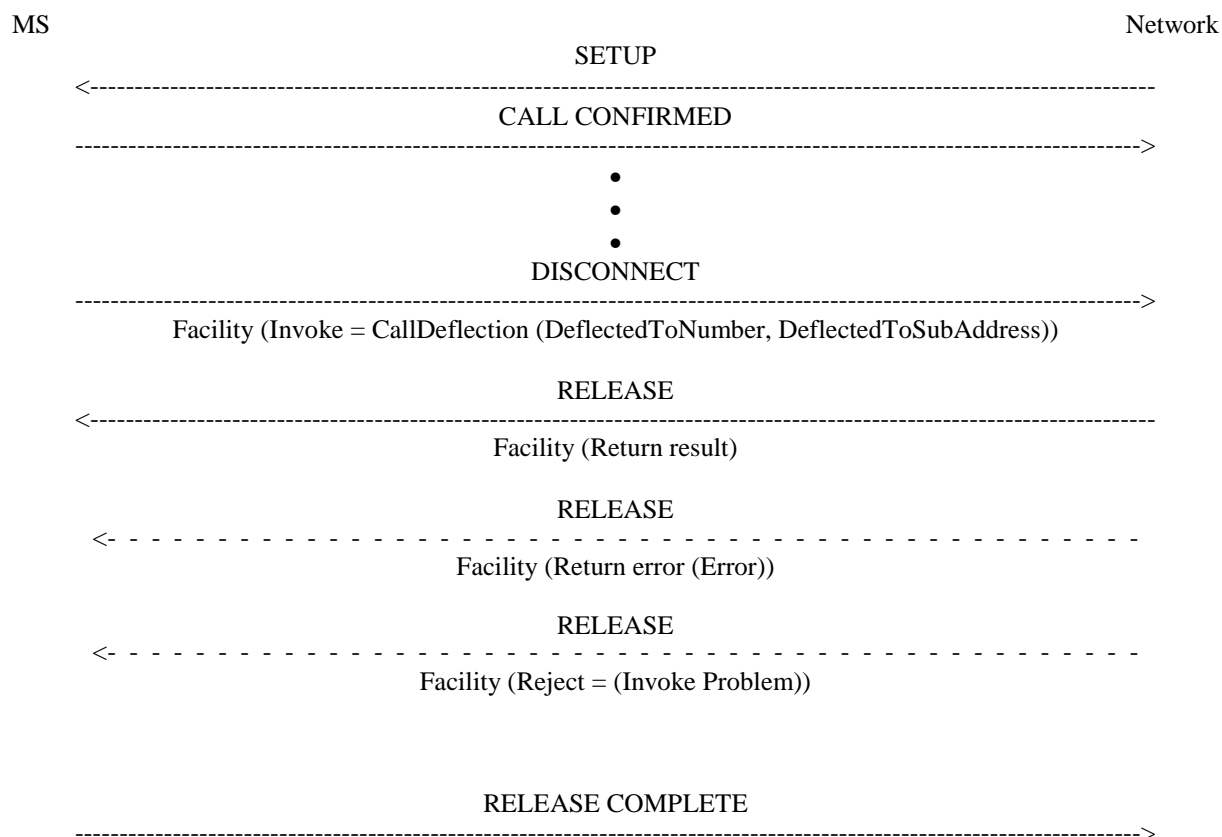


Figure 4.1: Call deflection invocation for an incoming call

4.1.2 Deflected-to mobile subscriber side

As for the call forwarding supplementary services the deflected-to mobile subscriber will receive a NotifySS operation containing the SS Notification indicating that the incoming call is a forwarded call. When available, the SS Code of the Call Deflection supplementary service is included, see figure 4.2.

When multiple diversions occurs the value of the SS Code shall relate to the last invoked diversion service.

In addition the deflected-to subscriber will receive the redirecting party BCD number and optionally, a redirecting party subaddress.

The redirecting party BCD number information element is made up of a number of information units as defined in 3GPP TS 24.008.

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

- screening indicator;
- presentation indicator.

Indicator values are given in 3GPP TS 24.008.

The redirecting party subaddress information element is made up of a number of information units as defined in 3GPP TS 24.008.

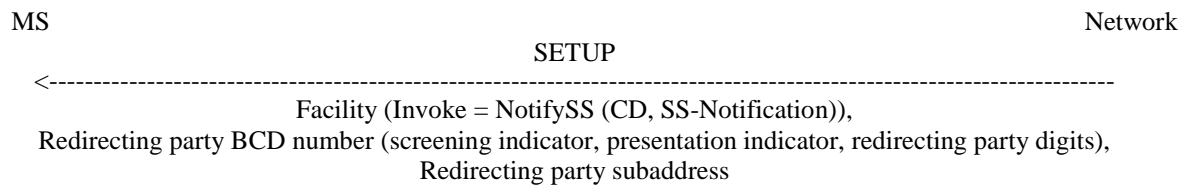


Figure 4.2: Notification to the forwarded to mobile subscriber that the incoming call is a forwarded call

4.1.3 Calling mobile subscriber side

As a subscription option, the served mobile subscriber can request that the calling mobile subscriber receives a NotifySS operation containing the SS Notification indicating that the call has been deflected. When available, the SS Code of the call deflection supplementary service is included, see figure 4.3.

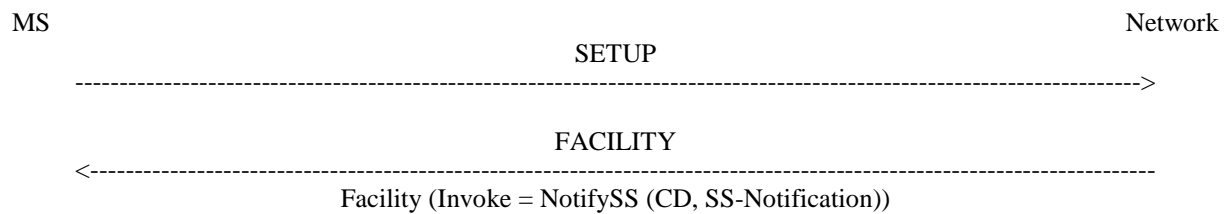


Figure 4.3: Notification to the calling mobile subscriber that the call is forwarded

Annex A (informative): Change history

Change history						
TSG CN#	Spec	Version	CR	<Phase>	New Version	Subject/Comment
Apr 1999	GSM 04.72	7.0.0				Transferred to 3GPP CN1
CN#03	24.072			R99	3.0.0	Approved at CN#03
CN#11	24.072	3.0.0		Rel-4	4.0.0	Release 4 after CN#11
CN#15	24.072	4.0.0		Rel-4	4.0.1	References updated
CN#16	24.072	4.0.1		Rel-5	5.0.0	Release 5 after CN#16
CN#26	24.072	5.0.0		Rel-6	6.0.0	Release 6 after CN#26
CT#36	24.072	6.0.0		Rel-7	7.0.0	Upgraded unchanged from Rel-6
CT#42	24.072	7.0.0		Rel-8	8.0.0	Upgraded unchanged from Rel-7
2009-12	24.072	8.0.0	-	Rel-9	9.0.0	Update to Rel-9 version (MCC)
2011-03	24.072	9.0.0	-	Rel-10	10.0.0	Update to Rel-10 version (MCC)
2012-09	24.072	10.0.0	-	Rel-11	11.0.0	Update to Rel-11 version (MCC)
2014-09	24.072	11.0.0	-	Rel-12	12.0.0	Update to Rel-12 version (MCC)
2015-12	24.072	12.0.0	-	Rel-13	13.0.0	Update to Rel-13 version (MCC)
2017-03	24.072	13.0.0	-	Rel-14	14.0.0	Update to Rel-14 version (MCC)
2018-06	24.072	14.0.0	-	Rel-15	15.0.0	Update to Rel-15 version (MCC)

History

Document history		
V15.0.0	July 2018	Publication