

ETSI TS 101 541 V7.0.1 (2000-01)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Location Services (LCS);
Supplementary service operations - Stage 3
(GSM 04.30 version 7.0.1 Release 1998)**



GSM®
GLOBAL SYSTEM FOR
MOBILE COMMUNICATIONS

ETSI 

Reference

DTS/SMG-030430Q7

Keywords

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

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
1 Scope	5
2 References	5
3 Abbreviations	5
4 Network initiated location services operations.....	6
4.1 Location Notification	6
4.1.1 Normal operation	6
5 Mobile initiated location services operations	7
5.1 Mobile Originated Location Request (MO-LR)	7
5.1.1 Normal operation	7
Annex A (informative): Change History	9
History	10

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 Technical Specification (TS) has been produced by the Special Mobile Group (SMG).

The present document specifies the stage 3 description of the LoCation Services (LCS) related supplementary service operations within the digital cellular telecommunications system.

The contents of the present document are subject to continuing work within SMG and T1P1 and may change following formal SMG and T1P1 approval. Should SMG or T1P1 modify the contents of the present document it will then be re-issued with an identifying change of release date and an increase in version number as follows:

Version 7.x.y

where:

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

1 Scope

The present document gives the stage 3 description of the Location Service (LCS) operations for mobile station.

The group of location services operations is divided into two different classes:

- Network initiated location services operations (clause 4);
- Mobile initiated location services operations (clause 5).

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.
- 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 01.04: "Digital cellular telecommunications system (Phase 2+); Abbreviations and acronyms"
- [2] GSM 03.71: "Digital cellular telecommunications system (Phase 2+); Location Services (LCS); (Functional description) - Stage 2"
- [3] GSM 04.80: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 supplementary services specification; Formats and coding"

3 Abbreviations

Abbreviations used in the present document are listed in GSM 01.04 and GSM 03.71.

4 Network initiated location services operations

4.1 Location Notification

4.1.1 Normal operation

The network invokes a location notification procedure by sending a REGISTER message containing a LCS-LocationNotification invoke component to the MS. This may be sent either to request verification for MT-LR or to notify about already authorized MT-LR.

In case of privacy verification the MS shall respond to the request by sending a RELEASE COMPLETE message containing the mobile subscriber's response in a return result component (figure 4.1).

If the timer expires in the network before any response from the MS (e.g. due to no response from the user), the network shall interpret this by applying the default treatment defined in GSM 03.71 (i.e. disallow location if barred by subscription and allow location if allowed by subscription).

In the case of location notification no response is required from the MS, the MS shall terminate the dialogue by sending a RELEASE COMPLETE message containing a LocationNotification return result.

If the MS is unable to process the request received from the network, it shall return an error indication by sending a RELEASE COMPLETE message containing a return error component. Error values are specified in GSM 04.80.

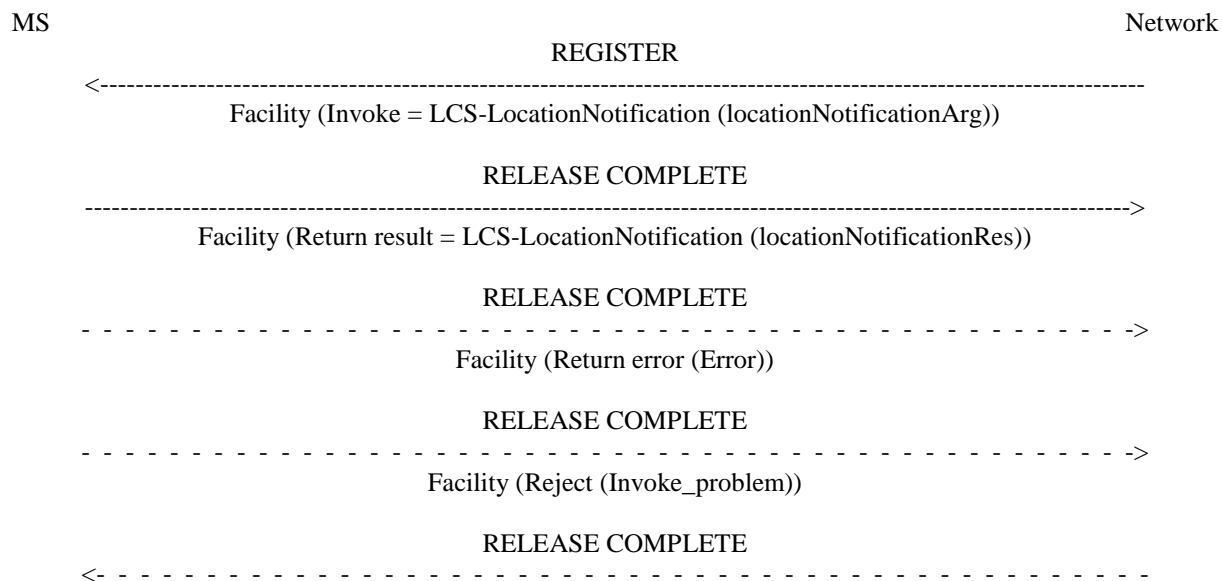


Figure 4.1: Location Notification

5 Mobile initiated location services operations

5.1 Mobile Originated Location Request (MO-LR)

5.1.1 Normal operation

The MS invokes a MO-LR by sending a REGISTER message to the network containing a LCS-MOLR invoke component.

The receiving network entity shall initiate the handling of location request in the network. The network shall pass the result of the location procedure to the MS by sending a FACILITY message to the MS containing a LCS-MOLR return result component.

The MS may terminate the dialogue by sending a RELEASE COMPLETE message in the case of single location request (see figure 5.1). The MS may also initiate another location request operation by sending a FACILITY message to the network containing a LCS-MOLR invoke component (see figure 5.2). After the last location request operation the MS shall terminate the dialogue by sending a RELEASE COMPLETE message.

If the network is unable to process the request received from the MS, it shall clear the transaction by sending a RELEASE COMPLETE message containing a return error component. Error values are specified in GSM 04.80.

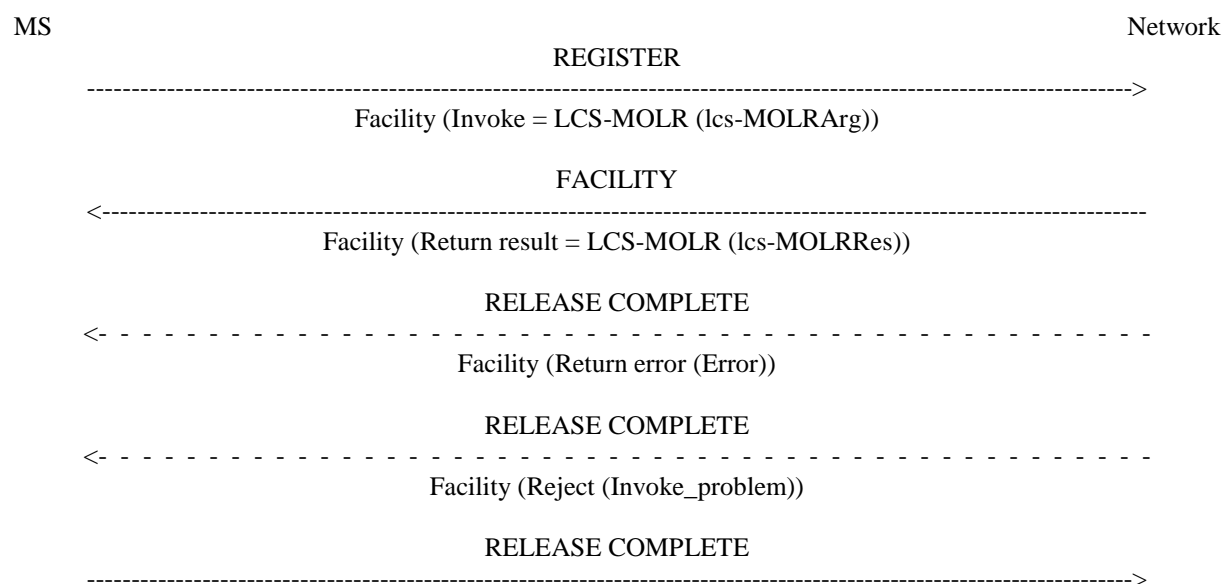


Figure 5.1: Single mobile originated location request

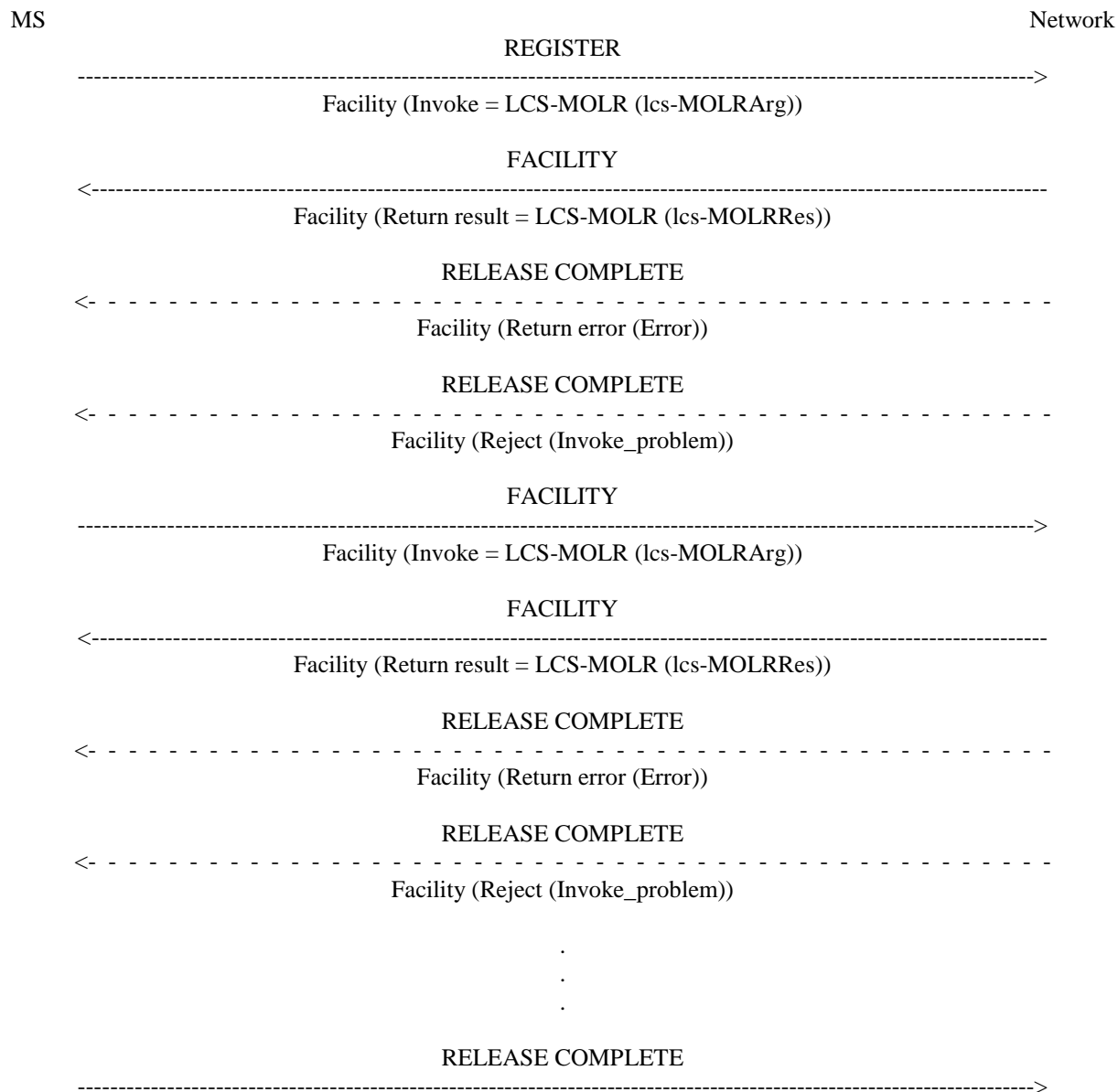


Figure 5.2: Multiple mobile originated location requests

Annex A (informative): Change History

Change history						
Meeting#	Spec	Version	CR	<Phase>	New Version	Subject/Comment
SMG#30bis	04.30		-	R98	7.0.1	Approved at SMG#30bis as Release 98

History

Document history		
V7.0.1	January 2000	Publication