

ETSI TS 100 934 V8.5.0 (2005-06)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Voice Broadcast service (VBS);
Stage 2
(3GPP TS 03.69 version 8.5.0 Release 1999)**



Reference

RTS/TSGC-010369v850

Keywords

GSM

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

Individual copies of the present document can be downloaded from:
<http://www.etsi.org>

The present document 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.

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
<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:
http://portal.etsi.org/chaircor/ETSI_support.asp

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 2005.
All rights reserved.

DECT™, PLUGTESTS™ and UMTS™ are Trade Marks of ETSI registered for the benefit of its Members.
TIPHON™ and the **TIPHON logo** are Trade Marks currently being registered by ETSI for the benefit of its Members.
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

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 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 (<http://webapp.etsi.org/IPR/home.asp>).

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.

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>.

Contents

Intellectual Property Rights	2
Foreword.....	2
Foreword.....	5
1 Scope	6
2 References	6
3 Definitions and abbreviations.....	7
3.1 Definitions.....	7
3.2 Abbreviations	7
4 Main concepts	8
4.1 Group definition	8
4.2 Broadcast process.....	8
4.2.1 Broadcast call initiation	8
4.2.1.1 Normal operation with successful outcome	8
4.2.1.2 Exceptional procedures	9
4.2.2 On-going broadcast calls	9
4.2.2.1 Normal operation with successful outcome	9
4.2.2.2 Exceptional procedures	10
4.2.3 Leaving of a broadcast call without termination.....	10
4.2.4 Broadcast call termination	10
4.2.5 Acknowledgements.....	10
4.2.6 Transactions between the mobile station and the network.....	10
5 General architecture	10
5.1 Group Call Register (GCR).....	10
5.2 Voice broadcast call responsibility.....	12
6 Compatibility issues	12
7 Transmission	12
7.1 Transmission architecture.....	12
7.2 Radio channels	12
7.3 Data confidentiality	13
8 Information storage	13
8.1 Information stored in the GCR	13
8.1.1 Information used for routing of service subscriber originated voice broadcast calls	13
8.1.2 Broadcast call attributes.....	14
8.1.2.1 Group call area	14
8.1.2.2 Dispatcher identities.....	14
8.1.2.3 Priorities	15
8.2 Information managed per subscriber	15
8.2.1 Stored in the HLR	15
8.2.2 Stored in the VLR	15
8.2.3 Stored in the SIM	15
8.3 Information used for routing of dispatcher originated broadcast calls	15
9 Identities	15
9.1 Elementary identities for broadcast calls.....	15
9.2 Use of identities in the network.....	16
10 Operation and maintenance aspects	17
11 Function and information flows	18
11.1 Broadcast function management	18
11.2 Group membership management.....	18
11.3 Call management.....	18

11.3.1	Call establishment.....	18
11.3.1.1	Service subscriber call establishment.....	18
11.3.1.1.1	Initial stage	18
11.3.1.2	Establishment of the transmission means	19
11.3.1.3	Release of the dedicated transmission means of mobile stations responding to a notification.....	19
11.3.1.2	Dispatcher call establishment.....	19
11.3.1.3	Notification procedures.....	20
11.3.1.4	Destination service subscribers.....	21
11.3.1.5	Destination dispatchers	22
11.3.2	Call release.....	22
11.3.3	Leaving of a dispatcher.....	22
11.3.4	Leaving and returning to a voice broadcast call of a service subscriber	22
11.3.5	Cell change	22
11.3.5.1	Listening subscriber	22
11.3.5.2	Calling service subscriber	22
11.3.5.3	Dispatcher	23
11.3.6	New calls	23
11.3.7	Uplink transmission management.....	23
11.3.8	Overview of signalling.....	23
11.4	Functional requirement of Anchor-MSC.....	33
11.5	Functional requirement of Relay-MSC	37
11.6	Functional requirement of GCR	40
11.7	Functional requirement of VLR	44
12	Content of messages	46
12.1	Messages on the B interface (MSC-VLR).....	46
12.1.1	Allocate Group Call Number	46
12.1.2	Allocate Group Call Number ack	46
12.1.3	Allocate Group Call Number negative response.....	46
12.1.4	Release Group Call Number	47
12.2	Messages on the E interface (MSC-MSD)	47
12.2.1	Prepare Group Call	47
12.2.2	Prepare Group Call ack.....	47
12.2.3	Prepare Group Call negative response	47
12.2.4	Send Group Call End Signal	47
12.3	Messages on the I interface (MSC-GCR).....	48
12.3.1	GCR Interrogation	48
12.3.2	GCR Interrogation ack.....	48
12.3.3	GCR interrogation negative response	48
12.3.4	Call released.....	49
Annex A (informative):	Change history	50
History		51