

ETSI TS 101 377-2-5 V1.1.1 (2001-03)

Technical Specification

**GEO-Mobile Radio Interface Specifications;
Part 2: Service specifications;
Sub-part 5: Multiparty (MPTY) Supplementary Services;
GMR-2 02.084**



Reference

DTS/SES-002-02084

KeywordsGMR, GSM, GSO, interface, MES, mobile,
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supplementary service**ETSI**

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IPRs:

Project	Company	Title	Country of Origin	Patent n°	Countries Applicable
TS 101 377 V1.1.1	Digital Voice Systems Inc		US	US 5,715,365	US
TS 101 377 V1.1.1	Digital Voice Systems Inc		US	US 5,754,974	US
TS 101 377 V1.1.1	Digital Voice Systems Inc		US	US 5,226,084	US
TS 101 377 V1.1.1	Digital Voice Systems Inc		US	US 5,701,390	US
TS 101 377 V1.1.1	Digital Voice Systems Inc		US	US 5,826,222	US

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Project	Company	Title	Country of Origin	Patent n°	Countries Applicable
TS 101 377 V1.1.1	Ericsson Mobile Communication	Improvements in, or in relation to, equalisers	GB	GB 2 215 567	GB
TS 101 377 V1.1.1	Ericsson Mobile Communication	Power Booster	GB	GB 2 251 768	GB
TS 101 377 V1.1.1	Ericsson Mobile Communication	Receiver Gain	GB	GB 2 233 846	GB
TS 101 377 V1.1.1	Ericsson Mobile Communication	Transmitter Power Control for Radio Telephone System	GB	GB 2 233 517	GB

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Project	Company	Title	Country of Origin	Patent n°	Countries Applicable
TS 101 377 V1.1.1	Hughes Network Systems		US	Pending	US

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Project	Company	Title	Country of Origin	Patent n°	Countries Applicable
TS 101 377 V1.1.1	Lockheed Martin Global Telecommunic. Inc	2.4-to-3 KBPS Rate Adaptation Apparatus for Use in Narrowband Data and Facsimile Communication Systems	US	US 6,108,348	US
TS 101 377 V1.1.1	Lockheed Martin Global Telecommunic. Inc	Cellular Spacecraft TDMA Communications System with Call Interrupt Coding System for Maximizing Traffic Throughput Cellular Spacecraft TDMA Communications System with Call Interrupt Coding System for Maximizing Traffic Throughput	US	US 5,717,686	US
TS 101 377 V1.1.1	Lockheed Martin Global Telecommunic. Inc	Enhanced Access Burst for Random Access Channels in TDMA Mobile Satellite System	US	US 5,875,182	
TS 101 377 V1.1.1	Lockheed Martin Global Telecommunic. Inc	Spacecraft Cellular Communication System	US	US 5,974,314	US
TS 101 377 V1.1.1	Lockheed Martin Global Telecommunic. Inc	Spacecraft Cellular Communication System	US	US 5,974,315	US
TS 101 377 V1.1.1	Lockheed Martin Global Telecommunic. Inc	Spacecraft Cellular Communication System with Mutual Offset High-argin Forward Control Signals	US	US 6,072,985	US
TS 101 377 V1.1.1	Lockheed Martin Global Telecommunic. Inc	Spacecraft Cellular Communication System with Spot Beam Pairing for Reduced Updates	US	US 6,118,998	US

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Satellite Earth Stations and Systems (SES).

The present document is part 2, sub-part 5 of a multi-part deliverable covering Geo-Mobile Radio Interface Specification, as identified below:

Part 1: "General specifications";

Part 2: "Service specifications":

Sub-part 1: "Teleservices supported by a GMR-2 Public Satellite Mobile Network (PSMN); GMR-2 02.003";

Sub-part 2: "General on Supplementary Services; GMR-2 02.004";

Sub-part 3: "Security Aspects; GMR-2 02.009";

Sub-part 4: "Call Waiting (CW) and Call Hold (HOLD) Supplementary Services - Stage 1; GMR-2 02.083";

Sub-part 5: "Multiparty (MPTY) Supplementary Services; GMR-2 02.084";

Sub-part 6: "Service Accessibility; GMR-2 02.001";

Sub-part 7: "Operator Determined Barring (ODB); GMR-2 02.041";

Sub-part 8: "Call Barring Supplementary Services; GMR-2 02.088";

Sub-part 9: "Bearer Services (BS) supported by a GMR-2 Public Satellite Mobile Network (PSMN); GMR-2 02.002".

Part 3: "Network specifications";

Part 4: "Radio interface protocol specifications";

Part 5: "Radio interface physical layer specifications";

Part 6: "Speech coding specifications".

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Version 1.m.n

where:

- the third digit (n) is incremented when editorial only changes have been incorporated in the specification;
- the second digit (m) is incremented for all other types of changes, i.e. technical enhancements, corrections, updates, etc.

Introduction

GMR stands for GEO (Geostationary Earth Orbit) Mobile Radio interface, which is used for mobile satellite services (MSS) utilizing geostationary satellite(s). GMR is derived from the terrestrial digital cellular standard GSM and supports access to GSM core networks.

Due to the differences between terrestrial and satellite channels, some modifications to the GSM standard are necessary. Some GSM specifications are directly applicable, whereas others are applicable with modifications. Similarly, some GSM specifications do not apply, while some GMR specifications have no corresponding GSM specification.

Since GMR is derived from GSM, the organization of the GMR specifications closely follows that of GSM. The GMR numbers have been designed to correspond to the GSM numbering system. All GMR specifications are allocated a unique GMR number as follows:

GMR-n xx.zyy

where :

- xx.0yy ($z = 0$) is used for GMR specifications that have a corresponding GSM specification. In this case, the numbers xx and yy correspond to the GSM numbering scheme.
- xx.2yy ($z = 2$) is used for GMR specifications that do not correspond to a GSM specification. In this case, only the number xx corresponds to the GSM numbering scheme and the number yy is allocated by GMR.
- n denotes the first ($n = 1$) or second ($n = 2$) family of GMR specifications.

A GMR system is defined by the combination of a family of GMR specifications and GSM specifications as follows:

- If a GMR specification exists it takes precedence over the corresponding GSM specification (if any). This precedence rule applies to any references in the corresponding GSM specifications.

NOTE: Any references to GSM specifications within the GMR specifications are not subject to this precedence rule. For example, a GMR specification may contain specific references to the corresponding GSM specification.

- If a GMR specification does not exist the corresponding GSM specification may or may not apply. The applicability of the GSM specifications is defined in GMR-n 01.201.

1 Scope

The present document should be read in conjunction with GSM 02.84 [3]. Only the differences as they apply to the GMR-2 satellite system are included in the present document.

The present document describes the supplementary services belonging to the group MULTI PARTY SUPPLEMENTARY SERVICES. The general aspects, including definitions and recommended provision, of the description of the GMR-2 supplementary services are given in specification GMR-2 02.004 [2].

The group of supplementary services MULTI PARTY SUPPLEMENTARY SERVICES consists of one supplementary service:

- Multi Party service (see clause 4).

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] GMR-2 01.004 (ETSI TS 101 377-1-1): "GEO-Mobile Radio Interface Specifications; Part 1: General specifications; Sub-part 1: Abbreviations and acronyms; GMR-2 01.004".

[2] GMR-2 02.004 (ETSI TS 101 377-2-2): "GEO-Mobile Radio Interface Specifications; Part 2: Services specifications; Sub-part 2: General on supplementary services; GMR-2 02.004".

[3] GSM 02.84 (ETSI ETS 300 517 Edition 2): "Digital cellular telecommunication system (Phase 2); Multi Party (MPTY) supplementary services - Stage 1 (GSM 02.84 version 4.4.7)".

3 Abbreviations

For the purposes of the present document, the abbreviations given in GMR-2 01.004 [1] apply.

4 Description Multi Party supplementary services

Refer to clause 1.2.1 of GSM 02.84 [3].

A precondition for the multi-party service is that the served mobile subscriber is in control of one active call and one call on hold, both calls having been answered. In this situation the served mobile subscriber can request the network to begin the multi-party service. Once a multi-party call is active, remote parties may be added, disconnected or separated i.e. removed from the multi-party call but remain connected to the served mobile subscriber.

The maximum number of remote parties is 5.

NOTE: A served GMR mobile subscriber may not maintain more than one active call with a GMR mobile subscriber.

4.1 Exceptional procedures or unsuccessful outcome

Refer to clause 1.4 of GSM 02.84 [3].

If a served mobile subscriber attempts to invoke multi-party service and the network cannot accept that request, the request will be rejected and an indication will be given to the served mobile subscriber with a reason for denial. Some possible reasons for rejection are:

- service not subscribed;
- resources cannot be allocated;
- conflicting situation with other supplementary services;
- calls are not in appropriate state (e.g. one or more calls are not answered or are in the process of being cleared);
- service not supported by the LPLMN;
- active call is between two GMR mobile subscribers.

If the service provider cannot satisfy the request to add a further remote party (e.g. if the multi-party call has been cleared or if the maximum number of remote parties allowed has already been reached) the served mobile subscriber shall receive an indication that the request is denied, with the reason for failure.

If the radio path of the served mobile subscriber is lost permanently for any reason, the multi-party call shall be released.

Annex A (informative): Bibliography

- GSM 02.30 (ETSI ETS 300 511 Edition 2): "Digital cellular telecommunication system (Phase 2); Man-Machine Interface (MMI) of the Mobile Station (MS) (GSM 02.30 version 4.13.0)".
- GMR-2 02.083 (ETSI TS 101 377-2-4): "GEO-Mobile Radio interface specifications; Call Waiting (CW) and Call Hold (HOLD) supplementary services - Stage 1 (GMR-2 02.083)".
- GSM 02.85 (ETSI ETS 300 518 Edition 2): "Digital cellular telecommunication system (Phase 2); Closed User Group (CUG) supplementary services - Stage 1 (GSM 02.85 version 4.2.6)".

History

Document history		
V1.1.1	March 2001	Publication