

ETSI TS 101 377-4-11 V1.1.1 (2001-03)

Technical Specification

**GEO-Mobile Radio Interface Specifications;
Part 4: Radio interface protocol specifications;
Sub-part 11: Call Waiting (CW) and Call Holding (HOLD)
Supplementary Services;
GMR-2 04.083**



Reference

DTS/SES-002-04083

Keywords

GMR, MSS, MES, satellite, GSO, S-PCN, GSM,
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| 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 |
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| 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 contents of the present document are subject to continuing work within TC-SES and may change following formal TC-SES approval. Should TC-SES modify the contents of the present document it will then be republished by ETSI with an identifying change of release date and an increase in version number as follows:

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.

The present document is part 4, sub-part 11 of a multi-part deliverable covering the GEO-Mobile Radio Interface Specifications, as identified below:

Part 1: "General specifications";

Part 2: "Service specifications";

Part 3: "Network specifications";

Part 4: "Radio interface protocol specifications";

Sub-part 1: "GMR-2 Mobile Earth Station-Network Interface; General Aspects and Principles; GMR-2 04.001";

Sub-part 2: "GMR-2 Mobile Earth Station-Network Interface; Channel Structures and Access capabilities; GMR-2 04.003";

Sub-part 3: "Layer 1 General requirements; GMR-2 04.004";

Sub-part 4: "Data Link Layer General Aspects; GMR-2 04.005";

Sub-part 5: "GMR-2 Mobile Earth Station - Network Interface; Data Link (DL) layer Specifications; GMR-2 04.006";

Sub-part 6: "Mobile Radio Interface Signalling Layer 3; General Aspects; GMR-2 04.007";

Sub-part 7: "Mobile radio interface Layer 3 Specifications; GMR-2 04.008";

Sub-part 8: "Point-to-Point Short Message Services; GMR-2 04.011";

Sub-part 9: "Performance requirements on the mobile radio interface; GMR-2 04.013";

Sub-part 10: "Rate Adaptation on the Mobile Earth Station (MES) - Gateway System Interface; GMR-2 04.021";

Sub-part 11: "Call Waiting (CW) and Call Holding (HOLD) Supplementary Services; GMR-2 04.083";

Sub-part 12: "Multiparty Supplementary Services (MPTY); GMR-2 04.084";

Sub-part 13: "Technical Realisation of the Early Flag Technique; GMR-2 04.201";

Sub-part 14: "Call Barring Supplementary Services; GMR-2 02.088";

Part 5: "Radio interface physical layer specifications";

Part 6: "Speech coding specifications".

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 are defined in GMR-n 01.201.

1 Scope

The present document should be read in conjunction with GSM 04.83 [2] which specifies the stage 3 description of the call completion supplementary services.

The original text in GSM 04.83 [2] is fully applicable to the GMR-2 system except for the modified text shown in clause 4 of the present document.

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, subsequent revisions do apply.

- [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] GSM 04.83 (ETSI ETS 300 567 Edition 2): "Digital cellular telecommunications system (Phase 2); Call Waiting (CW) and Call Hold (HOLD) supplementary services; Stage 3 (GSM 04.83 version 4.6.1)".

3 Abbreviations

For the purposes of the present document, all abbreviations are listed in GMR-2 01.004 [1].

4 General

The GMR-2 system shall provide limited support of Call waiting (CW) and Call Hold (HOLD) supplementary services when more than one MES is involved in this process. When an MES is engaged in a single-hop MES-to-MES connection with another MES, the network will not support CW and HOLD supplementary services to either of these users. Hence, GSM 04.83 [2] is fully applicable with the following modification to GSM 04.83 [2] clauses 1.3.5 (new clause) and 2.1.1 (additional text).

4.1 Call Waiting (CW)

This clause is fully applicable with the addition of the new clause shown in 4.1.1 below.

4.1.1 Incoming call from subscriber C when subscribers A and B are GMR Mobile subscribers

If both subscribers A and B are in a mobile to mobile call, then subscriber C shall be given a busy indication, unless e.g. Call Forwarding applies.

4.2 Call Hold (CH)

This clause is fully applicable with the addition of the new text shown in 4.2.1 below.

4.2.1 Hold and retrieve functions

The following additional text applies:

"A GMR mobile subscriber may not hold a call from another GMR mobile subscriber".

History

| Document history | | |
|-------------------------|------------|-------------|
| V1.1.1 | March 2001 | Publication |
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