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Technical Specification

**GEO-Mobile Radio Interface Specifications;
Part 1: General specifications;
Sub-part 1: Abbreviations and acronyms;
GMR-1 01.004**



Reference

DTS/SES-001-01004

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Contents

Intellectual Property Rights4

Foreword6

Introduction6

1 Scope8

2 References8

3 Abbreviations and acronyms8

History22

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IPRs:

| Project | Company | Title | Country of Origin | Patent n° | Countries Applicable |
|-------------------|---------------------------|-------|-------------------|--------------|----------------------|
| TS 101 376 V1.1.1 | Digital Voice Systems Inc | | US | US 5,226,084 | US |
| TS 101 376 V1.1.1 | Digital Voice Systems Inc | | US | US 5,715,365 | US |
| TS 101 376 V1.1.1 | Digital Voice Systems Inc | | US | US 5,826,222 | US |
| TS 101 376 V1.1.1 | Digital Voice Systems Inc | | US | US 5,754,974 | US |
| TS 101 376 V1.1.1 | Digital Voice Systems Inc | | US | US 5,701,390 | US |

IPR Owner: Digital Voice Systems Inc
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| Project | Company | Title | Country of Origin | Patent n° | Countries Applicable |
|-------------------|-------------------------------|--|-------------------|--------------|----------------------|
| TS 101 376 V1.1.1 | Ericsson Mobile Communication | Improvements in, or in relation to, equalisers | GB | GB 2 215 567 | GB |
| TS 101 376 V1.1.1 | Ericsson Mobile Communication | Power Booster | GB | GB 2 251 768 | GB |
| TS 101 376 V1.1.1 | Ericsson Mobile Communication | Receiver Gain | GB | GB 2 233 846 | GB |
| TS 101 376 V1.1.1 | Ericsson Mobile Communication | Transmitter Power Control for Radio Telephone System | GB | GB 2 233 517 | GB |

IPR Owner: Ericsson Mobile Communications (UK) Limited
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| Project | Company | Title | Country of Origin | Patent n° | Countries Applicable |
|-------------------|------------------------|-------|-------------------|-----------|----------------------|
| TS 101 376 V1.1.1 | Hughes Network Systems | | US | Pending | US |

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| Project | Company | Title | Country of Origin | Patent n° | Countries Applicable |
|-------------------|--|--|-------------------|--------------|----------------------|
| TS 101 376 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 101 376 V1.1.1 | Lockheed Martin Global Telecommunic. Inc | Cellular Spacecraft TDMA Communications System with Call Interrupt Coding System for Maximizing Traffic Throughput | US | US 5,717,686 | US |
| TS 101 376 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 101 376 V1.1.1 | Lockheed Martin Global Telecommunic. Inc | Spacecraft Cellular Communication System | US | US 5,974,314 | US |
| TS 101 376 V1.1.1 | Lockheed Martin Global Telecommunic. Inc | Spacecraft Cellular Communication System | US | US 5,974,315 | US |
| TS 101 376 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 101 376 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:

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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 1, sub-part 1 of a multi-part deliverable covering the GEO-Mobile Radio Interface Specifications, as identified below:

Part 1: "General specifications";

Sub-part 1: "Abbreviations and acronyms; GMR-1 01.004";

Sub-part 2: "Introduction to the GMR-1 family; GMR-1 01.201";

Sub-part 3: "General System Description; GMR-1 01.202";

Part 2: "Service specifications";

Part 3: "Network specifications";

Part 4: "Radio interface protocol specifications";

Part 5: "Radio interface physical layer specifications";

Part 6: "Speech coding specifications";

Part 7: "Terminal adaptor 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 is defined in GMR-n 01.201.

1 Scope

The present document describes abbreviations and acronyms to be used throughout the GMR-1 specifications. All abbreviations are presented in the singular, but are equally applicable to the plural.

2 References

The present document has no references.

3 Abbreviations and acronyms

For the purposes of the present document, the following abbreviations and acronyms apply:

A

| | |
|----------|--|
| A3 | Authentication algorithm A3 |
| A38 | A single algorithm performing the functions of A3 & A8 |
| A5/1 | Encryption algorithm A5/1 |
| A5/2 | Encryption algorithm A5/2 |
| A5-GMR-1 | Signaling data AND user data encryption algorithm |
| A5/X | Encryption algorithm A5/0-7 |
| A8 | ciphering key generating algorithm A8 session key generating algorithm, used in security schemes |
| AB | Access Burst |
| ABM | Asynchronous Balance Mode |
| | Asymmetric Balance Mode |
| AC | Access Class (C0 to C15) |
| | Application Context |
| ACC | Automatic Congestion Control |
| | ACcept |
| ACCH | Associated Control CHannel |
| ACCH/FA | Associated Control CHannel/Full Allocation |
| ACK | Acknowledgment |
| | ACKnowledge |
| ACM | Accumulated Call Meter |
| | Address Complete Message |
| ACU | Antenna Combining Unit |
| ADC | Administration center |
| | Analog to Digital Converter |
| AND | Abbreviated Dialing Number |
| ADPCM | Adaptive Differential Pulse Code Modulation |
| AE | Application Entity |
| AEC | Acoustic Echo Control |
| AEF | Additional Elementary Functions |
| AGCH | Access Grant Channel |
| Ai | Action indicator |
| ANM | ANswer Message |
| AoC | Advice of Charge |
| AOC | Advanced Operation Center |
| AoCC | Advice of Charge Charging supplementary service |
| AoCI | Advice of Charge Information supplementary service |
| ASE | Application Service Element |
| ASN.1 | Abstract Syntax Notation One |
| ARFCN | Absolute Radio Frequency Channel Number |
| ARQ | Automatic ReQuest for retransmission |
| ASD | Accelerated Special Density |
| ASFC | Alerting Signaling Failure Counter |

| | |
|------------|---|
| AT | Access Terminal |
| Ata | Access terminal, country a |
| Atb | Access terminal, country b |
| Atc | Access terminal, country c |
| AT-BSS | Access Terminal-Base Station Subsystem |
| AT-GSS | Access Terminal-Gateway Station Subsystem |
| ATI | Any Time Interrogation |
| AT(o) | Access Terminal, Originating (TtT) |
| AT(t) | Access Terminal, Terminating (TtT) |
| ATT (flag) | ATTach |
| AU | Access Unit |
| AuC | Authentication Center |
| AUT(H) | AUThentication |

B

| | |
|------------|--|
| BA | BCCH Allocation |
| BACH | Broadcasting Alert CHannel Broadcast Alerting CHannel Basic Alerting Channel |
| BAIC | Barring of All Incoming Calls supplementary service |
| BAOC | Barring of All Outgoing Calls supplementary service |
| BCC | Base transceiver station (BTS) Color Code |
| BCCH | Broadcast Control Channel |
| BCD | Binary Coded Decimal |
| BCF | Base station Control Function |
| BCIE | Bearer Capability Information Element |
| BCS | Binary Coded Signaling |
| BER | Bit Error Rate |
| BFI | Bad Frame Indication |
| BI | all Barring of Incoming call supplementary services |
| BIC-Roam | Barring of Incoming Calls when Roaming outside the home PLMN Country supplementary service |
| BIIC | Barring of Incoming International Call |
| Bm | Full-rate traffic channel |
| BN | Bit Number |
| BO | All Barring of Outgoing call supplementary services |
| BOIC | Barring of Outgoing International Calls supplementary service |
| BOIC-exHC | Barring of Outgoing International Calls except those directed to the Home PLMN Country supplementary service |
| BS | Bearer Services Base Station Basic Service (group) |
| BSC | Base Station Controller |
| BSG | Basic Service Group |
| BSIC | Base Transceiver Station Identity Code |
| BSIC-NCELL | BSIC of an adjacent cell |
| BSS | Base Station System |
| BSSAP | Base Station System Application Part |
| BSSMAP | Base Station Subsystem Management Application Part |
| BSSOMAP | Base Station System Operation and Maintenance Application Part |
| BTS | Base Transceiver Station |

C

| | |
|-----|---|
| C | Conditional |
| CA | Cell Allocation |
| CAI | Common Air Interface Charge Advice Information |
| CB | Call Barring |
| CBC | Cell Broadcast Center |

| | |
|-------------|--|
| CBCH | Cell Broadcast Channel Call Broadcast Channel |
| CBMI | Cell Broadcast Message Identifier |
| CC | Country Code Circuit-switched Calls Call Control |
| CC/NDC | Country Code – Network Destination Code |
| CCBS | Completion of Calls to Busy Subscriber supplementary service |
| CCCH | Common Control Channel |
| CCF | Conditional Call Forwarding |
| CCH | Control Channel |
| CCITT (ITU) | Consultative Committee for International Telegraphy and Telephony (<i>F Comité Consultatif Internationale Téléphonique et Télégraphique</i>) Use ITU |
| CCM | Current Call Meter |
| CCP | Capability/Configuration Parameter |
| CCPE | Control Channel Protocol Entity |
| CCS7 | CCITT Signalling System No. 7 |
| Cct | Circuit |
| CDR | Call Data Record |
| CDUR | Chargeable DURation |
| CEd | Called station identifier |
| CEIR | Central Equipment Identity Register |
| CEND | END of charge point |
| CEPT | Conférence des administrations Européennes des Postes at Telecommunications |
| CF | Conversion Facility all Call Forwarding services |
| CFB | Call Forwarding on mobile subscriber Busy supplementary service |
| CFNRc | Call Forwarding on mobile subscriber Not Reachable supplementary service |
| CFNRre | Call Forwarding on mobile subscriber Not usable |
| CFNRp | Call Forwarding on mobile subscriber Not usable |
| CFNRy | Call Forwarding on No Reply supplementary service |
| CFU | Call Forwarding Unconditional supplementary service |
| CGI | Cell Group Identifier Cell Global Identification |
| CHP | CHarging Point |
| CHV | Card Holder Verification |
| C/I | Carrier-to-Interference |
| CI | Cell Identity CUG Index |
| CIP | Call In Progress |
| CIR | Channel Interference Ratio |
| CKSN | Ciphering Key Sequence Number |
| CLI | Calling Line Identity |
| CLIP | Calling Line Identification Presentation supplementary service |
| CLIR | Calling Line Identification Restriction supplementary service |
| CM | Connection Management |
| CMD | CoMmanD |
| CMM | Channel Mode Modify |
| CNG | CalliNG tone Comfort Noise Generation |
| COLI | COConnected Line Identity |
| COLP | COConnected Line identification Presentation supplementary service |
| COLR | COConnected Line identification Restriction Supplementary service |
| COM | COMplete |
| COMP | COMplete |
| CONN | CONNect |
| CONNACK | CONNect ACKnowledgment |
| CPI | Current Position Indicator |
| CQPSK | Coherent Quadrature Phase-Shift Keying |
| C/R | Command Response Command Response field bit |

| | |
|-------|---|
| CRC | Cycle Redundancy Check Cycle Redundancy Check (3 bit) |
| CRE | Call RE-establishment procedure |
| CSN | Compact Syntax Notation Check Sum Number |
| CSPDN | Circuit Switched Public Data Network |
| CT | Call Transfer supplementary service Channel Tester Channel Type |
| CTR | Common Technical Regulation |
| CU | Channel Unit |
| CUG | Closed User Group Closed User Group supplementary service |
| CW | Call Waiting Call Waiting supplementary service |

D

| | |
|----------|--|
| DAC | Digital to Analogue Converter |
| dB | DeciBel |
| DB | Dummy Burst |
| DC2 | two-slot Downlink Control |
| DC6 | six-slot Downlink Control |
| DCCCH | Dedicated Control CHannel |
| DCE | Data Circuit terminating Equipment |
| DCF | Data Communication Function |
| DCN | Data Communication Network |
| DCS1 800 | Digital Cellular System at 1 800 MHz |
| DET | DETAch |
| DISC | DISConnect |
| DKAB | Dual Keep-Alive-Burst |
| DL | Data Link Data Link (layer) |
| DLCI | Data Link Connection Identifier |
| DLD | Data Link Discriminator |
| Dm | mobile D control channel (ISDN terminology applied to mobile service) |
| DM | Disconnect Mode |
| DMR | Digital Mobile Radio |
| DNIC | Digital Network Identifier Control |
| DP | Dial/Dialed Pulse |
| DRX | Discontinuous Reception Discontinuous Reception (mechanism) |
| DSE | Data Switch Exchange |
| DSI | Digital Speech Interpolation |
| DSS1 | Digital Subscriber Signaling no. 1 |
| DTAP | Direct Transfer Application Part |
| DTE | Data Terminal Equipment |
| DTMF | Dual Tone MultiFrequency Dual Tone MultiFrequency (signaling) |
| DTX | Discontinuous Transmission Discontinuous Transmission (mechanism) |

E

| | |
|-------|--|
| EA | External Alarms Extended Address |
| EBSG | Elementary Basic Service Group |
| Ec/No | Ratio of Energy per modulating bit to the Noise spectral density |
| ECM | Error Correction Mode (facsimile) |
| ECT | Explicit Call Transfer supplementary service |
| EEL | Electronic Echo Loss |

| | |
|-------|---|
| EIA | Electronics Industries Association |
| EIR | Equipment Identity Register |
| EIRP | Effective Isotropic Radiated Power |
| EL | Echo Loss |
| EMC | ElectroMagnetic Compatibility |
| eMLPP | Enhanced Multi-Level Precedence and Pre-emption service |
| EMMI | Electrical Man Machine Interface |
| EPROM | Erasable Programmable Read Only Memory |
| ERP | Ear Reference Point |
| | Equivalent Radiated Power |
| ERR | ERRor |
| EST | European Standard Telecommunications |
| ETR | ETSI Technical Report |
| ETS | European Telecommunication Standard |
| ETSI | European Telecommunications Standards Institute |

F

| | |
|---------|---|
| FA | Full Allocation |
| | Fax Adapter |
| FA/IWF | Fax Adapter located at IWF side |
| FA/MT | Fax Adapter integrated with the MT |
| FAC | Final Assembly Code |
| FACCH | Fast-Associated Control CHannel |
| | Fast Access Control CHannel |
| FACCH/F | Fast Associated Control CHannel/Full rate |
| FACCH/H | Fast Associated Control CHannel/Half rate |
| FACCHN | Fast Access Control CHAnnel |
| FB | Frequency correction Burst |
| FCCH | Frequency Correction CHannel |
| | Frequency Control CHannel |
| FCS | Frame Check Sequence |
| FDM | Frequency Division Multiplexing |
| FDN | Fixed Dialing Number |
| FEC | Forward Error Correction |
| FER | Frame Erasure Ratio |
| | Frame Error Rate |
| FH | Frequency Hopping |
| FN | Frame Number |
| FR | Full Rate |
| FT | Fixed Terminal |
| ftn | forwarded-to number |

G

| | |
|------|--|
| GBCH | GPS Broadcast Channel |
| | GPS Broadcast Control Channel |
| GCI | GPS Capability Indicator |
| GCR | Group Call Register |
| GEM™ | GeoMobile (satellite system) |
| GEO | Geostationary Earth Orbit |
| GF | Galois Field |
| GMR | GEO-Mobile Radio interface |
| GMSC | Gateway Mobile-service Switching Center |
| GMSK | Gaussian Minimum Shift Keying (modulation) |
| GP | Global Positioning |
| GPA | GSM PLMN Area |
| GPRS | General Packet Radio Service |
| GPS | Global Positioning System |
| GREJ | Group REJect |
| GS | Gateway Station |

| | |
|----------|---|
| Gsa | Gateway Station a |
| GSA | GSM System Area |
| GSb | Gateway Station b |
| GSc | Gateway Station c |
| GS(o) | Ground Station, originating |
| GS(t) | Ground Station, terminating |
| GSC | GMR network element, gateway Station Controller GMR Security Custodian |
| GSC(t1) | GSC within terminating GS(t) |
| GSC(t2) | GSC within terminating GS(t) |
| GSC(o1) | GSC within terminating GS(o) |
| GSC(o2) | GSC within terminating GS(o) |
| GSM | Global System for Mobile communications |
| GSM MES | GSM Mobile Earth Station |
| GSM PLMN | GSM Public Land Mobile Network |
| GSS-MSC | Gateway Station Subsystem-Mobile Switching Center |
| GSTN | General Switched Telephone Network |
| GT | Global Title |
| G/T | Gain/Temperature |
| GTS | Gateway Transceiver Station |

H

| | |
|-------|---|
| HANDO | HANDOver |
| HDLC | High-level Data Link Control |
| HHT | HandHeld Terminal |
| HITS | Hughes InTernational Systems |
| HLC | High Layer Compatibility |
| HLR | Home Location Register |
| HNS | Hughes Network Systems |
| HOLD | Call HOLD supplementary service |
| HPA | High-Penetration Alerting |
| HPLMN | Home Public Land Mobile Network |
| HPU | Hand Portable Unit |
| HR | Half Rate |
| HSC | Hughes Space and Communications |
| HSN | Half-Symbol Number Hopping Sequence Number |
| HSP | Home Service Provider |
| HU | Home Units |
| Hz | Hertz |

I

| | |
|----------|---|
| I | Information frames (RLP) |
| IA | Incoming Access (closed user group SS) |
| IAM | Initial Address Message |
| IAR | Immediate Assignment Reject Immediate Assignment Request |
| IC | Interlock Code (CUG SS) |
| ICB | Incoming Call Barred (within the CUG) |
| IC(pref) | Interlock Code of the preferential CUG |
| ICC | Integrated Circuit(s) Card |
| ICM | In-Call Modification |
| ID | Identification/Density |
| IDN | Integrated Digital Network |
| IE | Signaling Information Element |
| IEC | International Electrotechnical commission |
| IEEE | Institute of Electrical and Electronics Engineers |
| IEI | Information Element Identifier |
| I-ETS | Interim European Telecommunications Standard |
| IMEI | International Mobile station Equipment Identity |

| | |
|-------|--|
| | International Mobile Equipment Identity |
| IMM | Immediate Assignment Message |
| IMSI | International Mobile Subscriber Identity |
| | International Mobile Station Identity |
| | International Mobile System Identities |
| IN | Interrogating Node |
| INCS | IntraNetwork Communication Subsystem |
| ISC | International Switching Center |
| ISDN | Integrated Services Digital Network |
| ISO | International Standards Organization |
| ISUP | ISDN User Part (of signaling system No. 7) |
| ITC | Information Transfer Capability |
| ITU | International Telecommunication Union |
| IWF | InterWorking Function |
| IWMSC | InterWorking MSC (was CCITT) |
| IWU | InterWorking Unit |

K

| | |
|----------|---|
| K | Windows size |
| K | Constraint length of the convolutional code |
| KAB | Keep-Alive Burst |
| Kbps | Kilo bits per second |
| Kc | Ciphering Key |
| Kc[M] | Message encrypted with ciphering key Kc |
| Kc[TMSI] | TMSI encrypted with ciphering key Kc |
| KEYNR | KEY Number associated with a session key |
| KHz | KiloHertz |
| Ki | Individual subscriber authentication Key |

L

| | |
|---------|---|
| L1 | Layer 1 |
| L2ML | Layer 2 Management Link |
| L2R | Layer 2 Relay |
| L2R BOP | L2R Bit Orientated Protocol |
| L2R COP | L2R Character Orientated Protocol |
| L3 | Layer 3 |
| LA | Location Area |
| LAC | Location Area Code |
| LAI | Location Area Identity |
| | Location Area Identification |
| LAN | Local Area Network |
| LAP | Link Access Procedure |
| LAPB | Link Access Protocol Balance |
| LAPD | Link Access Protocol for D channel |
| LAPDm | Link Access Protocol on the Dm channel |
| LCN | Local Communication Network |
| LE | Local Exchange |
| LFI | Length Field Indicator |
| LI | Length Indicator |
| | Line Identity |
| LLC | Low Layer Compatibility |
| Lm | traffic channel with capacity Lower than a Bm |
| LMSI | Local Mobile Station Identity |
| LMSS | Land Mobile Satellite Service |
| LND | Last Number Dialed |
| LO | Last Octet |
| LOBITS | Low Order Bits |
| | Length of the Burst in TimeSlot(s) |
| LOC | LOCation |
| LoS | Line of Sight |

| | |
|-------|-----------------------------|
| LPD | Link Protocol Discriminator |
| LPLMN | Local PLMN |
| LQI | Link Quality Indication |
| LR | Location Register |
| lsb | Least significant bit |
| LSTR | Listener Side Tone Rating |
| LTE | Local Terminal Emulator |
| LU | Location Update |
| | Local Units |
| LV | Length and Value |

M

| | |
|---------|---|
| M | Mandatory |
| | clear text Message |
| MA | Mobile Allocation |
| MACN | Mobile Allocation Channel Number |
| MAF | Mobile Additional Function |
| MAH | Mobile Access Hunting supplementary service |
| MAI | Mobile Allocation Index |
| MAIO | Mobile Allocation Index Offset |
| MAP | Mobile Application Part |
| MCC | Mobile Country Code |
| | Mobile County Code |
| MCI | Malicious Call Identification supplementary service |
| MD | Mediation Device |
| MDL | (mobile) Management (entity)-Data Link (layer) |
| ME | Maintenance Entity |
| | Mobile Equipment |
| MEF | Maintenance Entity Function |
| MES | Mobile Earth Station |
| MESa | Mobile Earth Station, country a |
| MESb | Mobile Earth Station, country b |
| MES-BSS | Mobile Earth Station-Base Station Subsystem |
| MESc | Mobile Earth Station, country c |
| MES-GSS | Mobile Earth Station-Gateway Station Subsystem |
| MES(o) | Mobile Earth Station, originating (TtT) |
| MES(t) | Mobile Earth Station, terminating (TtT) |
| MES-ME | Mobile Earth Station–Mobile Equipment |
| MES-MS | Mobile Earth Station–Mobile Station |
| MF | Multi Frame |
| MHS | Message handling System |
| MHz | MegaHertz |
| MIC | Mobile Interface Controller |
| MII | Mobile Identity Indicator |
| MM | Mobility Management layer |
| | Man Machine |
| | Mobility Management |
| MME | Mobile Management Entity |
| MMI | Man-Machine Interface |
| MNC | Mobile Network Code |
| MO | Mobile-Originated |
| MOD | MODify |
| MoU | Memorandum of Understanding |
| MPH | (mobile) Management (entity) – PHysical (layer) [primitive] |
| MPTY | MultiParTY (Multi ParTY) supplementary service |
| MRP | Mouth Reference Point |
| MS | Mobile Station |
| msb | most significant bit |
| MS-BSS | Mobile Station – Base Station System |
| MSC | Mobile Switching Center |
| MSCID | MSC/vlr Identity |

| | |
|------------|--|
| MSCM | Mobile Station Class Mark |
| MSC(o) | MSC within originating GS |
| MSC(t) | MSC within terminating GS |
| MSCU | Mobile Station Control Unit |
| msec | Millisecond |
| MSG | MeSsaGe phase of fax transmission per CCITT T.30 |
| MSISDN | Mobile Station International iSDn Number |
| MSRN | Mobile Station Roaming Number |
| MT | Mobile Terminated |
| MT (0,1,2) | Mobile Termination |
| MTGMR | Mobile Terminal for GMR |
| | Mobile Terminated (subscriber GMR) |
| MTM | Mobile-to-Mobile (call) |
| MTP | Message Transfer Part |
| | Message TransPort layer |
| MU | Mark Up |
| MUMS | Multi User Mobile Station |

N

| | |
|----------------|---|
| N(R) | Receiver sequence Number |
| N(S) | Send sequence Number |
| N(SD) | N(Send Duplicated) |
| NA | Not Available |
| N _a | size of triplet array |
| NB | Normal Burst |
| NBIN | a parameter in the hopping sequence |
| NCC | Network (PLMN) Color Code |
| NCELL | Neighboring (or current serving) CELL |
| NCH | Notification CHannel |
| NDC | National Destination Code |
| NDUB | Network Determined User Busy |
| NE | Network Element |
| NEF | Network Element Function |
| NET | Norme Europeenne de Télécommunications |
| NF | Network Function |
| NIC | Network Independent Clocking |
| NM | Network Management |
| NMC | Network Management Center |
| NMSI | National Mobile Station Identification number |
| NPI | Numbering Plan Indicator |
| NSAP | Network Service Access Point |
| NSS | Network Switching Subsystem |
| NT | Network Termination |
| | Non Transparent |
| NT3 | three-slot Normal Traffic |
| NT6 | six-slot Normal Traffic |
| NT9 | nine-slot Normal Traffic |
| NTAAB | New Type Approval Advisory Board |
| NTN | Network Terminal Number |
| NUA | Network User Access |
| NUI | Network User Identification |
| NUP | National User Part (SS7) |
| N/W | Network |

O

| | |
|-------|-------------------------------------|
| O | Optional |
| O&M | Operations & Maintenance |
| OA | Outgoing Access (CUG SS) |
| OACSU | Off-Air-Call-Set-Up |
| OCB | Outgoing Call Barred within the CUG |

| | |
|--------|---|
| OD | Optional for operators to implement for their aim |
| OLR | Overall Loudness Rating |
| OMC | Operations & Maintenance Center |
| OML | Operations and Maintenance Link |
| OR | Optimal Routing |
| OS | Operating System |
| OSI | Open System Interconnection |
| | Open Systems Information |
| OSI RM | OSI Reference Model |
| OSS | Operation(s) Support System |

P

| | |
|----------|---|
| PABX | Private Automatic Branch eXchange |
| PAD | Packet Assembly/Disassembly facility |
| PAN | Power Attenuation Notification |
| PAR | Power Attenuation Request |
| PAS | Power Attenuation Setting |
| PC | Personal Computer |
| | Physical Channel |
| PC2d | Physical Channel (2d) |
| PC6d | Physical Channel (6d) |
| PC12u | Physical Channel (12u) |
| PCH | Paging Channel |
| PCM | Pulse Code Modulation |
| PCRTN | Physical-Channel-Relative Timeslot Number |
| PD | Protocol Discriminator |
| | Public Data |
| PDN | Public Data Network |
| PDR | Preliminary Design Review |
| P/F | Poll/Final |
| | Poll and Final bit |
| PH | Packet Handler |
| | PHysical (layer) |
| PHI | Packet Handler Interface |
| PHY | PHYSical (layer) |
| PI | Presentation Indicator |
| PICS | Protocol Implementation Conformance Statement |
| PIN | Personal Identification Number |
| PLMN | Public Land Mobile Network(s) |
| PNE | Présentation des Normes Européennes |
| POI | Point Of Interconnection (with PSTN) |
| PP | Point-to-Point |
| PPE | Primitive Procedure Entity |
| Pref CUG | Preferential CUG |
| PRN | Provide Roaming Number |
| PROC | PROCeeding |
| PROG | PROGram |
| Ps | location Probability |
| PSFC | Paging Signaling Failure Counter |
| PSPDN | Packet Switched Public Data Network |
| PSTN | Public Switched Telephone Network |
| PUCT | Price per Unit Currency Table |
| PW | PassWord |

Q

| | |
|-----|-------------------------|
| QA | Q (interface) – Adapter |
| QAF | Q-Adapter Function |
| QOS | Quality Of Service |

R

| | |
|---------|---|
| R | Value or Reduction of the MS transmitted RF power relative to the maximum allowed output power of the highest power class of MS (A) |
| RA | Roaming Agreements |
| RAB | Random Access Burst |
| RACH | Random Access Channel |
| RAND | RANdOm number (used for authentication) |
| RBER | Residual Bit Error Ratio |
| RDI | Restricted Digital Information |
| REC | RECommendation |
| REJ | REJect(ion) |
| REL | RELease |
| REQ | REQuEst |
| RF | Radio Frequency |
| RFC | Radio Frequency Channel |
| RFCH | Radio Frequency Channel |
| RFN | Reduced TDMA Frame Number |
| RFU | Reserved for Future Use |
| RLP | Radio Link Protocol |
| RLR | Receiver Loudness Rating |
| RMS | Root Mean Square (value) |
| RNR | Receiver Not Ready |
| RNTABLE | TABLE of 128 integers in the hopping sequence |
| RPLMN | Registered PLMN |
| RPOA | Recognized Private operating Agency |
| RR | Radio Resource management layer |
| | Receive Ready |
| RS | Reed-Solomon |
| RSE | Radio System Entity |
| RSL | Radio Signaling Link |
| RSS | Received Signal Strength |
| RSSI | Received Signal Strength Indication |
| RSZI | Regional Subscription Zone Identity |
| RTE | Remote Terminal Emulator |
| Rx | Receiver |
| RXLEV | Receiver signal LEVel |
| RXQUAL | Receiver signal QUALity |

S

| | |
|----------|---|
| S | Supervisor (function bit) |
| Sa | Subscriber country a |
| SABM | Set Asynchronous Balance Mode |
| SACCH | Satellite Access Control CHannel |
| | Slow Associated Control CHannel |
| | Slow Access Control CHannel |
| SACCH/C4 | Slow Associated Control CHannel/Channel 4 |
| SACCH/C8 | Slow Associated Control CHannel/Channel 8 |
| SACCH/T | Slow Associated Control CHannel/Traffic channel |
| SACCH/TF | Slow Associated Control CHannel/Traffic channel Full rate |
| SACCH/TH | Slow Associated Control CHannel/Traffic channel Half rate |
| SAP | Service Access Point |
| SAPI | Service Access Point Identifier |
| Sat | Satellite |
| Sb | Subscriber country b |
| SB | Synchronization Burst |
| SBID | Spot Beam IDentity |
| Sc | Subscriber country c |
| SC | Service Center (used for SMS) |
| | Service Code |
| SCCP | Signaling Connection Control Part |

| | |
|--------|--|
| SCH | Synchronization CHannel |
| SCN | SubChannel Number |
| SCP | Service Control Point |
| SDCCH | Standalone Dedicated Control CHannel |
| SDD | System Design Document Software Design Document |
| SDL | Specification Description Language |
| SDT | SDL Development Tool |
| SDU | Service Data Unit |
| SE | Support Entity |
| SEF | Support Entity Function |
| SFH | Slow Frequency Hopping |
| SI | System Information Screening Indicator Service Interworking Supplementary Information (SIA=Supplementary Information A) |
| SID | Silence Descriptor |
| SIM | Subscriber Identity Module |
| SIRFN | System-Information-Relative Frame Number |
| SLR | Send Loudness Rating |
| SLTM | Signaling Link Test Message |
| SME | Short Message Entity |
| SMG | Special Mobile Group |
| SMS | Short Message Service |
| SMSCB | Short Message Service Cell Broadcast |
| SMS-SC | Short Message Service-Service Center |
| SMS/PP | Short Message Service/Point-to-Point |
| Smt | Short message terminal |
| SN | Subscriber Number |
| SNR | Serial Number |
| SOA | Suppress Outgoing Access (CUG SS) |
| SOR | Support of Optimal Routing |
| SP | Service Provider Signaling Point SPare |
| SPC | Signaling Point Code Suppress Preferential CUG |
| SQI | Signal Quality Indicator |
| SQT | Signal Quality Target |
| SRES | Signal RESponse (authentication) |
| SRH | SB_Reselect_Hysteresis |
| SRI | Send Routing Information |
| SS | Supplementary Service System Simulator |
| SS7 | Signaling System 7 |
| SSC | Supplementary Service Control string |
| SSN | SubSystem Number |
| SSP | Service Switching Point |
| SST | SACCH Status bit |
| STMR | Side Tone Masking Rating |
| STP | Signaling Transfer Point |
| SVN | Software Version Number |
| S/W | SoftWare |

T

| | |
|-------|---|
| T | Timer Transparent Type only |
| TA | Terminal Adapter |
| TAC | Type Approval Code |
| TACCH | Terminal-to-terminal Associated Control CHannel |

| | |
|------------------|---|
| TAF | Terminal Adaptation Function |
| TBR | Technical Basis for Regulation |
| TC | Transaction Capabilities |
| TC-TR | Technical Committee-Technical Report |
| TCH | Traffic Channel |
| TCH3 | Traffic CHannel for speech |
| TCH6 | Traffic CHannel for-4,8 kbps user data |
| TCH9 | Traffic CHannel for-9,6 kbps user data |
| TCH/F | Traffic CHannel for Full rate |
| TCH/F2,4 | Traffic CHannel for Full rate data ($\leq 2,4$ kbps) |
| TCH/F4,8 | Traffic CHannel for Full rate data (4,8 kbps) |
| TCH/F9,6 | Traffic CHannel for Full rate data (9,6 kbps) |
| TCH/FS | Traffic CHannel for Full rate Speech |
| TCH/H | Traffic CHannel for Half rate |
| TCH/HS | Traffic CHannel for Half rate Speech |
| TCH/H2,4 | Traffic CHannel for Half rate data ($\leq 2,4$ kbps) |
| TCH/H4,8 | Traffic CHannel for Half rate data (4,8 kbps) |
| TCHN | Traffic CHannel Network |
| TCI | Transceiver Control Interface |
| TCS | Traffic Control Subsystem |
| TCS(o) | TCS within originating ground station |
| TCS(t) | TCS within terminating ground station |
| TDMA | Time Division Multiple Access |
| TE | Terminal Equipment |
| Tei | Terminal endpoint identifier |
| TFA | TransFer Allowed |
| TFP | TransFer Prohibited |
| T _{HPA} | Timer (High Penetration Alerting) |
| TI | Transaction Identifier |
| TLV | Type, Length and Value |
| TMN | Telecommunications Management Network |
| TMSI | Temporary Mobile Subscriber Identity |
| TMSI o/n | Temporary Mobile Subscriber Identity old/new |
| TN | Timeslot Number |
| TON | Type Of Number |
| triplet | Set of three numbers: R, S, and Kc |
| TRX | Transceiver |
| TS | TimeSlot |
| | Technical Specification |
| | TeleService |
| TSC | Training Sequence Code |
| TSDI | Transceiver Speech & Data Interface |
| TSP | Target Service Provider |
| TTCH | Terminal-to-Terminal Channel |
| TTCN | Tree and Tabular Combined Notation |
| TTFX | Time To First Fix |
| TtG | Terminal-to-Gateway |
| TTID | Temporary Terminal Identification |
| TtT | Terminal-to-Terminal |
| TUP | Telephone User Part (SS7) |
| TV | Type and Value |
| Tx | Transmit |
| | Transmitter |
| TXPWR | Transmit PoWeR |
| | TX power level in the MS_TXPWR_REQUEST and MS_TXPWR_CONF parameters |

U

| | |
|------|----------------------------------|
| U | Unnumbered (function bit) |
| UA | Unnumbered Acknowledgment |
| UDI | Unrestricted Digital Information |
| UDUB | User Determined User Busy |

| | |
|-------|--|
| UI | Unnumbered Information (frame) |
| UIC | Union Internationale des Chemins de Fer |
| UPCMI | Uniform PCM Interface (13 bit) |
| UPD | UP to Date |
| USSD | Unstructured SS Data |
| UT | User Terminal |
| UTC | Universal Time Code |
| | Universal Time Co-ordinate(s) |
| | UT terminated Call |
| UUS | User-to-User Signaling supplementary service |
| UW | Unique Word |

V

| | |
|----------|--|
| V | Value only |
| V(A) | Acknowledge state Variable |
| V(R) | Receive state Variable |
| V(S) | Send state Variable |
| V(SD) | SenD state Variable |
| VAD | Voice Activity Detection |
| VAP | Videotex Access Point |
| VBS | Voice Broadcast Service |
| VGCS | Voice Group Call Service |
| VLR | Visitor Location Register |
| VLR o/n | Visitor Location Register old/new |
| VMSC | Visited MSC |
| | Visited Message Switching Center |
| VPLMN | Visited PLMN |
| | Visited Public Land Mobile Network |
| VSC | Videotex Service Center |
| VSP | Visiting Service Provider |
| VT | Vehicular Terminal |
| VTX host | The components dedicated to Videotex service |

W

| | |
|-----|-----------------------------------|
| WS | Work Station |
| WPA | Wrong Password Attempts (counter) |

X

| | |
|-----|---------------------|
| XID | EXchange IDentifier |
|-----|---------------------|

Z

| | |
|----|-----------|
| ZC | Zone Code |
|----|-----------|

History

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