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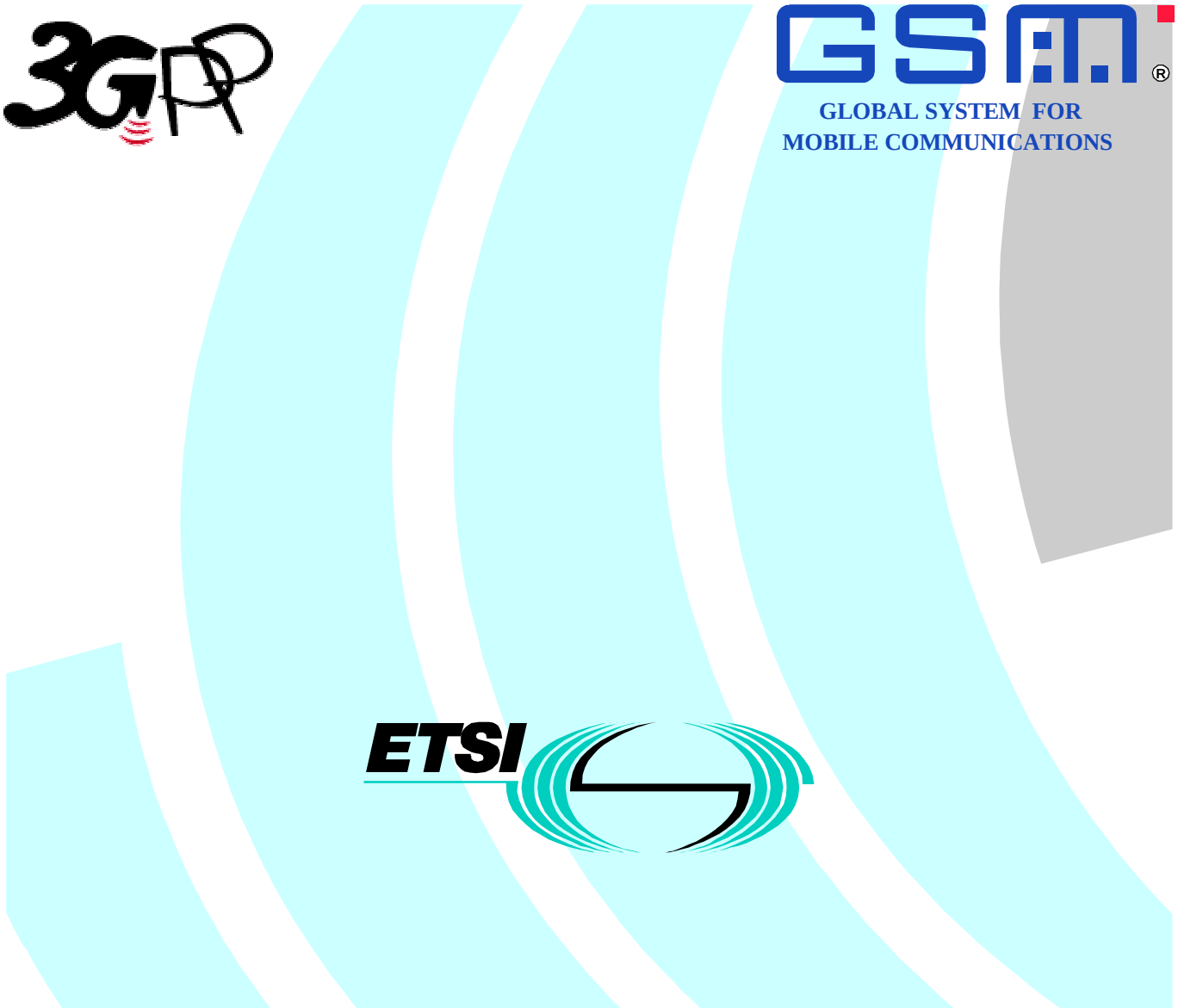
Technical Specification

Digital cellular telecommunications system (Phase 2+);
GSM Release 1999 Specifications
(3GPP TS 01.01 version 8.1.0 Release 1999)



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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
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Foreword

This Technical Specification (TS) has been produced by the 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.

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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

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

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document identifies the GSM system specifications for GSM Release 1999.

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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] GSM 01.04: "Abbreviations and acronyms".

3 Abbreviations

For the purposes of the present document, the terms and definitions given in GSM 01.04 apply.

4 General

GSM Release 1999 consists of GSM-only specifications and the GSM Core Network specifications developed for both GSM Release 1999 and Release 1999 of the 3rd Generation mobile system.

GSM Release 1999 also includes many enhanced features developed within the 3rd Generation Partnership Project.

The present document identifies the GSM system set of specifications required to implement GSM Release 1999.

4.1 Specification and report numbering

Specifications for GSM Release-1999-only can be identified by the "**ab.de"** numbering scheme.

Specifications for both GSM Release 1999 and Release 1999 of the 3rd Generation mobile system are identified by the "**ab.cde"** numbering scheme.

NOTE: A "**c**" digit equal to zero indicates a GSM heritage of a specification.

4.2 Specification series

In general the Specification series are identified as follows:

4.2.1 01 and 21-series

Requirements specifications

These specifications are often transient and contain requirements towards other specifications. They may become obsolete when technical solutions have been fully specified; they could then, e.g., be replaced by reports describing the performance of the system, they could be deleted without replacement or be kept for historical reasons but turned into

background material. When found necessary and appropriate, the transient or permanent nature of a requirement specification may be expressed in its scope.

4.2.2 02 and 22-series

Service aspects

Specifications in this series specify services, service features, building blocks or platforms for services (a service feature or service building block may provide certain generic functionality for the composition of a service, including the control by the user; a platform may comprise one or more network elements, e.g. UIM, mobile terminal, auxiliary system to the core network etc.); stage 1 specifications that are felt appropriate belong into this series; reports defining services which can be realized by generic building blocks etc. also belong into this series.

4.2.3 03 and 23-series

Technical realization

This series mainly contains stage 2 specifications (or specifications of a similar nature describing interworking over several interfaces, the behaviour in non-exceptional cases, etc.).

4.2.4 04 and 24-series

Signalling protocols (UE-CN)

This series contains the detailed and bit exact stage 3 specifications of protocols between MS/UE and the core network.

4.2.5 05 series

GSM Radio aspects

4.2.6 06 series

Codecs

This series defines speech codecs and other codecs for GSM.

4.2.7 07 and 27-series

Data

This series defines the functions necessary to support data applications at the user equipment side.

4.2.8 08 and 28-series

Signalling protocols (RSS - network part)

This series contains the detailed and bit exact stage 3 specifications of protocols relevant for interfaces internal to the Radio Access Network and between this and the Core Network.

4.2.9 09 and 29-series

Signalling protocols (NSS)

This series contains the detailed and bit exact stage 3 specifications of protocols within the Core Network.

4.2.10 11 series

SIM and conformance test

This series specifies the Subscriber Identity Module (SIM) and the interfaces between SIM and other entities. and the conformance test specifications for GSM.

4.2.11 12 series

Operation and maintenance

This series defines the application of TMN for GSM and other functions for operation, administration and maintenance of a GSM network.

4.2.12 13 series

Access requirements

This series contains Access requirement specifications for GSM.

5 Content of GSM Release 1999

5.1 GSM only Work Areas

WI Title	Prime resp STC	Rel
BSS co-ordination of Radio Resource allocation for class A GPRS services - GSM Radio Access	SMG02	99
Enhanced Data rates for GSM Evolution (EDGE) - BSS	SMG02	99
General Packet Radio Service Phase 2 (GPRS) - radio part	SMG02	99
GSM on 400 MHz Frequency Band	SMG02	99
BSS co-ordination of Core Network Resource allocation for class A GPRS services -GSM-UMTS Core Network	SMG12	99

5.2 Common GSM/3G Work Areas

5.2.1 Work areas related to the services

WI Title	Prime responsible STC	Rel
Advanced Addressing	SMG01	99
Automatic Establishment of Roaming Relations	SMG01	99
CAMEL Phase 3	SMG01	99
Follow Me	SMG01	99
GSM Mobile Number Portability EURO MNP	SMG01	98
Service Continuity and Provision of VHE via GSM/UMTS	SMG01	99
UMTS Charging & Billing	SMG01	99
UMTS Numbering, Addressing and Identities	SMG01	99
Virtual Home Environment	SMG01	99
Unstructured Supplementary Service Data (USSD) enhancements	SMG01 and TSG-N	99
MS and Network-Resident Execution Environments (MS/N-RExE)	SMG01	99

5.2.2 Work areas related to the system architecture

WI Title	Prime responsible STC	Rel
Enhanced QoS Support in GPRS	S2	99
IP-in-IP tunneling in GPRS backbone for UMTS, phase 1	S2	99
UMTS Open Service Architecture	S2	99
Architecture of the GSM-UMTS Platform	S2/SMG12	99
Architecture overview of the GSM-UMTS System	S2/SMG12	99
End to End UMTS QoS Management	S2/SMG12	99
Multimedia in UMTS	S2/SMG12	99
Provision of text telephony service in GSM and UMTS	S2/SMG12	99
Study on Combined GSM and Mobile IP Mobility Handling in UMTS IP CN	S2/SMG12	99
Support for real time services in the Packet domain for GSM/GPRS/UMTS R99	S2/SMG12	99
UMTS Core based on ATM Transport	S2/SMG12	99
Location Services (LCS) for R99	S2	99
Support of non-realtime Multimedia Messaging Service	SMG04 / S2	99

5.2.3 Work areas related to the security

WI Title	Prime responsible STC	Rel
Fraud Information Gathering System applied to GPRS	SMG10	99
Immediate Service Termination (IST) : CAMEL free solution	SMG10	99
SS7 Security	SMG10	99

5.2.4 Work areas related to the codec

WI Title	Prime responsible STC	Rel
3G audio-visual terminal characteristics	S4	99
Codec for Low Bitrate Multimedia Telephony Service	S4	99
Mandatory Speech Codec for Narrowband Telephony Service	S4	99
Codec(s) for Wideband Telephony Services	S4	99
AMR – Wideband	S4	99
AMR - Adaptive Multi-Rate codec (GSM 10.70)	S4?	98
QoS for Speech and Multimedia Codec	S4	99
Tandem free operation in 3G systems and between 2G and 3G systems	S4	98

5.2.5 Work areas related to the network management

WI Title	Prime responsible STC	Rel
3G charging management	S5	99
3G system configuration management	S5	99
3G system fault management	S5	99
3G system performance management	S5	99
Charging and Billing for GPRS – Advice of Charge	SMG06	99
Charging and Billing for GPRS – Hot Billing	SMG06	99
Charging and Billing for GPRS – Pre-Paid	SMG06	99

5.2.6 Work areas related to the core network specification

Concerning N1 (layer MM/CM/SM) (SMG3A at SMG)

WI Title	Prime responsible STC	Rel
Pre-paging	N1	99
Turbo-Charger: Feasibility Study	N1	99
Unstructured Supplementary Service Data (USSD) enhancements	S1 / SMG01 and TSG-N	99
General Packet Radio Service Phase 2 (GPRS) - network part	SMG03	99
Tandem Free Operation of speech codecs in Mobile-to-Mobile Calls (MMCs) in band (including AMR)	SMG02 and SMG 11	98
Tandem Free Operation of speech codecs in Mobile-to-Mobile Calls (MMCs) : out-band	SMG03	99
Access to ISPs and Intranets in GPRS Phase 2 – Separation of GPRS Bearer Establishment and ISP Service Environment Setup	SMG03 / N	98 or 99

Concerning N2 (Camel) (SMG3C at SMG)

None

Concerning N3 (Interworking with external networks) (SMG3D at SMG)

WI Title	Prime responsible STC	Rel
Enhanced Data rates for GSM Evolution (EDGE) - NSS	N3 / SMG03	99

5.2.7 Work areas related to the testing of the MS

WI Title	Prime responsible STC	Rel
MS Protocol/RF/EMC conformance specification	SMG7	99

5.2.8 Work areas related to the data

WI Title	Prime responsible STC	Rel
SMS Advanced Cell Broadcast	T2	99
SMS Cell Broadcast	T2	99
Messaging (Multimedia Messaging Service); Stage 2/3	T2	99
Messaging (Short Message Service (SMS); Stage 2/3	T2	99
Terminal interfaces (Alternatives to AT commands)	T2	99
Terminal interfaces (AT commands for 3GPP)	T2	99
Access to ISPs and Intranets in GPRS Phase 2 – Wireless/Remote Access to LANs	SMG03	99
Connecting an octet stream to a port on an Internet host	SMG03	98
GPRS Mobile IP Interworking	SMG03	99
Mobile Station Execution Environment (MExE)	SMG03	98 - 99
Modem and ISDN interworking for GPRS	SMG03	98
Study on provision of facsimile services in GSM and UMTS	SMG03	99
Unstructured octet stream GPRS PDP Type	SMG03	98
Access to ISPs and Intranets in GPRS Phase 2 – Separation of GPRS Bearer Establishment and ISP Service Environment Setup	SMG03 / N	98 or 99
Support of non-realtime Multimedia Messaging Service	SMG03 / S2	99
GPRS - Point-To-Multipoint Services	SMG03	99

5.2.9 Work areas related to the User Card

WI Title	Prime responsible STC	Rel
Specification of administrative commands and functions for IC cards	T	99
WAP WAE User Agent / SIM toolkit interworking	T	99
GSM-API for SIM-Toolkit	SMG09	98
Specification of a bearer independent protocol for SAT applications to exchange data over the GSM network	SMG09	99
SIM toolkit test specification	SMG09	99
Generic Logical and Physical specification for IC card and terminal interface	SMG09	99
Specification of administrative commands and functions for IC cards	SMG09	99

5.2.10 Work areas related to the access network

Concerning the testing of the BSS (RAN4 at 3GPP, SMG2C at SMG)

None

Concerning all the other groups

None

5.2.11 Work areas handled by other groups

WI Title	Prime responsible STC	Rel
Location Services (LCS)	T1P1	98
EDGE Compact	SMG02	99
support for EGPRS in ANSI-136 networks	SMG02	99

5.3 Release 99 work areas impacting other systems

None

6 Specifications and Reports

6.1 GSM Only

Number	Title
01.01	GSM Release 1999 Specifications
01.02	General Description of a GSM Public Land Mobile Network (PLMN)
01.04	Abbreviations and Acronyms
01.31	Fraud Information Gathering System (FIGS); Service requirements; Stage 0
01.33	Lawful Interception requirements for GSM
01.48	ISDN-based DECT/GSM interworking; Feasibility Study
01.56	GSM Cordless Telephony System (CTS) (Phase 1); CTS Authentication and Key Generation Algorithms Requirements
01.60	GPRS requirements
01.61	General Packet Radio Service (GPRS) ; GPRS ciphering algorithm requirements
02.06	Types of Mobile Stations (MS)
02.07	Mobile Station (MS) Features
02.09	Security aspects
02.17	Subscriber Identity Modules, Functional Characteristics
02.19	Subscriber Identity Module Application Programming Interface (SIM API); Service description; Stage 1
02.31	Fraud Information Gathering System (FIGS) Service description; Stage 1
02.32	Immediate Service Termination (IST); Service description; Stage 1
02.33	Lawful interception; Stage 1
02.40	Procedures for Call Progress Indications
02.48	Security mechanisms for the SIM Application Toolkit; Stage 1
02.53	Tandem Free Operation (TFO); Service description; Stage 1
02.56	GSM Cordless Telephony System (CTS), Phase 1; Service description; Stage 1

02.63	Packet Data on Signalling channels Service (PDS); Stage 1
02.68	Voice Group Call Service (VGCS); Stage 1
02.69	Voice Broadcast Service (VBS); Stage 1
02.76	Noise Suppression for the AMR
02.94	Follow Me Service description ; Stage 1
02.95	Digital cellular telecommunications system (Phase 2+); Support of Private Numbering Plan (SPNP); Service description, Stage 1
03.01	Network Functions
03.04	Signalling requirements relating to routeing of calls to mobile subscribers
03.05	Technical performance objectives
03.10	GSM Public Land Mobile Network (PLMN) Connection Types
03.13	Discontinuous Reception (DRX) in the GSM System
03.19	GSM API for SIM toolkit stage 2
03.20	Security-related Network Functions
03.22	Functions related to Mobile Station (MS) in idle mode
03.26	Multiband operation of GSM/DCS 1800 by a single operator
03.30	Radio Network Planning Aspects
03.31	Fraud Information Gathering System (FIGS); Service description; Stage 2
03.33	Lawful Interception; Stage 2
03.35	Immediate Service Termination (IST); Stage 2
03.43	Support of Videotext
03.44	Support of Teletex in a GSM Public Land Mobile Network (PLMN)
03.45	Technical realization of facsimile Group 3 service - transparent
03.46	Technical realization of facsimile group 3 service - non-transparent
03.47	Example Protocol Stacks for Interconnecting Service Centre(s) (SC) and Mobile Services Switching Centre(s) (MSC)
03.48	Security Mechanisms for SIM Toolkit Application; Stage 2
03.49	Example Protocol Stacks for Interconnecting Cell Broadcast Centre (CBC) and Base Station Controller (BSC)
03.50	Transmission Planning Aspects of the Speech Service in the GSM Public Land Mobile Network (PLMN) System
03.52	Lower layers of the GSM Cordless Telephony System (CTS) radio interface; Stage 2
03.53	Tandem Free Operation (TFO); Service description; Stage 2
03.55	Dual Transfer Mode (DTM); Stage 2
03.56	GSM Cordless Telephony System (CTS), Phase 1; CTS Architecture Description; Stage 2
03.58	Characterization, test methods and quality assessment for handsfree Mobile Stations (MSs)
03.63	Packet Data on Signalling channels service (PDS) Service description; Stage 2

03.64	Overall description of the GPRS radio interface; Stage 2
03.68	Voice Group Call Service (VGCS); Stage 2
03.69	Voice Broadcast service (VBS); Stage 2
03.70	Routeing of calls to/from Public Data Networks (PDN)
03.71	Location Services (LCS); Stage 2
03.79	Support of Optimal Routeing phase 1; Stage 2
04.01	Mobile Station - Base Station System (MS - BSS) Interface General Aspects and Principles
04.03	Mobile Station - Base Station System (MS - BSS) Interface Channel Structures and Access Capabilities
04.04	Layer 1 - General Requirements
04.05	Data Link (DL) Layer General Aspects
04.06	Mobile Station - Base Stations System (MS - BSS) Interface Data Link (DL) Layer Specification
04.08	Mobile radio interface layer 3 specification
04.13	Performance Requirements on Mobile Radio Interface
04.14	Individual equipment type requirements and interworking; Special conformance testing functions
04.18	Mobile radio interface layer 3 specification; Radio Resource Control Protocol
04.21	Rate Adaption on the Mobile Station - Base Station System (MS-BSS) Interface
04.30	Location Services (LCS); Mobile radio interface layer 3 supplementary services specification; Mobile Originating Location Request (MO-LR).
04.31	Location Services (LCS); Mobile Station (MS) - Serving Mobile Location Centre (SMLC); Radio Resource LCS Protocol (RRLP)
04.35	Location Services (LCS); Broadcast Network Assistance for Enhanced Observed Time Difference (E-OTD) and Global Positioning System (GPS) Positioning Methods
04.56	GSM Cordless Telephony System (CTS), (Phase 1) CTS Radio Interface Layer 3 Specification
04.57	GSM Cordless Telephony System (CTS), (Phase 1) CTS supervising system Layer 3 Specification
04.60	General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol
04.63	Packet Data on Signalling channels Service (PDS) Service Description, Stage 3
04.64	Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) Layer Specification
04.65	Mobile Station (MS) - Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SNDCP)
04.68	Group Call Control (GCC) protocol
04.69	Broadcast Call Control (BCC) protocol
04.71	Location Services (LCS); Mobile radio interface layer 3 Location Services (LCS) specification
05.01	Physical Layer on the Radio Path (General Description)
05.02	Multiplexing and Multiple Access on the Radio Path
05.03	Channel Coding

05.04	Modulation
05.05	Radio Transmission and Reception
05.08	Radio Subsystem Link Control
05.09	Link Adaptation
05.10	Radio Subsystem Synchronization
05.14	Release independent frequency bands; Implementation guidelines
05.22	Radio link management in hierarchical networks
05.50	Background for RF Requirements
05.56	CTS-FP Radio Sub-system
06.01	Full Rate Speech Processing Functions
06.02	Half Rate Speech Processing Functions
06.06	Half Rate Speech; ANSI-C Code for GSM Half Rate Speech Codec
06.07	Half Rate Speech; Test Sequence for GSM Half Rate Speech Codec
06.08	Half Rate Speech; Performance Characterization of the GSM half rate speech codec
06.10	Full Rate Speech Transcoding
06.11	Substitution and Muting of Lost Frames for Full Rate Speech Channels
06.12	Comfort Noise Aspects for Full Rate Speech Traffic Channels
06.20	Half Rate Speech Transcoding
06.21	Half rate speech; Substitution and muting of lost frames for half rate speech traffic channels
06.22	Comfort Noise Aspects for Half Rate Speech Traffic Channels
06.31	Discontinuous Transmission (DTX) for Full Rate Speech Traffic Channels
06.32	Voice Activity Detection (VAD)
06.41	Discontinuous Transmission (DTX) for Half Rate Speech Traffic Channels
06.42	Voice Activity Detection (VAD) for Half Rate Speech Traffic Channels
06.51	Enhanced full rate speech processing functions: General description
06.53	ANSI-C code for the enhanced full rate speech codec
06.54	Test sequences for the GSM Enhanced Full Rate (EFR)
06.55	Performance characterization of the GSM EFR Speech Codec
06.60	Enhanced full rate speech transcoding
06.61	Substitution and muting of lost frames for enhanced full rate speech traffic channels
06.62	Comfort noise aspects for Enhanced Full Rate (EFR) speech traffic channels
06.76	Adaptive Multi-Rate (AMR) speech codec; Study phase report
06.77	Minimum Performance Requirements for Noise Suppresser Application to the AMR Speech Encoder
06.78	Results of the AMR noise suppression selection phase

06.81	Discontinuous Transmission (DTX) for enhanced full rate speech traffic channels
06.82	Voice Activity Detection (VAD) for enhanced full rate speech traffic channels
06.85	Subjective tests on the interoperability of the HR/FR/EFR speech codecs; single, tandem and tandem free operation
07.07	AT Command set for GSM Mobile Equipment (ME)
07.08	GSM Application Programming Interface
08.01	General Aspects on the BSS-MSC Interface
08.02	Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface - Interface Principles
08.04	Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface Layer 1 Specification
08.06	Signalling Transport Mechanism Specification for the Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface
08.08	Mobile Switching Centre - Base Station system (MSC-BSS) Interface Layer 3 Specification
08.14	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) interface; Gb Interface Layer 1
08.16	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) Interface; Network Service
08.18	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN); BSS GPRS Protocol
08.20	Rate Adaptation on the BSS-MSC Interface
08.31	Location Services (LCS); Serving Mobile Location Centre (SMLC) - Serving Mobile Location Centre (SMLC); SMLC Peer Protocol (SMLCPP) Location Centre (SMLC); Radio Resource LCS Protocol (RRLP)
08.51	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface General Aspects
08.52	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface - Interface Principles
08.54	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface Layer 1 Structure of Physical Circuits
08.56	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface Layer 2 Specification
08.58	Base Station Controller - Base Transceiver Station (BCS-BTS) Interface Layer 3 Specification
08.59	BSC-BTS O&M Signalling Transport
08.60	Inband Control of Remote Transcoders and Rate Adaptors for EFR/FR
08.61	Inband Control of Remote Transcoder and Rate Adaptors;(Half Rate)
08.62	Inband Tandem Free Operation (TFRO) of speech codecs, Service description, stage 3
08.71	Location services (LCS) SMLC-BSS interface L 3
09.01	General Network Interworking Scenarios
09.09	General Network Interworking scenarios
09.03	Signalling Requirements on Interworking between the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN) and the Public Land Mobile Network (PLMN)
09.04	Interworking between the Public Land Mobile Network and the CSPDN

09.05 Interworking between PLMN and PAD access

09.06 Interworking between PLMN and a Packet Switched Public Data Network/Integrated Services digital Network (PSPDN/ISDN) for Support of Packet Switched Data Transmission Services

09.08 Application of the Base Station System Application Part (BSSAP) on the E-Interface

09.09 Detailed Signalling Interworking within the PLMN with the PSTN/ISDN

09.12 Application of ISUP Version 2 for the ISDN-PLMN (GSM) signalling

09.14 Application of ISUP Version 3 for the ISDN-PLMN Signalling

09.31 Location Services (LCS); Base Station System Application Part LCS Extension (BSSAP-LE)

09.90 Interworking between Phase 1 Infrastructure and Phase 2 Mobile Stations (MS)

09.91 Interworking Aspects of the SIM/ME Interface Between Phase 1 and Phase 2

11.10-1 Mobile station (MS) conformance specification; Part1: Conformance specification

11.10-2 Mobile Station (MS) Conformance Specification, Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification

11.10-3 Mobile Station (MS) Conformance Specification; Part 3 : Layer3 (L3) Abstract Test Suite (ATS)

11.10-4 Mobile Station (MS) Conformance Specification; Part 4: SIM Application Toolkit conformance Specification

Note: The 11.10- series specifications do not contain tests for Release 1999. Such tests will be contained in the Release 4 specifications (51.010- series).

11.11 Specification of the Subscriber Identity Module - Mobile Equipment (SIM-ME) Interface

11.14 Phase 2+ SIM Application Tool kit

11.17 SIM test specification

11.19 CTS SIM Fixed Part

11.21 GSM Radio Aspects Base Station System Equipment Specification

11.23 GSM Signalling Aspects Base Station System equipment Specification

11.24 GSM transcoding and rate adaptation: Base station

11.26 GSM Repeater Equipment Specification

11.30 Mobile Services Switching Centre

11.31 Home Location Register specification

11.32 Visitor Location Register specification

12.00 Objectives and structure of GSM Public Land Mobile Network (PLMN) management

12.01 Common Aspects of Public Land Mobile Network (PLMN) Management

12.02 Subscriber, Mobile Equipment (ME) and Services Data Administration

12.03 Security Management

12.04 Performance Management and Measurements for a GSM Public Land Mobile Network (PLMN)

12.06 Network Configuration Management and Administration

12.08 Subscriber and Equipment trace

12.11	Fault management of the Base Station System (BSS)
12.71	Location Serices (LCS); Location services management
13.01	Attachment requirements for Global System for Mobile communications (GSM) mobile stations; Access
13.01-1	Attachment requirements for Global System for Mobile communications (GSM) mobile stations; Access
13.01-2	Attachment requirements for mobile stations in the DCS 1800 band and additional GSM 900 band; Access
13.02	Attachment requirements for mobile stations in the DCS 1800 band and additional GSM 900 band; Access
13.11	Terminal essential requirements (RTTE)
13.34	Attachment requirements for Global System for Mobile communications (GSM); High Speed Circuit Switched Data (HSCSD) Multislot Mobile Stations; Access
13.55	Attachment requirements for Cordless Telephony System Fixed Part (CTS-FP); Access
13.56	Cordless Telephony System Mobile Stations (CTS-MS); Access
13.60	Attachment requirements for Global System for Mobile communications (GSM); General Packet Radio Service (GPRS); Mobile stations; Access
13.67	Attachment requirements for Global System for Mobile communications (GSM); Railways Band (R-GSM); Mobile Stations; Access
13.68	Attachment requirements for Global System for Mobile communications (GSM); Advanced Speech Call Items (GSM-ASCI) Mobile Stations; Access
13.21	BSS Radio aspects requirements (RTTE)

6.2 Common GSM and UMTS

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21.978	Feasibility Technical Report – CAMEL Control of VoIP Services
22.001	Principles of CircuitTelecommunication Services Supported by a Public Land Mobile Network (PLMN)
22.002	Bearer Services Supported by a GSM PLMN
22.003	Circuit Teleservices supported by a PLMN
22.004	General on Supplementary Services
22.011	Service accessibility
22.016	International Mobile Equipment Identities (IMEI)
22.022	Personalisation of Mobile Equipment (ME); Mobile functionality specification
22.024	Description of Charge Advice Information (CAI)
22.030	Man-Machine Interface (MMI) of the Mobile Station (MS)
22.034	High Speed Circuit Switched Data (HSCSD); Stage; Stage 1
22.038	SIM application toolkit (SAT); Stage 1
22.041	Operator Determined Call Barring

22.042	Network Identity and Time Zone (NITZ), stage 1
22.043	Support of Localized Service Area (SoLSA); Stage 1
22.057	Mobile Station Application Execution Environment (MExE); Stage 1
22.060	General Packet Radio Service (GPRS); Stage 1
22.066	Support of Mobile Number Portability (MNP); Stage 1
22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1
22.071	Location Services (LCS); Stage 1 (T1P1)
22.072	Call Deflection (CD); Stage 1
22.078	CAMEL phase 3; Stage 1
22.079	Support of Optimal routeing; Stage 1
22.081	Line Identification Supplementary Services; Stage 1
22.082	Call Forwarding (CF) Supplementary Services; Stage 1
22.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Services; Stage 1
22.084	MultiParty (MPTY) Supplementary Service; Stage 1
22.085	Closed User Group (CUG) Supplementary Services; Stage 1
22.086	Advice of Charge (AoC) Supplementary Services; Stage 1
22.087	User-to-user signalling (UUS); Stage 1
22.088	Call Barring (CB) Supplementary Services; Stage 1
22.090	Unstructured Supplementary Service Data (USSD); Stage 1
22.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 1
22.093	Call Completion to Busy Subscriber (CCBS); Stage 1
22.096	Calling Name Presentation (CNAP); Stage 1 (T1P1)
22.097	Multiple Subscriber Profile (MSP); Stage 1
22.115	Service Aspects Charging and billing
22.121	Provision of Services in UMTS - The Virtual Home Environment
22.129	Handover Requirements between UMTS and GSM or other Radio Systems
22.140	Service aspects; Stage 1; Multimedia Messaging Service
22.945	Study of provision of fax service in GSM and UMTS
23.002	Network Architecture
23.003	Numbering, Addressing and Identification
23.007	Restoration procedures
23.008	organization of subscriber data
23.009	Handover procedures
23.011	Technical Realization of Supplementary Services - General Aspects
23.012	Location management procedures

23.014	Support of Dual Tone Multi Frequency (DTMF) signalling
23.015	Technical realization of Operator Determined Barring (ODB)
23.016	Subscriber data management; Stage 2
23.018	Basic Call Handling - Technical realization
23.032	Universal Geographical Area Description (GAD)
23.034	High Speed Circuit Switched Data (HSCSD); Stage 2
23.038	Alphabets & Language
23.039	Interface Protocols for the Connection of Short Message Service Centres (SMSCs) to Short Message Entities (SMEs)
23.040	Technical realization of SMS Point to Point
23.041	Technical Realization of Short Message Service Cell Broadcast (SMSCB)
23.042	Compression algorithm for SMS
23.046	Technical realization of facsimile Group 3 service- non-transparent
23.054	Shared Interworking Functions; Stage 2
23.057	Mobile Station Application Execution Environment (MExE)
23.060	General Packet Radio Service (GPRS) Service description; Stage 2
23.066	Support of GSM Mobile Number Portability (MNP) stage 2
23.067	Enhanced Multi-Level Precedence and Pre-emption Service (EMLPP); Stage 2
23.072	Call Deflection Supplementary Service; Stage 2
23.073	Support of localized Service Area (SoLSA); Stage 2
23.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2
23.079	Support of Optical Routeing - Phase 1; Stage 2
23.081	Line Identification Supplementary Services; Stage 2
23.082	Call Forwarding (CF) Supplementary Services; Stage 2
23.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service; Stage 2
23.084	MultiParty (MPTY) Supplementary Service; Stage 2
23.085	Closed User Group (CUG) Supplementary Service; Stage 2
23.086	Advice of Charge (AoC) Supplementary Service; Stage 2
23.087	User-to-User Signalling (UUS); Stage 2
23.088	Call Barring (CB) Supplementary Service; Stage 2
23.090	Unstructured Supplementary Service Data (USSD); Stage 2
23.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 2
23.093	Call Completion to Busy Subscriber (CCBS); Stage 2
23.094	Follow Me; Stage 2
23.096	Name Identification Supplementary Service; Stage 2

23.097	Multiple Subscriber Profile (MSP); Stage 2
23.108	Mobile Radio Interface Layer 3 specification Core Network Protocols; Stage 2
23.110	UMTS Access Stratum Services and Functions
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23.119	Gateway Location Register (GLR); Stage2
23.121	Architecture Requirements for release 99
23.140	Multimedia Messaging Service (MMS)
23.908	Technical report on Pre-Paging
23.909	Technical report on the Gateway Location Register
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23.912	Technical report on Super-Charger
23.923	Combined GSM and Mobile IP mobility handling in UMTS IP CN
23.925	UMTS Core network based ATM transport
24.002	GSM-UMTS Public Land Mobile Network (PLMN) Access Reference Configuration
24.007	Mobile Radio Interface Signalling Layer 3 - General Aspects
24.008	Mobile Radio Interface Layer 3 specification; Core Network Protocols-Stage 3
24.010	Mobile Radio Interface Layer 3 - Supplementary Services Specification - General Aspects
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24.012	Short Message Service Cell Broadcast (SMSCB) Support on the Mobile Radio Interface?
24.022	Radio Link Protocol (RLP) for Data and Telematic Services on the (MS-BSS) Interface and the Base Station System - Mobile-services Switching Centre (BSS-MSC) Interface?
24.067	Enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 3
24.072	Call Deflection Supplementary Service; Stage 3
24.080	Mobile radio Layer 3 Supplementary Service specification - Formats and coding
24.081	Line Identification Supplementary Service; Stage 3
24.082	Call Forwarding Supplementary Service; Stage 3
24.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service; Stage 3
24.084	MultiParty (MPTY) Supplementary Service; Stage 3
24.085	Closed User Group (CUG) Supplementary Service; Stage 3
24.086	Advice of Charge (AoC) Supplementary Service; Stage 3
24.087	User-to-User Signalling (UUS); Stage 3
24.088	Call Barring (CB) Supplementary Service; Stage 3
24.090	Unstructured Supplementary Service Data (USSD); Stage 3
24.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 3
24.093	Call Completion to Busy Subscriber (CCBS); Stage 3

24.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 3
24.093	Call Completion to Busy Subscriber (CCBS); Stage 3
24.096	Name Identification Supplementary Service; Stage 3
27.001	General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)
27.002	Terminal Adaptation Functions (TAF) for services using Asynchronous bearer capabilities
27.003	Terminal Adaptation Functions (TAF) for services using Synchronous bearer capabilities
27.005	Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)
27.007	AT command set for 3G User Equipment (UE)
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27.103	Wide Area Network Synchronization
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29.060	GPRS Tunnelling protocol (GPT) across the Gn and Gp interface
29.061	General Packet Radio Service (GPRS); Interworking between the Public Land Mobile Network (PLMN) supporting GPRS and Packet
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Annex A (informative): Document change history

Status of GSM 01.01		
Date	**Version**	**Information about changes**
August 1999	version 0.0.0	1st draft created by MCC
August 1999	version 0.0.1	Comment from SMG6/S5 and N1 included. New LCS specs
September 1999	version 0.0.2	Transfer of 04.12 to 24.012 included, 22.121, 22.115, 22.129 included (SA1 comment)
September 1999	version 0.0.3	Joint SMG11/S4 Meeting decisions on AMR and TFO
September 1999	version 0.1.0	Joint SMG11/S4, S2 and WOME comments included
September 1999	version 0.2.0	03.41 transferred T2/SMG4
October 1999	version 0.3.0	Editorial changes
October 1999	version 0.4.0	Updated to align with 21.101
November	version 1.0.0	Updated to align with 21.101. For information to SMG#30
November	version 1.1.0	Updated to align with 21.101.
June 00	version 2.0.0	Updated and checked by SMG12 chairman and MCC. Approved by SMG#32
June 00	version 8.0.0	Cleaned up.

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
2000-12	SA#10	SP-000526	001		Corrections to table of specs which comprise GSM Release 1999	8.0.0	8.1.0

History

Document history		
V8.0.0	October 2000	Publication
V8.1.0	December 2000	Publication