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Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Technical Specifications and Technical Reports
for a GERAN-based 3GPP system
(3GPP TS 41.101 version 5.4.0 Release 5)**



Reference

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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.

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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;
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- 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 Release 5. The specifications and reports of 3GPP Release 5 have a major version number 5 (e.g. 5.x.y).

Most of the core Release 5 Technical Specifications and Technical Reports were functionally frozen at either the 15th Technical Specification Group meetings in March 2002 or the 16th in June 2002.

NOTE 1: Functionally frozen means that no further functionality/features may be incorporated into the set of specifications, and that only corrective Change Requests (CRs) are to be accepted and agreed.

NOTE 2: It can be expected that corrective CRs will be introduced into the Release 5 version 5.x.y specifications throughout 2002 and beyond.

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] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TR 21.900: "Technical Specification Group working methods".

3 Abbreviations

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 apply.

4 General

GSM Release 5 consists of GSM-only specifications and common specifications developed for both GSM Release 5 and Release 5 of the 3rd Generation mobile system.

The present document identifies the GSM system set of specifications required to implement GSM Release 5.

Specifications for GSM-only Release 5 can be identified by the "**ab.cde**" numbering scheme where "ab" is in the range 41 to 52.

Specifications for both GSM Release 4 and Release 5 of the 3rd Generation mobile system are identified by the "**ab.cde**" numbering scheme where "ab" is in the range 21 to 35.

A more detailed description of the specification numbering scheme is given in 3GPP TR 21.900.

5 Specifications and Reports

NOTE 1: The "for publication?" column of the table below indicates whether or not the documents are intended for adoption by the partner Standards Development Organizations as their own publications. Those marked "no" are internal working documents of the 3GPP TSGs.

NOTE 2: For definition of "freezing" of specifications (last two columns), see 3GPP TS 21.900 [2].

Number	Title	WG prime	For publication?	freeze date	frozen
21.801	Specification drafting rules	SP	No	14/03/2002	yes
21.900	Technical Specification Group working methods	SP	Yes	14/03/2002	yes
22.001	Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)	S1	Yes	13/06/2002	yes
22.002	Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)	S1	Yes	13/06/2002	yes
22.003	Circuit Teleservices supported by a Public Land Mobile Network (PLMN)	S1	Yes	14/03/2002	yes
22.004	General on supplementary services	S1	Yes	13/06/2002	yes
22.011	Service accessibility	S1	Yes	13/06/2002	yes
22.016	International Mobile Equipment Identities (IMEI)	S1	Yes	13/06/2002	yes
22.022	Personalisation of Mobile Equipment (ME); Mobile functionality specification	S3	Yes	12/09/2002	yes
22.024	Description of Charge Advice Information (CAI)	S1	Yes	13/06/2002	yes
22.030	Man-Machine Interface (MMI) of the User Equipment (UE)	S1	Yes	13/06/2002	yes
22.031	Fraud Information Gathering System (FIGS); Service description; Stage 1	S3	Yes	12/12/2002	yes
22.032	Immediate Service Termination (IST); Service description; Stage 1	S3	Yes	13/06/2002	yes
22.034	High Speed Circuit Switched Data (HSCSD); Stage 1	S1	Yes	13/06/2002	yes
22.038	USIM/SIM Application Toolkit (USAT/SAT); Service description; Stage 1	S1	Yes	14/03/2002	yes
22.041	Operator Determined Call Barring	S1	Yes	13/06/2002	yes
22.042	Network Identity and Time Zone (NITZ) service description; Stage 1	S1	Yes	13/06/2002	yes
22.048	Security mechanisms for the (U)SIM application toolkit; Stage 1	T3	Yes	13/06/2003	yes
22.053	Tandem Free Operation (TFO); Service description; Stage 1	S4	Yes	13/06/2002	yes
22.057	Mobile Execution Environment (MExE) service description; Stage 1	S1	Yes	14/03/2002	yes
22.060	General Packet Radio Service (GPRS); Service description; Stage 1	S1	Yes	14/03/2002	yes
22.066	Support of Mobile Number Portability (MNP); Stage 1	S1	Yes	13/06/2002	yes
22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1	S1	Yes	13/06/2002	yes
22.071	Location Services (LCS); Stage 1	S1	Yes	14/03/2002	yes
22.072	Call Deflection (CD); Stage 1	S1	Yes	13/06/2002	yes
22.076	Noise suppression for the AMR codec; Service description; Stage 1	S4	Yes	13/06/2002	yes
22.078	Customized Applications for Mobile network Enhanced Logic (CAMEL); Service description; Stage 1	S1	Yes	14/03/2002	yes
22.079	Support of optimal routeing; Stage 1	S1	Yes	13/06/2002	yes
22.081	Line Identification supplementary services; Stage 1	S1	Yes	13/06/2002	yes
22.082	Call Forwarding (CF) Supplementary Services; Stage 1	S1	Yes	13/06/2002	yes

Number	Title	WG prime	For publication?	freeze date	frozen
22.083	Call Waiting (CW) and Call Hold (HOLD) supplementary services; Stage 1	S1	Yes	13/06/2002	yes
22.084	MultiParty (MPTY) supplementary service; Stage 1	S1	Yes	13/06/2002	yes
22.085	Closed User Group (CUG) supplementary services; Stage 1	S1	Yes	13/06/2002	yes
22.086	Advice of Charge (AoC) supplementary services; Stage 1	S1	Yes	13/06/2002	yes
22.087	User-to-user signalling (UUS); Stage 1	S1	Yes	13/06/2002	yes
22.088	Call Barring (CB) supplementary services; Stage 1	S1	Yes	13/06/2002	yes
22.090	Unstructured Supplementary Service Data (USSD); Stage 1	S1	Yes	13/06/2002	yes
22.091	Explicit Call Transfer (ECT) supplementary service; Stage 1	S1	Yes	13/06/2002	yes
22.093	Completion of Calls to Busy Subscriber (CCBS); Service description, Stage 1	S1	Yes	13/06/2002	yes
22.094	Follow Me service description - Stage 1	S1	Yes	13/06/2002	yes
22.096	Name identification supplementary services; Stage 1	S1	Yes	13/06/2002	yes
22.097	Multiple Subscriber Profile (MSP) Phase 1; Service description - Stage 1	S1	Yes	13/06/2002	yes
22.115	Service Aspects Charging and billing	S1	Yes	14/03/2002	yes
22.121	Service aspects; The Virtual Home Environment; Stage 1	S1	Yes	14/03/2002	yes
22.129	Handover requirements between UTRAN and GERAN or other radio systems	S1	Yes	14/03/2002	yes
22.226	Global text telephony (GTT); Stage 1: Service description	S1	Yes	14/03/2002	yes
22.228	Service requirements for the Internet Protocol (IP) multimedia core network subsystem; Stage 1	S1	Yes	14/03/2002	yes
23.002	Network architecture	S2	Yes	14/03/2002	yes
23.003	Numbering, Addressing and Identification	N4	Yes	08/03/2002	yes
23.007	Restoration procedures	N4	Yes	08/03/2002	yes
23.008	Organisation of subscriber data	N4	Yes	08/03/2002	yes
23.009	Handover procedures	N1	Yes	08/03/2002	yes
23.011	Technical realization of Supplementary Services	N4	Yes	08/03/2002	yes
23.012	Location management procedures	N4	Yes	08/03/2002	yes
23.014	Support of Dual Tone Multi Frequency (DTMF) signalling	N1	Yes	08/03/2002	yes
23.015	Technical realisation of Operator Determined Barring (ODB)	N4	Yes	08/03/2002	yes
23.016	Subscriber data management; Stage 2	N4	Yes	08/03/2002	yes
23.018	Basic Call Handling; Technical realization	N4	Yes	08/03/2002	yes
23.031	Fraud Information Gathering System (FIGS); Service description; Stage 2	S3	Yes	12/12/2002	yes
23.032	Universal Geographical Area Description (GAD)	S2	Yes	20/03/2003	yes
23.034	High Speed Circuit Switched Data (HSCSD); Stage 2	N1	Yes	08/03/2002	yes
23.035	Immediate Service Termination (IST); Stage 2	S3	Yes	13/06/2002	yes
23.038	Alphabets and language-specific information	T2	Yes	08/03/2002	yes
23.039	Interface Protocols for the Connection of Short Message Service Centers (SMSCs) to Short Message Entities (SMEs)	T2	Yes	08/03/2002	yes
23.040	Technical realization of Short Message Service (SMS)	T2	Yes	08/03/2002	yes
23.041	Technical realization of Cell Broadcast Service (CBS)	T2	Yes	07/06/2002	yes
23.042	Compression algorithm for SMS	T2	Yes	08/03/2002	yes
23.048	Security mechanisms for the (U)SIM application toolkit; Stage 2	T3	Yes	08/03/2002	yes
23.053	Tandem Free Operation (TFO); Service description; Stage 2	S4	Yes	13/06/2002	yes

Number	Title	WG prime	For publication?	freeze date	frozen
23.057	Mobile Execution Environment (MExE); Functional description; Stage 2	T2	Yes	08/03/2002	yes
23.060	General Packet Radio Service (GPRS) Service description; Stage 2	S2	Yes	14/03/2002	yes
23.066	Support of GSM Mobile Number Portability (MNP) stage 2	N4	Yes	08/03/2002	yes
23.067	Enhanced Multi-Level Precedence and Pre-emption Service (eMLPP); Stage 2	N4	Yes	08/03/2002	yes
23.072	Call Deflection Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.078	Customised Applications for Mobile network Enhanced Logic (CAMEL); Stage 2	N2	Yes	07/06/2002	yes
23.079	Support of Optimal Routeing (SOR); Technical realization; Stage 2	N4	Yes	08/03/2002	yes
23.081	Line Identification supplementary services; Stage 2	N4	Yes	08/03/2002	yes
23.082	Call Forwarding (CF) Supplementary Services; Stage 2	N4	Yes	08/03/2002	yes
23.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.084	MultiParty (MPY) Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.085	Closed User Group (CUG) Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.086	Advice of Charge (AoC) Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.087	User-to-User Signalling (UUS) supplementary service; Stage 2	N4	Yes	08/03/2002	yes
23.088	Call Barring (CB) Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.090	Unstructured Supplementary Service Data (USSD); Stage 2	N4	Yes	08/03/2002	yes
23.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.093	Technical realization of Completion of Calls to Busy Subscriber (CCBS); Stage 2	N4	Yes	08/03/2002	yes
23.094	Follow Me Stage 2	N4	Yes	08/03/2002	yes
23.096	Name Identification Supplementary Service; Stage 2	N4	Yes	08/03/2002	yes
23.097	Multiple Subscriber Profile (MSP) Phase 1; Stage 2	N4	Yes	08/03/2002	yes
23.108	Mobile radio interface layer 3 specification core network protocols; Stage 2 (structured procedures)	N1	Yes	07/06/2002	yes
23.116	Super-Charger technical realization; Stage 2	N4	Yes	08/03/2002	yes
23.119	Gateway Location Register (GLR); Stage2	N4	Yes	08/03/2002	yes
23.140	Multimedia Messaging Service (MMS); Functional description; Stage 2	T2	Yes	08/03/2002	yes
23.195	Provision of User Equipment Specific Behaviour Information (UESBI) to network entities	S2	Yes	19/06/2003	yes
23.207	End-to-end Quality of Service (QoS) concept and architecture	S2	Yes	14/03/2002	yes
23.218	IP Multimedia (IM) session handling; IM call model; Stage 2	N1	Yes	08/03/2002	yes
23.221	Architectural requirements	S2	Yes	14/03/2002	yes
23.226	Global text telephony (GTT); Stage 2: Architecture	S2	Yes	08/03/2002	yes
23.228	IP Multimedia Subsystem (IMS); Stage 2	S2	Yes	14/03/2002	yes
23.236	Intra-domain connection of Radio Access Network (RAN) nodes to multiple Core Network (CN) nodes	S2	Yes	14/03/2002	yes
23.271	Location Services (LCS); Functional description; Stage 2	S2	Yes	14/03/2002	yes
23.278	Customised Applications for Mobile network Enhanced Logic (CAMEL) - IP Multimedia	N2	Yes	06/12/2002	yes

Number	Title	WG prime	For publication?	freeze date	frozen
	System (IMS) interworking; Stage 2				
23.815	Charging implications of IMS architecture	S2	No	14/03/2002	yes
24.002	GSM-UMTS Public Land Mobile Network (PLMN) Access Reference Configuration	N1	Yes	08/03/2002	yes
24.007	Mobile radio interface signalling layer 3; General Aspects	N1	Yes	08/03/2002	yes
24.008	Mobile radio interface Layer 3 specification; Core network protocols; Stage 3	N1	Yes	08/03/2002	yes
24.010	Mobile Radio Interface Layer 3 - Supplementary Services Specification - General Aspects	N4	Yes	08/03/2002	yes
24.011	Point-to-Point (PP) Short Message Service (SMS) Support on Mobile Radio Interface	N1	Yes	08/03/2002	yes
24.022	Radio Link Protocol (RLP) for circuit switched bearer and teleservices	N3	Yes	08/03/2002	yes
24.030	Location Services (LCS); Supplementary service operations; Stage 3	N4	Yes	08/03/2002	yes
24.067	Enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 3	N4	Yes	08/03/2002	yes
24.072	Call Deflection Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.080	Mobile radio Layer 3 supplementary service specification; Formats and coding	N4	Yes	08/03/2002	yes
24.081	Line Identification Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.082	Call Forwarding supplementary service; Stage 3	N4	Yes	08/03/2002	yes
24.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.084	MultiParty (MPTY) Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.085	Closed User Group (CUG) Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.086	Advice of Charge (AoC) Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.087	User-to-User Signalling (UUS); Stage 3	N4	Yes	08/03/2002	yes
24.088	Call Barring (CB) Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.090	Unstructured Supplementary Service Data (USSD); Stage 3	N4	Yes	08/03/2002	yes
24.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.093	Call Completion to Busy Subscriber (CCBS); Stage 3	N4	Yes	08/03/2002	yes
24.096	Name Identification Supplementary Service; Stage 3	N4	Yes	08/03/2002	yes
24.228	Signalling flows for the IP multimedia call control based on SIP and SDP; Stage 3	N1	Yes	07/06/2002	yes
24.229	Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3	N1	Yes	07/06/2002	yes
26.071	AMR speech Codec; General description	S4	Yes	13/06/2002	yes
26.073	AMR speech Codec; C-source code	S4	Yes	13/06/2002	yes
26.074	AMR speech Codec; Test sequences	S4	Yes	13/06/2002	yes
26.077	Minimum performance requirements for noise suppresser application to the Adaptive Multi-Rate (AMR) speech encoder	S4	Yes	13/06/2002	yes
26.090	AMR speech Codec; Transcoding Functions	S4	Yes	13/06/2002	yes
26.091	AMR speech Codec; Error concealment of lost frames	S4	Yes	13/06/2002	yes
26.092	AMR speech Codec; comfort noise for AMR Speech Traffic Channels	S4	Yes	13/06/2002	yes
26.093	AMR speech Codec; Source Controlled Rate operation	S4	Yes	13/06/2002	yes
26.094	AMR Speech Codec; Voice Activity Detector for AMR Speech Traffic Channels	S4	Yes	13/06/2002	yes

Number	Title	WG prime	For publication?	freeze date	frozen
26.102	Adaptive Multi-Rate (AMR) speech codec; Interface to lu and Uu	S4	Yes	13/06/2002	yes
26.103	Speech codec list for GSM and UMTS	S4	Yes	14/03/2002	yes
26.104	ANSI-C code for the floating-point Adaptive Multi-Rate (AMR) speech codec	S4	Yes	13/06/2002	yes
26.110	Codec for circuit switched multimedia telephony service; General description	S4	Yes	13/06/2002	yes
26.111	Codec for Circuit switched Multimedia Telephony Service; Modifications to H.324	S4	Yes	13/06/2002	yes
26.140	Multimedia Messaging Service (MMS); Media formats and codes	S4	Yes	14/03/2002	yes
26.171	AMR speech codec, wideband; General description	S4	Yes	14/03/2002	yes
26.173	ANSI-C code for the Adaptive Multi-Rate - Wideband (AMR-W) speech codec	S4	Yes	14/03/2002	yes
26.174	AMR speech codec, wideband; Test sequences	S4	Yes	14/03/2002	yes
26.190	Mandatory Speech Codec speech processing functions AMR Wideband speech codec; Transcoding functions	S4	Yes	14/03/2002	yes
26.191	AMR speech codec, wideband; Error concealment of lost frames	S4	Yes	14/03/2002	yes
26.192	Mandatory Speech Codec speech processing functions AMR Wideband Speech Codec; Comfort noise aspects	S4	Yes	14/03/2002	yes
26.193	AMR speech codec, wideband; Source Controlled Rate operation	S4	Yes	14/03/2002	yes
26.194	Mandatory Speech Codec speech processing functions AMR Wideband speech codec; Voice Activity Detector (VAD)	S4	Yes	14/03/2002	yes
26.201	AMR speech codec, wideband; Frame structure	S4	Yes	14/03/2002	yes
26.202	AMR speech codec, wideband; Interface to lu and Uu	S4	Yes	14/03/2002	yes
26.204	ANSI-C code for the floating-point Adaptive Multi-Rate - Wideband (AMR-W) speech codec	S4	Yes	14/03/2002	yes
26.226	Global text telephony (GTT); Transport of text in the voice channel	S4	Yes	14/03/2002	yes
26.230	Global text telephony (GTT); Cellular text telephone modem transmitter C-code description	S4	Yes	14/03/2002	yes
26.231	Global text telephony (GTT); Cellular text telephone modem minimum performance requirements	S4	Yes	14/03/2002	yes
26.235	Packet switched conversational multimedia applications; Default codecs	S4	Yes	14/03/2002	yes
26.911	Codec for Circuit switched Multimedia Telephony Service; Terminal Implementor's Guide	S4	Yes	13/06/2002	yes
26.975	Performance characterization of the Adaptive Multi-Rate (AMR) speech codec	S4	Yes	13/06/2002	yes
26.976	Performance characterization of the Adaptive Multi-Rate Wideband (AMR-WB) speech codec	S4	Yes	07/06/2002	yes
27.001	General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)	N3	Yes	08/03/2002	yes
27.002	Terminal Adaptation Functions (TAF) for services using Asynchronous bearer capabilities	N3	Yes	08/03/2002	yes
27.003	Terminal Adaptation Functions (TAF) for services using Synchronous bearer capabilities	N3	Yes	08/03/2002	yes
27.005	Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE-DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)	T2	Yes	08/03/2002	yes
27.007	AT command set for 3G User Equipment (UE)	T2	Yes	08/03/2002	yes
27.010	Terminal Equipment to User Equipment (TE-UE) multiplexer protocol	T2	Yes	08/03/2002	yes
27.060	Packet domain; Mobile Station (MS) supporting Packet Switched services	N3	Yes	08/03/2002	yes

Number	Title	WG prime	For publication?	freeze date	frozen
27.103	Wide Area Network Synchronization	T2	Yes	08/03/2002	yes
28.062	Inband Tandem Free Operation (TFO) of speech codecs; Service description; Stage 3	S4	Yes	14/03/2002	yes
29.002	Mobile Application Part (MAP) specification	N4	Yes	08/03/2002	yes
29.007	General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)	N3	Yes	08/03/2002	yes
29.010	Information Element Mapping between Mobile Station - Base Station System (MS - BSS) and Base Station System - Mobile-services Switching Centre (BSS - MCS) Signalling Procedures and the Mobile Application Part (MAP)	N4	Yes	08/03/2002	yes
29.011	Signalling Interworking for Supplementary Services	N4	Yes	08/03/2002	yes
29.013	Signalling interworking between ISDN supplementary services Application Service Element (ASE) and Mobile Application Part (MAP) protocols	N4	Yes	08/03/2002	yes
29.016	Serving GPRS Support Node SGSN - Visitors Location Register (VLR); Gs Interface Network Service Specification	N1	Yes	08/03/2002	yes
29.018	General Packet Radio Service (GPRS); Serving GPRS Support Node (SGSN) - Visitors Location Register (VLR); Gs interface layer 3 specification	N1	Yes	08/03/2002	yes
29.060	General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp interface	N4	Yes	08/03/2002	yes
29.061	Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN)	N3	Yes	06/09/2002	yes
29.078	Customised Applications for Mobile network Enhanced Logic (CAMEL); CAMEL Application Part (CAP) specification	N2	Yes	07/06/2002	yes
29.207	Policy control over Gs interface	N3	Yes	07/06/2002	yes
29.208	End to end Quality of Service (QoS) signalling flows	N3	Yes	07/06/2002	yes
29.228	IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents	N4	Yes	07/06/2002	yes
29.229	Cx and Dx interfaces based on the Diameter protocol; Protocol details	N4	Yes	07/06/2002	yes
29.278	Customised Applications for Mobile network Enhanced Logic (CAMEL); CAMEL Application Part (CAP) specification for IP Multimedia Subsystems (IMS)	N2	Yes	06/12/2002	yes
29.328	IP Multimedia Subsystem (IMS) Sh interface signalling flows and message contents	N4	Yes	07/06/2002	yes
29.329	Sh interface based on the Diameter protocol	N4	Yes	07/06/2002	yes
29.994	Recommended infrastructure measures to overcome specific Mobile Station (MS) and User Equipment (UE) faults	N1	Yes	14/03/2002	yes
30.902	Guidelines for the modification of the Mobile Application Part (MAP)	N4	No	14/03/2003	yes
31.048	Test specification for security mechanisms for the (U)SIM application toolkit	T3	Yes	19/09/2003	
31.103	Characteristics of the IP Multimedia Services Identity Module (ISIM) application	T3	Yes	07/06/2002	yes
31.111	Universal Subscriber Identity Module Application Toolkit (USAT)	T3	Yes	08/03/2002	yes
32.200	Telecommunication management; Charging management; Charging principles	S5	Yes	12/09/2002	yes
32.225	Telecommunication management; Charging management; Charging data description for the IP Multimedia Subsystem (IMS)	S5	Yes	12/09/2002	yes

Number	Title	WG prime	For publication?	freeze date	frozen
32.311	Telecommunication management; Generic Integration Reference Point (IRP) management; Requirements	S5	Yes	14/03/2002	yes
32.401	Telecommunication management; Performance Management (PM); Concept and requirements	S5	Yes	14/03/2002	yes
32.403	Telecommunication management; Performance Management (PM); Performance measurements - UMTS and combined UMTS/GSM	S5	Yes	14/03/2002	yes
32.600	Telecommunication management; Configuration Management (CM); Concept and high-level requirements	S5	Yes	12/09/2002	yes
32.601	Telecommunication management; Configuration Management (CM); Basic Configuration Management (CM) Integration Reference Point (IRP): requirements	S5	Yes	12/09/2002	yes
32.602	Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP): Information service	S5	Yes	12/09/2002	yes
32.603	Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) solution set	S5	Yes	12/09/2002	yes
32.621	Telecommunication management; Configuration Management (CM); Generic network resources Integration Reference Point (IRP): requirements	S5	Yes	12/09/2002	yes
32.622	Telecommunication management; Configuration Management (CM); Generic network resources Integration Reference Point (IRP): Network Resource Model (NRM)	S5	Yes	12/09/2002	yes
32.623	Telecommunication management; Configuration Management (CM); Generic network resources Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) solution set	S5	Yes	12/09/2002	yes
32.624	Telecommunication management; Configuration Management (CM); Generic network resources: Integration Reference Point (IRP): Common Management Information Protocol (CMIP) solution set	S5	Yes	12/09/2002	yes
32.625	Telecommunication management; Configuration Management (CM); Generic network resources Integration Reference Point (IRP): Bulk CM eXtensible Markup Language (XML) file format definition	S5	Yes	14/03/2002	yes
32.632	Telecommunication management; Configuration Management (CM); Core Network Resources Integration Reference Point (IRP): Network Resource Model (NRM)	S5	Yes	12/09/2002	yes
32.633	Telecommunication management; Configuration Management (CM); Core network resources Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) solution set	S5	Yes	12/09/2002	yes
32.634	Telecommunication management; Configuration Management (CM); Core network resources Integration Reference Point (IRP): Common Management Information Protocol (CMIP) solution set	S5	Yes	12/09/2002	yes
32.635	Telecommunication management; Configuration Management (CM); Core network resources Integration Reference Point (IRP): Bulk CM eXtensible Markup Language (XML) file format definition	S5	Yes	13/06/2002	yes
32.651	Telecommunication management; Configuration Management (CM); GERAN network resources	S5	Yes	12/09/2002	yes

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	Integration Reference Point (IRP): Requirements				
32.652	Telecommunication management; Configuration Management (CM); GERAN network resources Integration Reference Point (IRP): Network Resource Model (NRM)	S5	Yes	12/09/2002	yes
32.653	Telecommunication management; Configuration Management (CM); GERAN network resources Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) solution set	S5	Yes	12/09/2002	yes
32.654	Telecommunication management; Configuration Management (CM); GERAN network resources Integration Reference Point (IRP): Common Management Information Protocol (CMIP) solution set	S5	Yes	12/09/2002	yes
32.655	Telecommunication management; Configuration Management (CM); GERAN network resources Integration Reference Point (IRP): Bulk CM eXtensible Markup Language (XML) file format definition	S5	Yes	13/06/2002	yes
32.691	Telecommunication management; Inventory management network resources Integration Reference Point (IRP): Requirements	S5	Yes	12/09/2002	yes
32.692	Telecommunication management; Inventory management network resources Integration Reference Point (IRP): Network Resource Model (NRM)	S5	Yes	12/09/2002	yes
33.203	3G security; Access security for IP-based services	S3	Yes	14/03/2002	yes
33.210	3G security; Network Domain Security (NDS); IP network layer security	S3	Yes	14/03/2002	yes
41.031	Fraud Information Gathering System (FIGS); Service requirements; Stage 0	S3	Yes	14/03/2002	yes
41.033	Lawful Interception requirements for GSM	S3	Yes	14/03/2002	yes
41.101	Technical Specifications and Technical Reports for a GERAN-based 3GPP system	SP	Yes	19/06/2003	yes
42.019	Subscriber Identity Module Application Programming Interface (SIM API); Stage 1	T3	Yes	08/03/2002	yes
42.033	Lawful Interception; Stage 1	S3	Yes	14/03/2002	yes
42.043	Support of Localised Service Area (SoLSA); Service description; Stage 1	S1	Yes	13/06/2002	yes
42.056	GSM Cordless Telephony System (CTS), Phase 1; Service description; Stage 1	S1	Yes	13/06/2002	yes
42.068	Voice Group Call Service (VGCS); Stage 1	S1	Yes	13/06/2002	yes
42.069	Voice Broadcast Service (VBS); Stage 1	S1	Yes	13/06/2002	yes
43.005	Technical performance objectives	NP	Yes	08/03/2002	yes
43.010	GSM Public Land Mobile Network (PLMN) connection types	N3	Yes	08/03/2002	yes
43.013	Discontinuous Reception (DRX) in the GSM system	G1	Yes	28/06/2002	yes
43.019	Subscriber Identity Module Application Programming Interface (SIM API) for Java Card; Stage 2	T3	Yes	08/03/2002	yes
43.020	Security-related network functions	S3	Yes	13/06/2002	yes
43.022	Functions related to Mobile Station (MS) in idle mode and group receive mode	G1	Yes	28/06/2002	yes
43.026	Multiband operation of GSM / DCS 1800 by a single operator	G1	Yes	28/06/2002	yes
43.030	Radio network planning aspects	G1	Yes	28/06/2002	yes
43.033	Lawful Interception; Stage 2	S3	Yes	14/03/2002	yes
43.045	Technical Realization of Facsimile Group 3 Service - transparent	N3	Yes	08/03/2002	yes
43.050	Transmission Planning Aspects of the Speech Service in the GSM Public Land Mobile Network	S4	Yes	14/03/2002	yes

Number	Title	WG prime	For publication?	freeze date	frozen
	(PLMN) System				
43.051	GSM/EDGE Radio Access Network (GERAN) overall description; Stage 2	G1	Yes	19/04/2002	yes
43.052	Lower layers of the GSM Cordless Telephony System (CTS) radio interface; Stage 2	G1	Yes	28/06/2002	yes
43.055	Dual Transfer Mode (DTM); Stage 2	G1	Yes	28/06/2002	yes
43.058	Characterisation, test methods and quality assessment for handsfree Mobile Stations (MSs)	S4	Yes	13/06/2002	yes
43.059	Functional stage 2 description of Location Services (LCS) in GERAN	G1	Yes	19/04/2002	yes
43.064	Overall description of the GPRS radio interface; Stage 2	G1	Yes	19/04/2002	yes
43.068	Voice Group Call Service (VGCS); Stage 2	N1	Yes	08/03/2002	yes
43.069	Voice Broadcast service (VBS); Stage 2	N1	Yes	08/03/2002	yes
43.073	Support of Localised Service Area (SoLSA); Stage 2	N4	Yes	13/06/2002	yes
43.130	Iur-g interface; Stage 2	G1	Yes	30/08/2002	yes
44.001	Mobile Station - Base Station System (MS - BSS) Interface General Aspects and Principles	N1	Yes	08/03/2002	yes
44.003	Mobile Station - Base Station System (MS - BSS) Interface Channel Structures and Access Capabilities	G2	Yes	30/08/2002	yes
44.004	Layer 1 - General Requirements	G2	Yes	19/04/2002	yes
44.005	Data Link (DL) Layer General Aspects	G2	Yes	30/08/2002	yes
44.006	Mobile Station - Base Stations System (MS - BSS) Interface Data Link (DL) Layer Specification	G2	Yes	30/08/2002	yes
44.012	Short Message Service Cell Broadcast (SMSCB) Support on the Mobile Radio Interface	G2	Yes	30/08/2002	yes
44.013	Performance Requirements on Mobile Radio Interface	N1	Yes	08/03/2002	yes
44.014	Individual equipment type requirements and interworking; Special conformance testing functions	G2	Yes	30/08/2002	yes
44.018	Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol	G2	Yes	19/04/2002	yes
44.021	Rate Adaption on the Mobile Station - Base Station System (MS-BSS) Interface	N3	Yes	08/03/2002	yes
44.031	Location Services (LCS); Mobile Station (MS) - Serving Mobile Location Centre (SMLC) Radio Resource LCS Protocol (RRLP)	G2	Yes	19/04/2002	yes
44.035	Location Services (LCS); Broadcast network assistance for Enhanced Observed Time Difference (E-OTD) and Global Positioning System (GPS) positioning methods	G2	Yes	30/08/2002	yes
44.056	GSM Cordless Telephony System (CTS), (Phase 1) CTS Radio Interface Layer 3 Specification	N1	Yes	08/03/2002	yes
44.057	GSM Cordless Telephony System (CTS), (Phase 1) CTS CTS supervising system Layer 3 Specification	N1	Yes	08/03/2002	yes
44.060	General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol	G2	Yes	19/04/2002	yes
44.064	Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) Layer Specification	N1	Yes	08/03/2002	yes
44.065	Mobile Station (MS) - Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SNDCP)	N1	Yes	08/03/2002	yes
44.068	Group Call Control (GCC) Protocol	N1	Yes	08/03/2002	yes
44.069	Broadcast Call Control (BCC) protocol	N1	Yes	08/03/2002	yes
44.071	Location Services (LCS); Mobile radio interface layer 3 LCS specification	G2	Yes	30/08/2002	yes

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44.118	Mobile radio interface layer 3 specification, Radio Resource Control (RRC) protocol; Iu mode	G2	Yes	19/04/2002	yes
44.160	General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol for Iu mode	G2	Yes	19/04/2002	yes
44.901	External network assisted cell change (NACC)	G2	Yes	19/04/2002	yes
45.001	Physical layer on the radio path; General description	G1	Yes	19/04/2002	yes
45.002	Multiplexing and multiple access on the radio path	G1	Yes	19/04/2002	yes
45.003	Channel coding	G1	Yes	19/04/2002	yes
45.004	Modulation	G1	Yes	19/04/2002	yes
45.005	Radio transmission and reception	G1	Yes	19/04/2002	yes
45.008	Radio subsystem link control	G1	Yes	19/04/2002	yes
45.009	Link adaptation	G1	Yes	19/04/2002	yes
45.010	Radio subsystem synchronization	G1	Yes	28/06/2002	yes
45.022	Radio link management in hierarchical networks	G1	Yes	28/06/2002	yes
45.050	Background for RF Requirements	G1	Yes	28/06/2002	yes
45.056	CTS-FP Radio Sub-system	G1	Yes	28/06/2002	yes
46.001	Full Rate Speech Processing Functions	S4	Yes	13/06/2002	yes
46.002	Half Rate Speech Processing Functions	S4	Yes	13/06/2002	yes
46.006	Half-rate speech: ANSI-C code for GSM half-rate speech codec	S4	Yes	13/06/2002	yes
46.007	Half Rate Speech: Test Sequence for GSM Half Rate Speech Codec	S4	Yes	13/06/2002	yes
46.008	Half Rate Speech; Performance Characterization of the GSM Half Rate speech codec	S4	Yes	13/06/2002	yes
46.010	Full-rate speech transcoding	S4	Yes	13/06/2002	yes
46.011	Substitution and Muting of Lost Frames for Full Rate Speech Channels	S4	Yes	13/06/2002	yes
46.012	Comfort Noise Aspects for Full Rate Speech Traffic Channels	S4	Yes	13/06/2002	yes
46.020	Half Rate Speech Transcoding	S4	Yes	13/06/2002	yes
46.021	Half rate speech; Substitution and muting of lost frames for half rate speech traffic channels	S4	Yes	13/06/2002	yes
46.022	Comfort Noise Aspects for Half Rate Speech Traffic Channels	S4	Yes	13/06/2002	yes
46.031	Discontinuous Transmission (DTX) for Full Rate Speech Traffic Channels	S4	Yes	13/06/2002	yes
46.032	Voice Activity Detection (VAD)	S4	Yes	13/06/2002	yes
46.041	Discontinuous Transmission (DTX) for Half Rate Speech Traffic Channels	S4	Yes	13/06/2002	yes
46.042	Voice Activity Detection (VAD) for Half Rate Speech Traffic Channels	S4	Yes	13/06/2002	yes
46.051	GSM Enhanced full rate speech processing functions: General description	S4	Yes	13/06/2002	yes
46.053	ANSI-C code for the GSM Enhanced full rate speech codec	S4	Yes	13/06/2002	yes
46.054	Test sequences for the GSM Enhanced Full Rate (EFR)	S4	Yes	13/06/2002	yes
46.055	Performance characterisation of the GSM EFR Speech Codec	S4	Yes	13/06/2002	yes
46.060	Enhanced full rate speech transcoding	S4	Yes	13/06/2002	yes
46.061	Substitution and muting of lost frames for enhanced full rate speech traffic channels	S4	Yes	13/06/2002	yes
46.062	Comfort noise aspects for Enhanced Full Rate (EFR) speech traffic channels	S4	Yes	13/06/2002	yes
46.081	Discontinuous Transmission (DTX) for enhanced full rate speech traffic channels	S4	Yes	13/06/2002	yes
46.082	Voice Activity Detection (VAD) for enhanced full rate speech traffic channels	S4	Yes	13/06/2002	yes
46.085	Subjective tests on the interoperability of the HR/FR/EFR speech codecs; single, tandem and	S4	Yes	13/06/2002	yes

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	tandem free operation				
48.001	General Aspects on the BSS-MSC Interface	G2	Yes	30/08/2002	yes
48.002	Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface - Interface Principles	G2	Yes	19/04/2002	yes
48.004	Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface Layer 1 Specification	G2	Yes	30/08/2002	yes
48.006	Signalling Transport Mechanism Specification for the Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface	G2	Yes	30/08/2002	yes
48.008	Mobile Switching Centre - Base Station system (MSC-BSS) Interface Layer 3 Specification	G2	Yes	19/04/2002	yes
48.014	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) interface; Gb Interface Layer 1	G2	Yes	30/08/2002	yes
48.016	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) Interface; Network Service	G2	Yes	19/04/2002	yes
48.018	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN); BSS GPRS Protocol	G2	Yes	19/04/2002	yes
48.020	Rate Adaptation on the Base Station System - Mobile Service Switching Centre (BSS-MSC) Interface	N3	Yes	08/03/2002	yes
48.031	Location Services LCS: Serving Mobile Location Centre - Serving Mobile Location Centre (SMLC - SMLC); SMLCPP specification	G2	Yes	28/06/2002	yes
48.051	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface General Aspects	G2	Yes	30/08/2002	yes
48.052	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface - Interface Principles	G2	Yes	30/08/2002	yes
48.054	Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 1 structure of physical circuits	G2	Yes	30/08/2002	yes
48.056	Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 2 specification	G2	Yes	30/08/2002	yes
48.058	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface Layer 3 Specification	G2	Yes	19/04/2002	yes
48.060	In-band control of remote transcoders and rate adaptors for full rate traffic channels	G1	Yes	19/04/2002	yes
48.061	In-band control of remote transcoders and rate adaptors for half rate traffic channels	G1	Yes	19/04/2002	yes
48.071	Location Services (LCS); Serving Mobile Location Centre - Base Station System (SMLC-BSS) interface; Layer 3 specification	G2	Yes	30/08/2002	yes
49.001	General network interworking scenarios	N4	Yes	08/03/2002	yes
49.008	Application of the Base Station System Application Part (BSSAP) on the E-Interface	N1	Yes	08/03/2002	yes
49.031	Location Services (LCS); Base Station System Application Part LCS Extension (BSSAP-LE)	G2	Yes	19/04/2002	yes
51.010-1	Mobile Station (MS) conformance specification; Part 1: Conformance specification	G3new	Yes	14/03/2002	yes
51.010-2	Mobile Station (MS) conformance specification; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification	G3new	Yes	30/08/2002	yes
51.013	Test specification for Subscriber Identity Module (SIM) Application Programming Interface (API) for Java Card	T3	Yes		
51.021	GSM radio aspects base station system equipment specification	G1	Yes	28/06/2002	yes

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51.026	GSM Repeater Equipment Specification	G1	Yes	28/06/2002	yes
52.021	Network Management (NM) Procedures and messages on the A-bis interface	G1	Yes	28/06/2002	yes
52.402	Telecommunication management; Performance Management (PM); Performance measurements - GSM	S5	Yes	12/12/2002	yes

Annex A (informative): Change history

Change history						
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	New version
2001-06	SP-12	SP-010278	-	-	First draft	3GPP TS 41.103 version 0.0.0
2001-06-20	SP-12	SP-010384			updates table of specs	0.1.0
2001-09-12	SP-13	SP-010421			updates table of specs	1.0.0
2002-03-04	SP-15	SP-020098			updates table of specs; adds columns for freeze info	1.1.0
2002-03-13	SP-15	SP-020203			updates table of specs	1.2.0
2002-06-03	SP-16	SP-020274			updates table of specs, minor corrections	2.0.0
2002-06-11	SP-16	SP-020401			updates table of specs, minor corrections	2.1.0
2002-06-12	SP-16	SP-020411			updates table of specs; sets unknown freeze target dates blank	2.2.0
	SP-16				approved	5.0.0
2002-09	SP-17	SP-020616	001	1	update list of specs; editorial corrections to spec titles	5.1.0
2002-12	SP-18	SP-020833	002	1	Correction to list of specs, editorial corrections to spec titles	5.2.0
2003-03	SP-19	SP-030077	003	1	Correction to list of specs, editorial corrections to spec titles	5.3.0
2003-06	SP-20	SP-030229	004		Correction to list of specs	3GPP TS 41.101 version 5.4.0
		SP-030235			Renumber from 41.103 to 41.101	

History

Document history		
V5.4.0	June 2003	Publication