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Technical Specification

**Digital cellular telecommunications system (Phase 2+);
GSM Specification set
(3GPP TS 41.102 version 4.0.0 Release 4)**



Reference

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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
Association à but non lucratif enregistrée à la
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Foreword

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

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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 GSM Release 4.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, 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: "3G vocabulary".

[2] 3GPP TR 21.900: "3GPP 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 4 consists of GSM-only specifications and common specifications developed for both GSM Release 4 and Release 4 of the 3rd Generation mobile system.

The present document identifies the GSM system set of specifications required to implement GSM Release 4.

Specifications for GSM-only Release 4 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 4 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

The first column shows the prior-Release specification number, if any, corresponding to the spec number given in the second column.

progenitor	Number	Title	WG prime	For publication
	21.801	3GPP drafting rules	SP	Yes
	22.121	Provision of Services in UMTS - The Virtual Home Environment ; Stage 1	S1	Yes
	23.221	Architectural requirements	S2	Yes
	23.908	Technical report on Pre-Paging	N4	Yes
	23.909	Technical report on the Gateway Location Register	N4	Yes
	23.911	Technical report on Out-of-band transcoder control	N4	Yes
	23.912	Technical report on Super-Charger	N4	Yes
	23.923	Combined GSM and Mobile IP mobility handling in UMTS IP CN	S2	Yes
	23.925	UMTS Core network based ATM transport	S2	Yes
	25.842	Smart antenna	R1	No
	43.051	GSM/EDGE Radio Access Network (GERAN) overall description; Stage 2	G1	Yes
	41.102	GSM Release 4 Specifications	SP	Yes
01.31	41.031	Fraud Information Gathering System (FIGS); Service requirements ; Stage 0	S3	Yes
01.33	41.033	Lawful Interception requirements for GSM	S3	Yes
01.61	41.061	General Packet Radio Service (GPRS); GPRS ciphering algorithm requirements	S3	Yes
02.01	22.001	Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)	S1	Yes
02.02	22.002	Circuit Bearer Services Supported by a PLMN	S1	Yes
02.03	22.003	Circuit Teleservices supported by a Public Land Mobile Network (PLMN)	S1	Yes
02.04	22.004	General on Supplementary Services	S1	Yes
02.09	42.009	Security Aspects	S3	Yes
02.11	22.011	Service accessibility	S1	Yes
02.15	22.115	Service Aspects Charging and billing	S1	Yes
02.17	42.017	Subscriber Identity Modules, Functional Characteristics	T3	Yes
02.22	22.022	Personalisation of GSM ME Mobile functionality specification ; Stage 1	S3	Yes
02.24	22.024	Description of Charge Advice Information (CAI)	S1	Yes
02.29	22.129	Handover Requirements between UMTS and GSM or other Radio Systems	S1	Yes
02.30	22.030	Man-Machine Interface (MMI) of the Mobile Station (MS)	S1	Yes
02.31	42.031	Fraud Information Gathering System (FIGS) Service description ; Stage 1	S3	Yes
02.32	42.032	Immediate Service Termination (IST); Service description ; Stage 1	S3	Yes
02.33	42.033	Lawful Interception ; Stage 1	S3	Yes
02.34	22.034	High Speed Circuit Switched Data (HSCSD) ; Stage 1	S1	Yes
02.38	22.038	SIM application toolkit (SAT); Stage 1	S1	Yes
02.41	22.041	Operator Determined Call Barring	S1	Yes
02.42	22.042	Network Identity and Time Zone (NITZ), stage 1	S1	Yes
02.43	42.043	Support of Localised Service Area (SoLSA) ; Stage 1	S1	Yes
02.48	42.048	Security mechanisms for the SIM Application Toolkit; Stage 1	T3	Yes
02.56	42.056	GSM Cordless Telephony System (CTS), Phase 1; Service description; Stage 1	S1	Yes
02.57	22.057	Mobile Station Application Execution Environment (MExE); Stage 1	S1	Yes
02.60	22.060	General Packet Radio Service (GPRS); Stage 1	S1	Yes
02.66	22.066	Support of Mobile Number Portability (MNP); Stage 1	S1	Yes
02.67	22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP) ; Stage 1	S1	Yes
02.68	42.068	Voice Group Call Service (VGCS) ; Stage 1	S1	Yes
02.69	42.069	Voice Broadcast Service (VBS) ; Stage 1	S1	Yes
02.71	22.071	Location Services (LCS); Stage 1	S1	Yes
02.72	22.072	Call Deflection (CD); Stage 1	S1	Yes

02.76	22.076	Noise Suppression for the AMR	S4	Yes
02.78	22.078	CAMEL; Stage 1	S1	Yes
02.79	22.079	Support of Optimal Routing; Stage 1	S1	Yes
02.81	22.081	Line Identification Supplementary Services; Stage 1	S1	Yes
02.82	22.082	Call Forwarding (CF) Supplementary Services; Stage 1	S1	Yes
02.83	22.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Services; Stage 1	S1	Yes
02.84	22.084	MultiParty (MPTY) Supplementary Service; Stage 1	S1	Yes
02.85	22.085	Closed User Group (CUG) Supplementary Services; Stage 1	S1	Yes
02.86	22.086	Advice of Charge (AoC) Supplementary Services; Stage 1	S1	Yes
02.87	22.087	User-to-user signalling (UUS); Stage 1	S1	Yes
02.88	22.088	Call Barring (CB) Supplementary Services; Stage 1	S1	Yes
02.90	22.090	Unstructured Supplementary Service Data (USSD); Stage 1	S1	Yes
02.91	22.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 1	S1	Yes
02.93	22.093	Call Completion to Busy Subscriber (CCBS); Stage 1	S1	Yes
02.96	22.096	Calling Name Presentation (CNAP); Stage 1 (T1P1)	S1	Yes
02.97	22.097	Multiple Subscriber Profile (MSP); Stage 1	S1	Yes
03.02	23.002	Network Architecture	S2	Yes
03.03	23.003	Numbering, Addressing and Identification	N4	Yes
03.05	43.005	Technical performance objectives	NP	Yes
03.07	23.007	Restoration procedures	N4	Yes
03.08	23.008	Organisation of subscriber data	N4	Yes
03.08	23.108	Mobile Radio Interface Layer 3 specification Core Network Protocols stage 2 (structured procedures)	N1	Yes
03.09	23.009	Handover procedures	N1	Yes
03.10	23.110	UMTS Access Stratum Services and Functions	S2	Yes
03.10	43.010	GSM Public Land Mobile Network (PLMN) Connection Types	N3	Yes
03.11	23.011	Technical Realization of Supplementary Services - General Aspects	N4	Yes
03.12	23.012	Location management procedures	N4	Yes
03.13	43.013	Discontinuous Reception (DRX) in the GSM System	GP	Yes
03.14	23.014	Support of Dual Tone Multi Frequency (DTMF) signalling	N1	Yes
03.15	23.015	Technical realisation of Operator Determined Barring (ODB)	N4	Yes
03.16	23.016	Subscriber data management ; Stage 2	N4	Yes
03.16	23.116	Super Charger ; Stage 2	N4	Yes
03.18	23.018	Basic Call Handling - Technical realisation	N4	Yes
03.19	23.119	Gateway Location Register (GLR) ; Stage2	N4	Yes
03.19	43.019	GSM API for SIM toolkit stage 2	T3	Yes
03.20	43.020	Security-related Network Functions	S3	Yes
03.22	43.022	Functions Related to Mobile Station (MS) in Idle Mode	G1	Yes
03.26	43.026	Multiband operation of GSM/DCS 1800 by a single operator	GP	Yes
03.30	43.030	Radio Network Planning Aspects	GP	Yes
03.31	43.031	Fraud Information Gathering System (FIGS); Service description; Stage 2	S3	Yes
03.32	23.032	Universal Geographical Area Description (GAD)	S2	Yes
03.33	43.033	Lawful Interception ; Stage 2	S3	Yes
03.34	23.034	High Speed Circuit Switched Data (HSCSD) ; Stage 2	N1	Yes
03.35	43.035	Immediate Service Termination (IST); Stage 2	S3	Yes
03.38	23.038	Alphabets & Language	T2	Yes
03.39	23.039	Interface Protocols for the Connection of Short Message Service Centers (SMSCs) to Short Message Entities (SMEs)	T2	Yes
03.40	23.040	Technical realisation of Short Message Service	T2	Yes
03.40	23.140	Multimedia Messaging Service (MMS)	T2	Yes
03.41	23.041	Technical Realization of Cell Broadcast Service	T2	Yes
03.42	23.042	Compression algorithm for SMS	T2	Yes
03.45	43.045	Technical Realization of Facsimile Group 3 Service - transparent	N3	Yes
03.48	43.048	Security Mechanisms for SIM Toolkit Application ; Stage 2	T3	Yes
03.50	43.050	Transmission Planning Aspects of the Speech Service in the GSM Public Land Mobile Network (PLMN) System	S4	Yes

03.52	43.052	Lower layers of the GSM Cordless Telephony System (CTS) radio interface ; Stage 2	GP	Yes
03.55	43.055	Dual Transfer Mode (DTM); Stage 2	G1	Yes
03.57	23.057	Mobile Station Application Execution Environment (MExE)	T2	Yes
03.58	43.058	Characterisation, test methods and quality assessment for handsfree Mobile Stations (MSs)	S4	Yes
03.59	43.059	Location services (LCS) GERAN; Stage 2	GP	Yes
03.60	23.060	General Packet Radio Service (GPRS) Service description; Stage 2	S2	Yes
03.63	43.063	Packet Data on Signalling channels service (PDS) Service description, Stage 2	N1	Yes
03.64	43.064	Overall description of the GPRS radio interface; Stage 2	G1	Yes
03.66	23.066	Support of GSM Mobile Number Portability (MNP) stage 2	N4	Yes
03.67	23.067	Enhanced Multi-Level Precedence and Preemption Service (EMLPP) ; Stage 2	N4	Yes
03.68	43.068	Voice Group Call Service (VGCS); Stage 2	N1	Yes
03.69	43.069	Voice Broadcast service (VBS); Stage 2	N1	Yes
03.71	43.071	Location services (LCS); Stage 2	S2	Yes
03.72	23.072	Call Deflection Supplementary Service ; Stage 2	N4	Yes
03.73	23.073	Support of Localised Service Area (SoLSA) ; Stage 2	N4	Yes
03.78	23.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2	N2	Yes
03.79	23.079	Support of Optimal Routeing - Phase 1 ; Stage 2	N4	Yes
03.81	23.081	Line Identification Supplementary Services ; Stage 2	N4	Yes
03.82	23.082	Call Forwarding (CF) Supplementary Services ; Stage 2	N4	Yes
03.83	23.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service ; Stage 2	N4	Yes
03.84	23.084	MultiParty (MPTY) Supplementary Service ; Stage 2	N4	Yes
03.85	23.085	Closed User Group (CUG) Supplementary Service ; Stage 2	N4	Yes
03.86	23.086	Advice of Charge (AoC) Supplementary Service ; Stage 2	N4	Yes
03.87	23.087	User-to-User Signalling (UUS) ; Stage 2	N4	Yes
03.88	23.088	Call Barring (CB) Supplementary Service ; Stage 2	N4	Yes
03.90	23.090	Unstructured Supplementary Service Data (USSD) ; Stage 2	N4	Yes
03.91	23.091	Explicit Call Transfer (ECT) Supplementary Service ; Stage 2	N4	Yes
03.93	23.093	Call Completion to Busy Subscriber (CCBS) ; Stage 2	N4	Yes
03.94	23.094	Follow Me Stage 2	N4	Yes
03.96	23.096	Name Identification Supplementary Service ; Stage 2	N4	Yes
03.97	23.097	Multiple Subscriber Profile (MSP); Stage 2	N4	Yes
04.01	44.001	Mobile Station - Base Station System (MS - BSS) Interface General Aspects and Principles	N1	Yes
04.02	24.002	GSM-UMTS Public Land Mobile Network (PLMN) Access Reference Configuration	N1	Yes
04.03	44.003	Mobile Station - Base Station System (MS - BSS) Interface Channel Structures and Access Capabilities	G2	Yes
04.04	24.004	Layer 1 - General Requirements	G2	Yes
04.04	44.004	Layer 1 - General Requirements	G2	Yes
04.05	44.005	Data Link (DL) Layer General Aspects	G2	Yes
04.06	44.006	Mobile Station - Base Stations System (MS - BSS) Interface Data Link (DL) Layer Specification	G2	Yes
04.07	24.007	Mobile Radio Interface Signalling Layer 3 - General Aspects	N1	Yes
04.08	24.008	Mobile Radio Interface Layer 3 specification; Core Network Protocols ; Stage 3	N1	Yes
04.08	44.008	Mobile radio interface layer 3 specification	N1	Yes
04.10	24.010	Mobile Radio Interface Layer 3 - Supplementary Services Specification - General Aspects	N4	Yes
04.11	24.011	Point-to-Point (PP) Short Message Service (SMS) Support on Mobile Radio Interface	N1	Yes
04.12	44.012	Short Message Service Cell Broadcast (SMSCB) Support on the Mobile Radio Interface	G2	Yes
04.13	44.013	Performance Requirements on Mobile Radio Interface	N1	Yes
04.14	44.014	Individual equipment type requirements and interworking; Special	G2	Yes

		conformance testing functions		
04.18	44.018	Mobile Radio Interface - Layer 3 Specification RR part	G2	Yes
04.21	44.021	Rate Adaption on the Mobile Station - Base Station System (MS-BSS) Interface	N3	Yes
04.22	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	N3	Yes
04.31	44.031	Location Services LCS RR LCS Protocol	G2	Yes
04.35	44.035	Location Services LCS Stage 3 E-OTD Enhanced Observed	G2	Yes
04.56	44.056	GSM Cordless Telephony System (CTS), (Phase 1) CTS Radio Interface Layer 3 Specification	N1	Yes
04.57	44.057	GSM Cordless Telephony System (CTS), (Phase 1) CTS CTS supervising system Layer 3 Specification	N1	Yes
04.60	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
04.63	44.063	Packet Data on Signalling channels Service (PDS) Service Description, Stage 3	N1	Yes
04.64	44.064	Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) Layer Specification	N1	Yes
04.65	44.065	Mobile Station (MS) - Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SNDCP)	N1	Yes
04.67	24.067	Enhanced Multi-Level Precedence and Pre-emption service (eMLPP) ; Stage 3	N4	Yes
04.68	44.068	Group Call Control (GCC) Protocol	N1	Yes
04.69	44.069	Broadcast Call Control (BCC) protocol	N1	Yes
04.71	44.071	Location services (LCS) stage 3	G2	Yes
04.72	24.072	Call Deflection Supplementary Service ; Stage 3	N4	Yes
04.80	24.080	Mobile radio Layer 3 Supplementary Service specification - Formats and coding	N4	Yes
04.81	24.081	Line Identification Supplementary Service ; Stage 3	N4	Yes
04.82	24.082	Call Forwarding Supplementary Service ; Stage 3	N4	Yes
04.83	24.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service ; Stage 3	N4	Yes
04.84	24.084	MultiParty (MPTY) Supplementary Service ; Stage 3	N4	Yes
04.85	24.085	Closed User Group (CUG) Supplementary Service ; Stage 3	N4	Yes
04.86	24.086	Advice of Charge (AoC) Supplementary Service ; Stage 3	N4	Yes
04.87	24.087	User-to-User Signalling (UUS) ; Stage 3	N4	Yes
04.88	24.088	Call Barring (CB) Supplementary Service ; Stage 3	N4	Yes
04.90	24.090	Unstructured Supplementary Service Data (USSD) ; Stage 3	N4	Yes
04.91	24.091	Explicit Call Transfer (ECT) Supplementary Service ; Stage 3	N4	Yes
04.93	24.093	Call Completion to Busy Subscriber (CCBS) ; Stage 3	N4	Yes
04.96	24.096	Name Identification Supplementary Service ; Stage 3	N4	Yes
05.01	45.001	Physical Layer on the Radio Path (General Description)	G1	Yes
05.02	45.002	Multiplexing and Multiple Access on the Radio Path	G1	Yes
05.03	45.003	Channel coding	G1	Yes
05.05	45.005	Radio transmission and reception	G1	Yes
05.08	45.008	Radio subsystem link control	G1	Yes
05.09	45.009	Link adaptation	G1	Yes
05.10	45.010	Radio subsystem synchronization	G1	Yes
05.22	45.022	Radio link management in hierarchical networks	GP	Yes
05.50	45.050	Background for RF Requirements	GP	Yes
05.56	45.056	CTS-FP Radio Sub-system	GP	Yes
06.01	46.001	Full Rate Speech Processing Functions	S4	Yes
06.02	46.002	Half Rate Speech Processing Functions	S4	Yes
06.06	46.006	Half Rate Speech: ANSI-C Code for GSM Half Rate Speech Codec	S4	Yes
06.07	46.007	Half Rate Speech: Test Sequence for GSM Half Rate Speech Codec	S4	Yes
06.08	46.008	Half Rate Speech; Performance Characterization of the GSM Half Rate speech codec	S4	Yes
06.10	46.010	Full Rate Speech Transcoding	S4	Yes

06.11	46.011	Substitution and Muting of Lost Frames for Full Rate Speech Channels	S4	Yes
06.12	46.012	Comfort Noise Aspects for Full Rate Speech Traffic Channels	S4	Yes
06.20	46.020	Half Rate Speech Transcoding	S4	Yes
06.21	46.021	Half rate speech; Substitution and muting of lost frames for half rate speech traffic channels	S4	Yes
06.22	46.022	Comfort Noise Aspects for Half Rate Speech Traffic Channels	S4	Yes
06.31	46.031	Discontinuous Transmission (DTX) for Full Rate Speech Traffic Channels	S4	Yes
06.32	46.032	Voice Activity Detection (VAD)	S4	Yes
06.41	46.041	Discontinuous Transmission (DTX) for Half Rate Speech Traffic Channels	S4	Yes
06.42	46.042	Voice Activity Detection (VAD) for Half Rate Speech Traffic Channels	S4	Yes
06.51	46.051	GSM Enhanced full rate speech processing functions: General description	S4	Yes
06.53	46.053	ANSI-C code for the GSM Enhanced full rate speech codec	S4	Yes
06.54	46.054	Test sequences for the GSM Enhanced Full Rate (EFR)	S4	Yes
06.55	46.055	Performance characterisation of the GSM EFR Speech Codec	S4	Yes
06.60	46.060	Enhanced full rate speech transcoding	S4	Yes
06.61	46.061	Substitution and muting of lost frames for enhanced full rate speech traffic channels	S4	Yes
06.62	46.062	Comfort noise aspects for Enhanced Full Rate (EFR) speech traffic channels	S4	Yes
06.76	46.076	Adaptive Multi-Rate (AMR) speech codec; Study phase report	S4	Yes
06.77	26.077	Minimum Performance Requirements for Noise Suppressor Application to the AMR Speech Encoder	S4	Yes
06.78	46.078	Results of the AMR noise suppression selection phase	S4	Yes
06.81	46.081	Discontinuous Transmission (DTX) for enhanced full rate speech traffic channels	S4	Yes
06.82	46.082	Voice Activity Detection (VAD) for enhanced full rate speech traffic channels	S4	Yes
06.85	46.085	Subjective tests on the interoperability of the HR/FR/EFR speech codecs; single, tandem and tandem free operation	S4	Yes
07.01	27.001	General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)	N3	Yes
07.02	27.002	Terminal Adaptation Functions (TAF) for services using Asynchronous bearer capabilities	N3	Yes
07.03	27.003	Terminal Adaptation Functions (TAF) for services using Synchronous bearer capabilities	N3	Yes
07.03	27.103	Wide Area Network Synchronisation	T2	Yes
07.05	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
07.07	27.007	AT command set for 3G User Equipment (UE)	T2	Yes
07.10	27.010	Terminal Equipment to User Equipment (TE-UE) multiplexer protocol User Equipment (UE)	T2	Yes
07.60	27.060	GPRS Mobile Stations supporting GPRS	N3	Yes
08.01	48.001	General Aspects on the BSS-MSC Interface	G2	Yes
08.02	48.002	Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface - Interface Principles	G2	Yes
08.04	48.004	Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface Layer 1 Specification	G2	Yes
08.06	48.006	Signalling Transport Mechanism Specification for the Base Station System - Mobile Services Switching Centre (BSS-MSC) Interface	G2	Yes
08.08	48.008	Mobile Switching Centre - Base Station system (MSC-BSS) Interface Layer 3 Specification	G2	Yes
08.14	48.014	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) interface; Gb Interface Layer 1	G2	Yes
08.16	48.016	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) Interface; Network Service	G2	Yes
08.18	48.018	General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN); BSS GPRS Protocol	G2	Yes
08.20	48.020	Rate Adaptation on the Base Station System - Mobile Service Switching Centre (BSS-MSC) Interface	N3	Yes
08.31	48.031	Location Services LCS: Serving Mobile Location Centre - Serving Mobile Location Centre (SMLC - SMLC); SMLCPP specification	G2	Yes
08.51	48.051	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface	G2	Yes

		General Aspects		
08.52	48.052	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface - Interface Principles	G2	Yes
08.54	48.054	BSC-BTS : Layer 1 Structure of Physical Circuits	G2	Yes
08.56	48.056	BSC-BTS Layer 2 Specification	G2	Yes
08.58	48.058	Base Station Controller - Base Transceiver Station (BSC-BTS) Interface Layer 3 Specification	G2	Yes
08.60	48.060	Inband Control of Remote Transcoders and Rate Adaptors for EFR/FR	GP	Yes
08.61	48.061	Inband Control of Remote Transcoder and Rate Adaptors;(Half Rate)	GP	Yes
08.62	48.062	Inband Tandem Free Operation (TFO) of Speech Codecs; Service Description; Stage 3	S4	Yes
08.71	48.071	Location services (LCS) SMLC-BSS interface L 3	G2	Yes
09.01	49.001	General Network Interworking Scenarios	N4	Yes
09.02	29.002	Mobile Application Part (MAP)	N4	Yes
09.07	29.007	General requirements on Interworking between the PLMN and the ISDN or PSTN	N3	Yes
09.08	49.008	Application of the Base Station System Application Part (BSSAP) on the E-Interface	N1	Yes
09.10	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
09.11	29.011	Signalling Interworking for Supplementary Services	N4	Yes
09.13	29.013	Signalling interworking between ISDN supplementary services Application Service Element (ASE) and Mobile Application Part (MAP) protocols	N4	Yes
09.16	29.016	Serving GPRS Support Node SGSN - Visitors Location Register (VLR); Gs Interface Network Service Specification	N1	Yes
09.18	29.018	Serving GPRS Support Node SGSN - Visitors Location Register (VLR); Gs Interface Layer 3 Specification	N1	Yes
09.31	49.031	Location Services LCS Extension (BSSAP-LE)	G2	Yes
09.60	29.060	GPRS Tunnelling protocol (GTP) across the Gn and Gp interface	N4	Yes
09.61	29.061	General Packet Radio Service (GPRS); Interworking between the Public Land Mobile Network (PLMN) supporting GPRS and Packet	N3	Yes
09.78	29.078	CAMEL; Stage 3	N2	Yes
10.43	50.043	Support of Localised Service Area (SoLSA); Work Item Status	S1	No
10.56	50.056	Project scheduling and open issues: GSM Cordless Telephony System CTS, Phase 1	S2	No
10.59	50.059	Project scheduling and open issues for EDGE	GP	No
10.89	50.089	GSM to other Systems Handover and Cell Selection/Reselection; Project scheduling and open issues;	GP	No
10.99	50.099	GERAN project plan and open issues	GP	No
11.10-1	51.010-1	Conformance Specification	G4	Yes
11.10-2	51.010-2	Mobile station (MS) conformance specification; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification	G4	Yes
11.10-3	51.010-3	Layer3 (L3) Abstract Test Suite (ATS)	G4	Yes
11.10-4	51.010-4	Mobile Station (MS) Conformance Specification; Part 4: SIM Application Toolkit conformance specification	G4	Yes
11.11	51.011	Specification of the Subscriber Identity Module - Mobile Equipment (SIM-ME) Interface	T3	Yes
11.13	51.013	Test specification for SIM API for Java card	T3	Yes
11.14	51.014	Specification of Subscriber Identity Module - Mobile Equipment (SIM - ME) Interface for SIM Application Toolkit	T3	Yes
11.21	51.021	GSM Radio Aspects Base Station System Equipment Specification	G3	Yes
11.26	51.026	GSM Repeater Equipment Specification	G3	Yes
12.71	52.071	Location Services (LCS); Location services management	S5	Yes

Annex A (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2001-03	SP-11	SP-010212	-	-	Approved and placed under TSG SA Change Control (Rel-4)	2.2.0	4.0.0

History

Document history		
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