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**Technical Specification** 

Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); 3rd Generation mobile system Release 1999 Specifications (3GPP TS 21.101 version 3.2.0 Release 1999)



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#### Foreword

This Technical Specification (TS) has been produced by the ETSI 3<sup>rd</sup> 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.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under www.etsi.org/key .

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#### Foreword

This Technical Specification (TS) has been produced by the 3<sup>rd</sup> 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 3<sup>rd</sup> generation mobile system specifications for Release 1999. The specifications and reports of 3GPP Release 1999 have a major version number 3 (e.g. 3.x.y).

Release 1999 Technical Specifications and Technical Reports were functionally frozen at the 6<sup>th</sup> Technical Specification Group meetings (TSG#6) in December 1999.

- 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 1999 version 3.x.y specifications throughout 2000.

### 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: "3GPP Working methods".
- [3] GSM 01.01: "GSM specification set".

#### 3 Abbreviations

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

### 4 General

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

The present document identifies the 3G system set of specifications required to implement Release 1999.

NOTE: GSM Release 1999 also consists of many enhanced features developed within the 3<sup>rd</sup> Generation Partnership Project. GSM Specification GSM 01.01 identifies the specifications and Reports of GSM release 1999.

#### 4.1 Specification and report numbering

The numbering scheme for specifications is described in 21.900.

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#### 4.2 (void)

### 5 Specifications and Reports of 3G Release 1999

NOTE 1: (void)

- NOTE 2: The final 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 3: The algorithm specifications in the 35-series are available only under licence.

NOTE 4: "Type" indicates Technical Specification (TS) or Technical Report (TR).

| Type Number |        | umber Title  |    | For         |
|-------------|--------|--|----|-------------|
|             |        |  |    | publication |
| TS          | 21.101 | 3rd Generation mobile system Release 1999 Specifications   | S  | Yes         |
| TS          | 21.111 | USIM and IC card requirements  | Т3 | Yes         |
| TS          | 21.133 | Security Threats and Requirements  | S3 | Yes         |
| TR          | 21.810 | Report on multi-mode UE issues; ongoing work and identified additional work                      | T2 | No          |
| TR          | 21.900 | 3GPP Working methods   | S  | Yes         |
| TR          | 21.904 | UE Capability Requirements (UCR)   | T2 | Yes         |
| TR          | 21.905 | 3G Vocabulary  | S1 | Yes         |
| TR          | 21.910 | Multi-mode UE issues; categories, principles and procedures                                      | T2 | Yes         |
| TR          | 21.978 | Feasibility Technical Report – CAMEL Control of VoIP Services                                    | N2 | Yes         |
| TS          | 22.001 | Principles of CircuitTelecommunication Services Supported by a Public Land Mobile Network (PLMN) | S1 | Yes         |
| TS          | 22.002 | Circuit Bearer Services Supported by a PLMN  | S1 | Yes         |
| TS          | 22.003 | Circuit Teleservices supported by a Public Land Mobile Network (PLMN)                            | S1 | Yes         |
| TS          | 22.004 | General on Supplementary Services  | S1 | Yes         |
| TS          | 22.011 | Service accessibility  | S1 | Yes         |
| TS          | 22.016 | International Mobile Equipment Identities (IMEI)   | S1 | Yes         |
| TS          | 22.022 | Personalisation of GSM ME Mobile functionality specification - Stage 1                           | S3 | Yes         |
| TS          | 22.024 | Description of Charge Advice Information (CAI)   | S1 | Yes         |
| TS          | 22.030 | Man-Machine Interface (MMI) of the Mobile Station (MS)   | S1 | Yes         |
| TS          | 22.034 | High Speed Circuit Switched Data (HSCSD) - Stage 1   | S1 | Yes         |
| TS          | 22.038 | SIM application toolkit (SAT); Stage 1   | S1 | Yes         |
| TS          | 22.041 | Operator Determined Call Barring   | S1 | Yes         |
| TS          | 22.042 | Network Identity and Time Zone (NITZ), stage 1   | S1 | Yes         |
| TS          | 22.043 | Support of Localised Service Area (SoLSA) - Stage 1  | S1 | Yes         |
| TS          | 22.057 | Mobile Station Application Execution Environment (MExE); Stage 1                                 | S1 | Yes         |
| TS          | 22.060 | General Packet Radio Service (GPRS); Stage 1   | S1 | Yes         |
| TS          | 22.066 | Support of Mobile Number Portability (MNP); Stage 1  | S1 | Yes         |
| TS          | 22.067 | enhanced Multi-Level Precedence and Pre-emption service (eMLPP) - Stage 1                        | S1 | Yes         |
| TS          | 22.071 | Location Services (LCS); Stage 1 (T1P1)  | S1 | Yes         |
| TS          | 22.072 | Call Deflection (CD); Stage 1  | S1 | Yes         |
| TS          | 22.078 | CAMEL; Stage 1   | S1 | Yes         |
| TS          | 22.079 | Support of Optimal Routing; Stage 1  | S1 | Yes         |
| TS          | 22.081 | Line Identification Supplementary Services; Stage 1  | S1 | Yes         |
| TS          | 22.082 | Call Forwarding (CF) Supplementary Services; Stage 1   | S1 | Yes         |
| TS          | 22.083 | Call Waiting (CW) and Call Hold (HOLD) Supplementary Services;<br>Stage 1                        | S1 | Yes         |
| TS          | 22.084 | MultiParty (MPTY) Supplementary Service; Stage 1   | S1 | Yes         |
| TS          | 22.085 | Closed User Group (CUG) Supplementary Services; Stage 1  | S1 | Yes         |
| TS          | 22.086 | Advice of Charge (AoC) Supplementary Services; Stage 1   | S1 | Yes         |
| TS          | 22.087 | User-to-user signalling (UUS); Stage 1   | S1 | Yes         |

| Туре | Number | Title   | WG | For publication |
|------|--------|---|----|-----------------|
| TS   | 22.088 | Call Barring (CB) Supplementary Services; Stage 1   | S1 | Yes             |
| TS   | 22.090 | Unstructured Supplementary Service Data (USSD); Stage 1   | S1 | Yes             |
| TS   | 22.091 | Explicit Call Transfer (ECT) Supplementary Service; Stage 1   | S1 | Yes             |
| TS   | 22.093 | Call Completion to Busy Subscriber (CCBS); Stage 1  | S1 | Yes             |
| TS   | 22.094 | Follow Me Stage 1   | S1 | Yes             |
| TS   | 22.096 | Calling Name Presentation (CNAP); Stage 1 (T1P1)  | S1 | Yes             |
| TS   | 22.097 | Multiple Subscriber Profile (MSP); Stage 1  | S1 | Yes             |
| TS   | 22.100 | UMTS Phase 1  | S1 | Yes             |
| TS   | 22.101 | UMTS Service principles   | S1 | Yes             |
| TS   | 22.105 | Services & Service capabilities   | S1 | Yes             |
| TS   | 22.115 | Service Aspects Charging and billing  | S1 | Yes             |
| TS   | 22.121 | Provision of Services in UMTS - The Virtual Home Environment;<br>Stage 1  | S1 | Yes             |
| TS   | 22.129 | Handover Requirements between UMTS and GSM or other Radio Systems   | S1 | Yes             |
| TS   | 22.135 | Multicall Stage 1   | S1 | Yes             |
| TS   | 22.140 | Multimedia Messaging Service Stage 1  | S1 | Yes             |
| TR   | 22.945 | Study of provision of fax service in GSM and UMTS   | T2 | Yes             |
| TR   | 22.971 | Automatic establishment of roaming relationships  | S1 | Yes             |
| TR   | 22.975 | Advanced addressing   | S1 | Yes             |
| TS   | 23.002 | Network Architecture  | S2 | Yes             |
| TS   | 23.003 | Numbering, Addressing and Identification  | N4 | Yes             |
| TS   | 23.007 | Restoration procedures  | N4 | Yes             |
| TS   | 23.008 | Organisation of subscriber data   | N4 | Yes             |
| TS   | 23.009 | Handover procedures   | N1 | Yes             |
| TS   | 23.011 | Technical Realization of Supplementary Services - General Aspects   | N4 | Yes             |
| TS   | 23.012 | Location management procedures  | N4 | Yes             |
| TS   | 23.014 | Support of Dual Tone Multi Frequency (DTMF) signalling  | N1 | Yes             |
| TS   | 23.015 | Technical realisation of Operator Determined Barring (ODB)  | N4 | Yes             |
| TS   | 23.016 | Subscriber data management - Stage 2  | N4 | Yes             |
| TS   | 23.018 | Basic Call Handling - Technical realisation   | N4 | Yes             |
| TS   | 23.032 | Universal Geographical Area Description (GAD)   | S2 | Yes             |
| TS   | 23.034 | High Speed Circuit Switched Data (HSCSD) - Stage 2  | N1 | Yes             |
| TS   | 23.038 | Alphabets & Language  | T2 | Yes             |
| TR   | 23.039 | Interface Protocols for the Connection of Short Message Service<br>Centers (SMSCs) to Short Message Entities (SMEs) | T2 | Yes             |
| TS   | 23.040 | Technical realisation of Short Message Service  | T2 | Yes             |
| TS   | 23.041 | Technical Realization of Cell Broadcast Service   | T2 | Yes             |
| TS   | 23.042 | Compression algorithm for SMS   | T2 | Yes             |
| TS   | 23.054 | Shared Interworking Functions - Stage 2   | N3 | Yes             |
| TS   | 23.057 | Mobile Station Application Execution Environment (MExE)   | T2 | Yes             |
| TS   | 23.060 | General Packet Radio Service (GPRS) Service description; Stage 2  | S2 | Yes             |
| TS   | 23.066 | Support of GSM Mobile Number Portability (MNP) stage 2  | N4 | Yes             |
| TS   | 23.067 | Enhanced Multi-Level Precedence and Preemption Service (EMLPP) -<br>Stage 2   | N4 | Yes             |
| TS   | 23.072 | Call Deflection Supplementary Service - Stage 2   | N4 | Yes             |
| TS   | 23.073 | Support of Localised Service Area (SoLSA) - Stage 2   | N4 | Yes             |
| TS   | 23.078 | CAMEL Stage 2   | N2 | Yes             |
| TS   | 23.079 | Support of Optical Routeing - Phase 1 - Stage 2   | N4 | Yes             |
| TS   | 23.081 | Line Identification Supplementary Services - Stage 2  | N4 | Yes             |
| TS   | 23.082 | Call Forwarding (CF) Supplementary Services - Stage 2   | N4 | Yes             |
| TS   | 23.083 | Call Waiting (CW) and Call Hold (HOLD) Supplementary Service -<br>Stage 2   | N4 | Yes             |
| TS   | 23.084 | MultiParty (MPTY) Supplementary Service - Stage 2   | N4 | Yes             |
| TS   | 23.085 | Closed User Group (CUG) Supplementary Service - Stage 2   | N4 | Yes             |
| TS   | 23.086 | Advice of Charge (AoC) Supplementary Service - Stage 2  | N4 | Yes             |
| TS   | 23.087 | User-to-User Signalling (UUS) - Stage 2   | N4 | Yes             |
| TS   | 23.088 | Call Barring (CB) Supplementary Service - Stage 2   | N4 | Yes             |
| TS   | 23.090 | Unstructured Supplementary Service Data (USSD) - Stage 2  | N4 | Yes             |
| TS   | 23.091 | Explicit Call Transfer (ECT) Supplementary Service - Stage 2  | N4 | Yes             |
| TS   | 23.093 | Call Completion to Busy Subscriber (CCBS) - Stage 2   | N4 | Yes             |

| Туре | Number | Title   | WG | For publication |
|------|--------|---|----|-----------------|
| TS   | 23.094 | Follow Me Stage 2   | N4 | Yes             |
| TS   | 23.096 | Name Identification Supplementary Service - Stage 2   | N4 | Yes             |
| TS   | 23.097 | Multiple Subscriber Profile (MSP); Stage 2  | N4 | Yes             |
| TS   | 23.101 | General UMTS Architecture   | S2 | Yes             |
| TS   | 23.107 | Quality of Service, Concept and Architecture  | S2 | Yes             |
| TS   | 23.108 | Mobile Radio Interface Layer 3 specification Core Network Protocols stage 2 (structured procedures)   | N1 | Yes             |
| TS   | 23.110 | UMTS Access Stratum Services and Functions  | S2 | Yes             |
| TS   | 23.116 | Super Charger - Stage 2   | N4 | Yes             |
| TS   | 23.119 | Gateway Location Register (GLR) - Stage2  | N4 | Yes             |
| TS   | 23.121 | Architecture Requirements for release 99  | S2 | Yes             |
| TS   | 23.122 | Non Access Stratum functions related to Mobile Station (MS) in idle mode  | N1 | Yes             |
| TS   | 23.127 | Virtual Home Environment; Stage 2   | S2 | Yes             |
| TS   | 23.135 | Multicall Stage 2   | N4 | Yes             |
| TS   | 23.140 | Multimedia Messaging Service (MMS)  | T2 | Yes             |
| TS   | 23.153 | Out of Band Transcoder Control - Stage 2  | N4 | Yes             |
| TS   | 23.171 | Functional stage 2 description of location services in UMTS   | S2 | Yes             |
| TR   | 23.814 | Separating RR and MM specific parts of the MS Classmark   | N1 | No              |
| TR   | 23.908 | Technical report on Pre-Paging  | N4 | Yes             |
| TR   | 23.909 | Technical report on the Gateway Location Register   | N4 | Yes             |
| TR   | 23.910 | Circuit Switched Data Bearer Services   | N3 | Yes             |
| TR   | 23.911 | Technical report on Out-of-band transcoder control  | N4 | Yes             |
| TR   | 23.912 | Technical report on Super-Charger   | N4 | Yes             |
| TR   | 23.922 | Architecture for an All IP network  | S2 | Yes             |
| TR   | 23.923 | Combined GSM and Mobile IP mobility handling in UMTS IP CN  | S2 | Yes             |
| TR   | 23.925 | UMTS Core network based ATM transport   | S2 | Yes             |
| TR   | 23.930 | Iu Principles   | S2 | Yes             |
| TR   | 23.972 | Circuit Switched Multimedia Telephony   | N1 | Yes             |
| TS   | 24.002 | GSM-UMTS Public Land Mobile Network (PLMN) Access Reference<br>Configuration  | N1 | Yes             |
| TS   | 24.007 | Mobile Radio Interface Signalling Layer 3 - General Aspects   |    | Yes             |
| TS   | 24.008 | Mobile Radio Interface Layer 3 specification; Core Network Protocols - Stage 3  | N1 | Yes             |
| TS   | 24.010 | Mobile Radio Interface Layer 3 - Supplementary Services Specification - General Aspects   | N4 | Yes             |
| TS   | 24.011 | Point-to-Point (PP) Short Message Service (SMS) Support on Mobile Radio Interface   | N1 | Yes             |
| TS   | 24.012 | Short Message Service Cell Broadcast (SMSCB) Support on the Mobile Radio Interface  | N4 | Yes             |
| TS   | 24.022 | Radio Link Protocol (RLP) for Data and Telematic Services on the (MS-<br>BSS) Interface and the Base Station System - Mobile-services<br>Switching Centre (BSS-MSC) Interface | N3 | Yes             |
| TS   | 24.030 | Location Services LCS Stage 3 SS (MO-LR)  | N4 | Yes             |
| TS   | 24.067 | Enhanced Multi-Level Precedence and Pre-emption service (eMLPP) - Stage 3   | N4 | Yes             |
| TS   | 24.072 | Call Deflection Supplementary Service - Stage 3   | N4 | Yes             |
| TS   | 24.080 | Mobile radio Layer 3 Supplementary Service specification - Formats<br>and coding  | N4 | Yes             |
| TS   | 24.081 | Line Identification Supplementary Service - Stage 3   | N4 | Yes             |
| TS   | 24.082 | Call Forwarding Supplementary Service - Stage 3   | N4 | Yes             |
| ΤS   | 24.083 | Call Waiting (CW) and Call Hold (HOLD) Supplementary Service -<br>Stage 3   | N4 | Yes             |
| TS   | 24.084 | MultiParty (MPTY) Supplementary Service - Stage 3   | N4 | Yes             |
| TS   | 24.085 | Closed User Group (CUG) Supplementary Service - Stage 3   | N4 | Yes             |
| TS   | 24.086 | Advice of Charge (AoC) Supplementary Service - Stage 3  | N4 | Yes             |
| TS   | 24.087 | User-to-User Signalling (UUS) - Stage 3   | N4 | Yes             |
| TS   | 24.088 | Call Barring (CB) Supplementary Service - Stage 3   | N4 | Yes             |
| TS   | 24.090 | Unstructured Supplementary Service Data (USSD) - Stage 3  | N4 | Yes             |
| TS   | 24.091 | Explicit Call Transfer (ECT) Supplementary Service - Stage 3  | N4 | Yes             |
| TS   | 24.093 | Call Completion to Busy Subscriber (CCBS) - Stage 3   | N4 | Yes             |

| Туре | Number | Title  | WG | For publication |
|------|--------|--|----|-----------------|
| TS   | 24.096 | Name Identification Supplementary Service - Stage 3                                    | N4 | Yes             |
| TS   | 24.135 | Multicall Stage 3  | N4 | Yes             |
| TS   | 25.101 | UE Radio transmission and reception (FDD)  | R4 | Yes             |
| TS   | 25.102 | UE Radio transmission and reception (TDD)  | R4 | Yes             |
| TS   | 25.104 | UTRA (BS) FDD; Radio transmission and reception  | R4 | Yes             |
| TS   | 25.105 | UTRA (BS) TDD: Radio transmission and reception  | R4 | Yes             |
| TS   | 25.113 | Base station EMC   | R4 | Yes             |
| TS   | 25.123 | Requirements for support of radio resource management (TDD)                            | R4 | Yes             |
| TS   | 25.133 | Requirements for support of radio resource management (FDD)                            | R4 | Yes             |
| TS   | 25.141 | Base station conformance testing (FDD)   | R4 | Yes             |
| TS   | 25.142 | Base station conformance testing (TDD)   | R4 | Yes             |
| TS   | 25.201 | Physical layer -General Description  | R1 | Yes             |
| TS   | 25.211 | Physical channels and mapping of transport channels onto physical channels (FDD)       | R1 | Yes             |
| TS   | 25.212 | Multiplexing and channel coding (FDD)  | R1 | Yes             |
| TS   | 25.213 | Spreading and modulation (FDD)   | R1 | Yes             |
| TS   | 25.214 | Physical layer procedures (FDD)  | R1 | Yes             |
| TS   | 25.215 | Physical layer; Measurements (FDD)   | R1 | Yes             |
| TS   | 25.221 | Physical channels and mapping of transport channels onto physical channels (TDD)       | R1 | Yes             |
| TS   | 25.222 | Multiplexing and channel coding (TDD)  | R1 | Yes             |
| TS   | 25.223 | Spreading and modulation (TDD)   | R1 | Yes             |
| TS   | 25.224 | Pphysical layer procedures (TDD)   | R1 | Yes             |
| TS   | 25.225 | Physical layer; Measurements (TDD)   | R1 | Yes             |
| TS   | 25.301 | Radio Interface Protocol Architecture  | R2 | Yes             |
| TS   | 25.302 | Services provided by the physical layer  | R2 | Yes             |
| TS   | 25.303 | UE functions and inter-layer procedures in connected mode                              | R2 | Yes             |
| TS   | 25.304 | UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode       | R2 | Yes             |
| TS   | 25.305 | Stage 2 Functional Specification of Location Services in UTRAN (LCS)                   | R2 | Yes             |
| TS   | 25.306 | UE Radio Access capabilities definition  | R2 | Yes             |
| TS   | 25.321 | Medium Access Control (MAC) Protocol Specification                                     | R2 | Yes             |
| TS   | 25.322 | Radio Link Control (RLC) Protocol Specification  | R2 | Yes             |
| TS   | 25.323 | Packet Data Convergence Protocol (PDCP) protocol                                       | R2 | Yes             |
| TS   | 25.324 | Broadcast/Multicast (BMC) Services   | R2 | Yes             |
| TS   | 25.331 | Radio Resource Control (RRC) Protocol Specification                                    | R2 | Yes             |
| TS   | 25.401 | UTRAN Overall Description  | R3 | Yes             |
| TS   | 25.402 | Synchronisation in UTRAN Stage 2   | R3 | Yes             |
| TS   | 25.410 | UTRAN Iu Interface: General Aspects and Principles                                     | R3 | Yes             |
| TS   | 25.411 | UTRAN lu interface Layer 1   | R3 | Yes             |
| TS   | 25.412 | UTRAN lu interface signalling transport  | R3 | Yes             |
| TS   | 25.413 | UTRAN lu interface RANAP signalling  | R3 | Yes             |
| TS   | 25.414 | UTRAN lu interface data transport & transport signalling                               | R3 | Yes             |
| TS   | 25.415 | UTRAN lu interface user plane protocols  | R3 | Yes             |
| TS   | 25.419 | UTRAN Iu interface: Cell broadcast protocols between SMS-CBC and RNC                   | R3 | Yes             |
| TS   | 25.420 | UTRAN lur Interface: General Aspects and Principles                                    | R3 | Yes             |
| TS   | 25.421 | UTRAN lur interface Layer 1  | R3 | Yes             |
| TS   | 25.422 | UTRAN lur interface signalling transport   | R3 | Yes             |
| TS   | 25.423 | UTRAN lur interface RNSAP signalling   | R3 | Yes             |
| TS   | 25.424 | UTRAN lur interface data transport & transport signalling for CCH data streams         | R3 | Yes             |
| TS   | 25.425 | UTRAN lur interface user plane protocols for CCH data streams                          | R3 | Yes             |
| TS   | 25.426 | UTRAN lur and lub interface data transport & transport signalling for DCH data streams | R3 | Yes             |
| TS   | 25.427 | UTRAN lur and lub interface user plane protocols for DCH data streams                  | R3 | Yes             |
| TS   | 25.430 | UTRAN lub Interface: General Aspects and Principles                                    | R3 | Yes             |
| TS   | 25.431 | UTRAN lub interface Layer 1  | R3 | Yes             |
| TS   | 25.432 | UTRAN lub interface signalling transport   | R3 | Yes             |

| Туре | Number |  |    | For publication |
|------|--------|--|----|-----------------|
| TS   | 25.433 | UTRAN lub interface NBAP signalling  | R3 | Yes             |
| TS   | 25.434 | UTRAN lub interface data transport & transport signalling for CCH data streams   | R3 | Yes             |
| TS   | 25.435 | UTRAN lub interface user plane protocols for CCH data streams  | R3 | Yes             |
| TS   | 25.442 | UTRAN Implementation Specific O&M Transport  | R3 | Yes             |
| TR   | 25.831 | Study Items for future release   | R3 | No              |
| TR   | 25.832 | Manifestations of Handover and SRNS relocation   | R3 | No              |
| TR   | 25.833 | Physical layer items not for inclusion in Release 99   | R1 | No              |
| TR   | 25.921 | Guidelines and principles for protocol description and error handling  | R2 | Yes             |
| TR   | 25.922 | Radio Resource Management Strategies   | R2 | Yes             |
| TR   | 25.925 | Radio Interface for Broadcast/Multicast Services   | R2 | Yes             |
| TR   | 25.926 | UE Radio Access capabilities definition  | R2 | Yes             |
| TR   | 25.931 | UTRAN Functions, examples on signalling procedures   | R3 | Yes             |
| TR   | 25.941 | Document structure   | R4 | Yes             |
| TR   | 25.943 | Deployment aspects   | R4 | Yes             |
| TR   | 25.944 | Channel coding and multiplexing examples   | R1 | Yes             |
| TR   | 25.990 | Vocabulary for UTRAN   | R4 | Yes             |
| TS   | 26.071 | AMR speech Codec; General description  | S4 | Yes             |
| TS   | 26.073 | AMR speech Codec; C-source code  | S4 | Yes             |
| TS   | 26.074 | AMR speech Codec; Test sequences   | S4 | Yes             |
| TS   | 26.090 | AMR speech Codec; Transcoding Functions  | S4 | Yes             |
| TS   | 26.091 | AMR speech Codec; Error concealment of lost frames   | S4 | Yes             |
| TS   | 26.092 | AMR speech Codec; comfort noise for AMR Speech Traffic Channels  | S4 | Yes             |
| TS   | 26.093 | AMR speech Codec; Source Controlled Rate operation   | S4 | Yes             |
| TS   | 26.094 | AMR Speech Codec; Voice Activity Detector for AMR Speech Traffic Channels  | S4 | Yes             |
| TS   | 26.101 | AMR speech Codec; Frame Structure  | S4 | Yes             |
| TS   | 26.102 | AMR speech Codec; Interface to Iu and Uu   | S4 | Yes             |
| TS   | 26.103 | Codec lists  | S4 | Yes             |
| TS   | 26.104 | AMR speech Codec; Floating point C-Code  | S4 | Yes             |
| TS   | 26.110 | Codec for Circuit switched Multimedia Telephony Service; General Description   | S4 | Yes             |
| TS   | 26.111 | Codec for Circuit switched Multimedia Telephony Service; Modifications to H.324  | S4 | Yes             |
| TS   | 26.131 | Narrow Band (3,1kHz) Speech & Video Telephony Terminal Acoustic Characteristics  | S4 | Yes             |
| TS   | 26.132 | Narrow Band (3,1kHz) Speech & Video Telephony Terminal Acoustic Test Specification.  | S4 | Yes             |
| TR   | 26.911 | Codec for Circuit switched Multimedia Telephony Service;Terminal Implementor's Guide   | S4 | Yes             |
| TR   | 26.912 | Codec for Circuit switched Multimedia Telephony Service; Quantitative performance evaluation of H.324 Annex C over 3G  | S4 | Yes             |
| TR   | 26.913 | Quantitative performance evaluation of real-time packet switched multimedia services over 3G   | S4 | Yes             |
| TR   | 26.915 | QoS for Speech and Multimedia Codec; Quantitative performance evaluation of real-time packet switched multimedia services over 3G                                | S4 | Yes             |
| TR   | 26.975 | Performance characterization of the AMR speech codec   | S4 | Yes             |
| TS   | 27.001 | General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)  | N3 | Yes             |
| TS   | 27.002 | Terminal Adaptation Functions (TAF) for services using Asynchronous bearer capabilities  | N3 | Yes             |
| TS   | 27.003 | Terminal Adaptation Functions (TAF) for services using Synchronous bearer capabilities   | N3 | Yes             |
| TS   | 27.005 | Use of Data Terminal Equipment - Data Circuit terminating Equipment<br>(DTE - DCE) interface for Short Message Service (SMS) and Cell<br>Broadcast Service (CBS) | T2 | Yes             |
| TS   | 27.007 | AT command set for 3G User Equipment (UE)  | T2 | Yes             |
| TS   | 27.010 | Terminal Equipment to User Equipment (TE-UE) multiplexer protocol<br>User Equipment (UE)   | T2 | Yes             |
| TS   | 27.060 | GPRS Mobile Stations supporting GPRS   | N3 | Yes             |
| TS   | 27.103 | Wide Area Network Synchronisation  | T2 | Yes             |
| TR   | 27.901 | Report on Terminal Interfaces - An Overview  | T2 | Yes             |

| Туре     | Number           | Title   | WG  | For publication |  |  |  |
|----------|------------------|---|---|-----------------|--|--|--|
| TR       | 27.903           | Discussion of Synchronisation Standards   | T2  | Yes             |  |  |  |
| TS       | 29.002           | Mobile Application Part (MAP)   | N4  | Yes             |  |  |  |
| TS       | 29.007           | General requirements on Interworking between the PLMN and the ISDN or PSTN  | N3  | Yes             |  |  |  |
| TS       | 29.010           | Information Element Mapping between Mobile Station - Base Station<br>System (MS - BSS) and Base Station System - Mobile-services<br>Switching Centre (BSS - MCS) Signalling Procedures and the Mobile<br>Application Part (MAP) | N4  | Yes             |  |  |  |
| TS       | 29.011           | Signalling Interworking for Supplementary Services  | N4  | Yes             |  |  |  |
| TS       | 29.013           | Signalling interworking between ISDN supplementary services<br>Application Service Element (ASE) and Mobile Application Part (MAP)<br>protocols   | N4  | Yes             |  |  |  |
| TS       | 29.016           | Serving GPRS Support Mode SGSN - Visitors Location Register (VLR);<br>Gs Interface Network Service Specification  | N1  | Yes             |  |  |  |
| TS       | 29.018           | Serving GPRS Support Mode SGSN - Visitors Location Register (VLR);<br>Gs Interface Layer 3 Specification  | N1  | Yes             |  |  |  |
| TS       | 29.060           | GPRS Tunnelling protocol (GTP) across the Gn and Gp interface   | N4  | Yes             |  |  |  |
| TS       | 29.061           | General Packet Radio Service (GPRS); Interworking between the Public Land Mobile Network (PLMN) supporting GPRS and Packet  | N3  | Yes             |  |  |  |
| TS       | 29.078           | CAMEL; Stage 3  | N2  | Yes             |  |  |  |
| TS       | 29.108           | Application of the Radio Access Network Application Part (RANAP) on the E-interface   | R3  | Yes             |  |  |  |
| TS       | 29.119           | GPRS Tunnelling Protocol (GTP) specification for Gateway Location Register (GLR)  | N4  | Yes             |  |  |  |
| TS       | 29.120           | Mobile Application Part (MAP) specification for Gateway Location<br>Register (GLR); stage 3   | N4  | Yes             |  |  |  |
| TS       | 29.198           | Open Services Architecture API part 1   | N5  | Yes             |  |  |  |
| TR       | 29.998           | Open Services Architecture API part 2   | N5  | Yes             |  |  |  |
| TR       | 30.531           | Work Plan and Study Items - RAN WG3   | R3  | No              |  |  |  |
| TS       | 31.101           | UICC-terminal interface; Physical and logical characteristics   | T3  | Yes             |  |  |  |
| TS<br>TS | 31.102           | Characteristics of the USIM Application   | T3<br>T3  | Yes             |  |  |  |
| TS       | 31.110<br>31.111 | Numbering system for telecommunication IC card applications<br>USIM Application Toolkit (USAT)  | T3  | Yes<br>Yes      |  |  |  |
| TS       | 31.120           | Terminal tests for the UICC Interface; part 1   | T3  | Yes             |  |  |  |
| TS       | 31.121           | Terminal tests for the UICC Interface; part 2   | T3  | Yes             |  |  |  |
| TS       | 31.122           | UICC Test Specification   | Т3  | Yes             |  |  |  |
| TS       | 32.005           | Telecommunications Management; Charging and billing; 3G call and event data for the Circuit Switched (CS) domain  | S5  | Yes             |  |  |  |
| TS       | 32.015           | Telecommunications Management; Charging and billing; 3G call and event data for the Packet Switched (PS) domain   | S5  | Yes             |  |  |  |
| TS       | 32.101           | 3G Telecom Management principles and high level requirements  | S5  | Yes             |  |  |  |
| TS       | 32.102           | 3G Telecom Management Architecture  | S5  | Yes             |  |  |  |
| TS       | 32.104           | 3G Performance Management   | S5  | Yes             |  |  |  |
| TS       | 32.105           | Charging & Billing; GSM call and event data for the Circuit Switched<br>(CS) domain   | S5  | Yes             |  |  |  |
| TS       | 32.106-1         | Telecommunication Management; Configuration Management; Part 1:<br>3G configuration management; Concept and requirements  | S5  | Yes             |  |  |  |
| TS       | 32.106-2         | Telecommunication Management; Configuration Management; Part 2:<br>Notification Integration Reference Point; Information Service version 1  | S5  | Yes             |  |  |  |
| TS       | 32.106-3         | Telecommunication Management; Configuration Management; Part 3:<br>Notification Integration Reference Point; CORBA solution set version<br>1:1  | S5  | Yes             |  |  |  |
| TS       | 32.106-4         | Telecommunication Management; Configuration Management; Part 4:<br>Notification Integration Reference Point: CMIP Solution Set Version 1:1  | S5  | Yes             |  |  |  |
| TS       | 32.106-5         | Telecommunication Management; Configuration Management; Part 5: S5<br>Basic Configuration Management IRP information model (including<br>NRM) version 1   |   |                 |  |  |  |
| TS       | 32.106-6         | Telecommunication Management; Configuration Management; Part 6:<br>Basic Configuration Management IRP CORBA solution set version 1:1  | elecommunication Management; Configuration Management; Part 6: S5 |                 |  |  |  |
| TS       | 32.106-7         | Telecommunication Management; Configuration Management; Part 7:<br>Basic Configuration Management IRP CMIP solution set version 1:1   | S5  | Yes             |  |  |  |
| TS       | 32.106-8         | Telecommunication Management; Configuration Management; Part 8: S5 Yes  |   |                 |  |  |  |

| Туре | Number   | Title   | WG  | For publication |
|------|----------|---|-----|-----------------|
|      |          | Name convention for Managed Objects   |     |                 |
| TS   | 32.111-1 | Telecommunication Management; Fault Management; Part 1: 3G fault management requirements  | S5  | Yes             |
| TS   | 32.111-2 | Telecommunication Management; Fault Management; Part 2: Alarm<br>Integration Reference Point: Information Service   | S5  | Yes             |
| TS   | 32.111-3 | Telecommunication Management; Fault Management; Part 3: Alarm<br>Integration Reference Point: CORBA solution set version 1:1                                      | S5  | Yes             |
| TS   | 32.111-4 | Telecommunication Management; Fault Management; Part 4: Alarm<br>Integration Reference Point: CMIP solution set   | S5  | Yes             |
| TS   | 33.102   | Security Architecture   | S3  | Yes             |
| TS   | 33.103   | Security Integration Guidelines   | S3  | Yes             |
| TS   | 33.105   | Cryptographic Algorithm requirements  | S3  | Yes             |
| TS   | 33.106   | Lawful interception requirements  | S3  | Yes             |
| TS   | 33.107   | Lawful interception architecture and functions  | S3  | Yes             |
| TS   | 33.120   | Security Objectives and Principles  | S3  | Yes             |
| TR   | 33.900   | Guide to 3G security  | S3  | Yes             |
| TR   | 33.901   | Criteria for cryptographic Algorithm design process   | S3  | Yes             |
| TR   | 33.902   | Formal Analysis of the 3G Authentication Protocol   | S3  | Yes             |
| TR   | 33.908   | Security Algorithms Group of Experts (SAGE); General report on the design, specification and evaluation of 3GPP standard confidentiality and integrity algorithms | S3  | Yes             |
| TS   | 34.108   | Common Test Environments for User Equipment (UE) Conformance Testing  | T1  | Yes             |
| TS   | 34.109   | Logical Test Interface (TDD and FDD)  | T1  | Yes             |
| TS   | 34.121   | Terminal Conformance Specification, Radio Transmission and Reception (FDD)  | T1  | Yes             |
| TS   | 34.122   | Terminal Conformance Specification, Radio Transmission and Reception (TDD)  | T1  | Yes             |
| TS   | 34.123-1 | UE Conformance Specification, Part 1 – Conformance specification  | T1  | Yes             |
| TS   | 34.123-2 | UE Conformance Specification, Part 2 – ICS  | T1  | Yes             |
| TS   | 34.123-3 | UE Conformance Specification, Part 3 – Abstract Test suites   | T1  | Yes             |
| TS   | 34.124   | Electromagnetic compatibility (EMC) requirements for Mobile terminals<br>and ancillary equipment  | T1  | Yes             |
| TR   | 34.907   | Report on electrical safety requirements and regulations  | T2  | Yes             |
| TR   | 34.925   | Specific Absorption Rate (SAR) requirements and regulations in different regions  | T2  | Yes             |
| TS   | 35.201   | Specification of the 3GPP confidentiality and integrity algorithms;<br>Document 1: f8 and f9 specifications   | S3  | Yes             |
| TS   | 35.202   | Specification of the 3GPP confidentiality and integrity algorithms;<br>Document 2: Kasumi algorithm specification   | Yes |                 |
| TS   | 35.203   | Specification of the 3GPP confidentiality and integrity algorithms;<br>Document 3: Implementors' test data  | S3  | Yes             |
| TS   | 35.204   | Specification of the 3GPP confidentiality and integrity algorithms;<br>Document 4: Design conformance test data   | S3  | Yes             |

# Annex A (void)

#### ETSI TS 121 101 V3.2.0 (2000-12)

## Annex B (informative): Document change history

| Date           | Version               | Information about changes  |
|----------------|-----------------------|--|
| August 1999    | version 0.0.0         | 1 <sup>st</sup> 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   |
| 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 (incomplete) and comments included  |
| September 1999 | version 0.2.0         | 03.41 transferred T2/SMG4 and S2 new specs and reports   |
| October 1999   | version 0.3.0         | Editorial changes and addition of new specifications<br>and reports identified in WGs  |
| October 1999   | version 1.0.0         | Reviewed by TSG CN, T and RAN #5 changes<br>implemented and raised to V1.0.0 for information to<br>TSG SA  |
| November 1999  | version 1.1.0         | Updated after decisions of TSG SA#5  |
| November 1999  | version 1.2.0         | Updated to align with GSM 01.01 after SMG#30   |
| December 1999  | version               | review by SA2  |
| December 1999  | version 2.0.0         | Presented to TSG#6 for approval. Cause 5 considered unstable and should deleted and re-<br>introduced at TSG#5.  |
| December 1999  | version 2.1.0         | Clause 5 removed, specs list updated following TSG SA decisions. Presented for e-mail approval.  |
| January 2000   | version 2.2.0         | Changes resulting from comments made during e-mail approval.   |
| March 2000     | version 2.3.0         | Original clause 5 ("Content of 3G Release 1999")<br>removed. Original clause 6 renumbered to 5. List of<br>specifications in new clause 5 brought up to date.<br>Submitted to TSG-SA #7. |
| March 2000     | Version 2.4.0         | Update of list in view of items presented to TSGs N, R and T #7 for approval.  |
| March 2000     | Version 2.5.0         | Further update of list in view of items presented to TSGs N, R and T #7 for approval. Subclause 4.2.15 for 35-series added.  |
| March 2000     | Version 2.6.0 = 3.0.0 | Minor changes notified after SA#7 before deadline 21 March 2000.   |

|               |         |           |                                       | Cha            | ange history   |
|---------------|---------|-----------|---------------------------------------|----------------|--|
| TSG SA<br>#   | Version | CR        | Tdoc SA                               | New<br>Version | Subject/Comment  |
| SA#7          |         |           |                                       | 3.0.0          | Approved following TSG SA #7 and placed under change control.              |
| March<br>2000 | 3.0.0   |           |                                       | 3.0.1          | Cosmetic edits   |
| SA#8          | 3.0.1   | 001<br>r1 | SP-<br>000182<br>revised<br>by e-mail | 3.1.0          | Specs added to / removed from list (table 1). Minor editorial corrections. |
|               |         | 002       | SP-<br>000280                         |                | Annex A removed (replaced by reference to 21.100).                         |
| SA#10         | 3.1.0   | 003       | SP-<br>000527                         | 3.2.0          | Update list of R99 specs   |

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# History

|        | Document history |             |  |  |  |  |
|--------|------------------|-------------|--|--|--|--|
| V3.0.1 | May 2000         | Publication |  |  |  |  |
| V3.1.0 | July 2000        | Publication |  |  |  |  |
| V3.2.0 | December 2000    | Publication |  |  |  |  |
|        |                  |             |  |  |  |  |
|        |                  |             |  |  |  |  |