

**Technical Specification Group Services and System Aspects Meeting #5, Kyongju, Korea, 11-13 October 1999** *TSGS#5(99)365*

**Source:** Ian Doig, MCC

**Title:** 3GPP Specification 21.101 version 1.0.0

**Document for:** Information

**Agenda Item:** 8

Following the approval of TD SP-99267 on 2G and 3G specification handling by TSG#4 and further endorsement by SMG#29, PCG#2 and the ETSI Board, both 3GPP and ETSI SMG have requested that the Specification sets for 3G R99 and GSM R99 be clearly identified. To this end the support team have produced a draft specification 3G TS 21.101 identifying the basic content and the specifications of 3G R99

Note that an equivalent specification for GSM R99, GSM 01.01 is available for information (TD SP-99366).

TD SP-99267 stated that "The provisional list [of specifications] given in annex A should be further elaborated and reviewed by SMG STCs and TSG WGs in detail". The specifications listed in 3G TS 21.101 have been based on the original list given in TD SP-99267 and information from the TSGs.

Notes for 3G TS 21.101:

Clause 1: Scope should be clarified.

Clause 3: Abbreviations to be added

Clause 4: Included for completeness, this is the PCG agreed numbering Scheme used for guidance.

Clause 5: The content of this clause is included for completeness, however, the present text is unstable and may be inaccurate and should be viewed as an example placeholder. The content of this clause should be elaborated by TSG SA and/or TSG SA2 producing the 3G R99 "Roadmap".

Clause 6: This contains the list of Specifications and reports which make up the content of 3G Release 1999 as identified by 3GPP. The present content of this list has been compiled from the TSG status lists and information supplied by the TSGs RAN, CN and T and some WGs of TSG SA.

TSG SA is invited to assume responsibility for this Specification

3G TS 21.101 is presented to TSG SA#5 as version 1.0.0 for information.

# 3G TS 21.101 V1.0.0 (1999-10)

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*Technical Specification*

## **3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Release 1999 Specifications (3G TS 21.101 version 1.0.0)**

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The present document has been developed within the 3<sup>rd</sup> Generation Partnership Project (3GPP™) and may be further elaborated for the purposes of 3GPP. The present document has not been subject to any approval process by the 3GPP Organisational Partners and shall not be implemented. This Specification is provided for future development work within 3GPP only. The Organisational Partners accept no liability for any use of this Specification. Specifications and reports for implementation of the 3GPP™ system should be obtained via the 3GPP Organisational Partners' Publications Offices.

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Reference

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DTS/TSGSA-0021101U

Keywords

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R99 Specification Report 3G

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# Foreword

This Technical Specification has been produced by the 3GPP.

This TS identifies the 3G system specifications for Release 1999.

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 this TS, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version 3.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 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 specification;

**Ed Note: This draft Specification has been produced following the TSGSA#4 , ETSI Board#20 and PCG #2 approval of the content of TD SP-99267 (SMG#29 TD P-99-546 made some clarifications modifications to TD SP-99267).**

**TD SP-99267 states "The provisional list given in annex A should be further elaborated and reviewed by SMG STCs and TSG WGs". This is an ongoing process, which it is hoped will be completed by TSGSA#6.**

**The content of Clause 5 should be considered unstable and is included only for completeness at this time. The R99 "Roadmap" style content requires further work ( S2 in conjunction with MCC?).**

**The equivalent SMG Specification (GSM 01.01) is being developed in a similar manner For GSM R99 and is aligned with this document.**

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## 1 Scope

The present document identifies the 3G system specifications for Release 1999.

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## 2 References

This TS contains no references.

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## 3 Abbreviations

For the purposes of the present document, the terms and definitions apply.

TBC

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## 4 General

Release 1999 consist 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.

GSM Release 1999 also consist of many enhanced features developed within the 3<sup>rd</sup> Generation Partnership Project.

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

### 4.1 Specification and report numbering

The numbering scheme described is similar to the GSM numbering scheme. The numbering scheme is designed on the experience of GSM in document structure and to create a structure that is easy to understand and remember.

To allow for more flexibility in the 3GPP numbering scheme and to allow for expansion, it has been decided to increase the numbering scheme by one digit to a 2+3 digit system (ab.cde). This permits a maximum number of 999 specifications in one series. It should be noted that the GSM system numbering has almost been completely used up.

The numbering scheme applies to specifications and reports for the 3GPP 3<sup>rd</sup> Generation Mobile System.

Where existing GSM Specifications are enhanced/modified by the TSGs for the 3<sup>rd</sup> Generation Mobile System the specification title and version should change (title reflecting 3<sup>rd</sup> Generation Mobile System). The GSM number (ab) should be increased by 20 and a "c" digit equal to zero added (e.g. GSM 07.07 becomes 3GTS 27.007) indicating the GSM heritage of the Specification.

For newly created 3GPP Specifications the "c" digit should not be equal to zero.

Existing 3<sup>rd</sup> Generation specifications transferred from ETSI SMG should have a "c" digit equal to one e.g. SMG UMTS TS 22.00 becomes 3G TS 22.100.

For newly created 3GPP Technical reports the "c" digit should normally be equal to nine e.g. A report in the 23 series will have a number 23.9de. The "c" digit equal to eight may be used for over-spill of the ab.9de range, or allocated to reports not intended for external circulation.

Specification numbers will be allocated on request by a centralised point within the 3GPP support group (see section 4.1 of TR 21.900). A particular Series will not necessarily remain within, or be the sole responsibility of a particular TSG or WG.

The following Series titles and descriptions should be used for guidance only and may be further developed with experience.

Specifications for Release 1999 of the 3<sup>rd</sup> Generation mobile system are identified by the "**ab.cde**" numbering scheme.

## 4.2 Specification series

In general the Specification series is identified as follows:

### 4.2.1 21-series

#### **Requirements specifications**

These specifications are often transient and contain requirements towards other specifications. They may become obsolete when technical solutions have been fully specified; they could then, e.g., be replaced by reports describing the performance of the system, they could be deleted without replacement or be kept for historical reasons but turned into background material. When found necessary and appropriate, the transient or permanent nature of a requirement specification may be expressed in its scope.

### 4.2.2 22-series

#### **Service aspects**

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

### 4.2.3 23-series

#### **Technical realisation**

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

### 4.2.4 24-series

#### **Signalling protocols (UE - CN network)**

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

### 4.2.5 25-series

#### **UTRA aspects**

#### 4.2.5.1 25.100-series

##### **UTRA radio performance aspects**

This series defines the radio performance of UTRAN.

#### 4.2.5.2 25.200-series

##### **UTRA radio aspects**

This series defines the (Physical) layer 1 of UTRA.

#### 4.2.5.3 25.300-series

##### **UTRA radio interface architecture, layer 2 and layer 3 aspects.**

This series defines the layer 2/3 of the UMTS radio.

#### 4.2.5.4 25.400-series

##### **UTRA Network aspects**

This series defines the Iub, Iur and Iu interfaces within UTRAN

#### 4.2.6 26-series

##### **Codecs (speech, video, etc. )**

This series defines speech codecs and other codecs (video etc., to be identified) for the 3GPP 3<sup>rd</sup> Generation Mobile System.

#### 4.2.7 27-series

##### **Data**

This series defines the functions necessary to support data applications.

#### 4.2.8 28-series

##### **Signalling protocols (RSS - network part )**

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

#### 4.2.9 29-series

##### **Signalling protocols (NSS )**

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

#### 4.2.10 30-series

##### **Program management**

This series contains the 3GPP 3<sup>rd</sup> Generation Mobile System, Project plans/project work programme and stand alone documents for major work items.

#### 4.2.11 31-series

##### **UIM**

This series specifies the User Identity Module (UIM) and the interfaces between UIM and other entities.

#### 4.2.12 32-series

##### **Operation and maintenance**

This series defines the application of TMN for the 3GPP 3<sup>rd</sup> Generation Mobile System and other functions for operation, administration and maintenance of a 3<sup>rd</sup> Generation Mobile System network.



## 4.2.13 33-series

### Security aspects

This series contains specifications of security functions for the 3GPP 3<sup>rd</sup> Generation Mobile System.

## 4.2.14 34-series

### Test specifications

This series contains the test specifications for the 3GPP 3<sup>rd</sup> Generation Mobile System.

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# 5 Content of 3G Release 1999

## 5.1 GSM only Work Areas

NOTE: 3rd Generation specifications may contain GSM R99 Specific parts.

Title
Enhanced Data rates for GSM Evolution (EDGE) - BSS Part
Enhanced Data rates for GSM Evolution (EDGE) - NSS Part
General Packet Radio Service Phase 2 (GPRS) – radio part
GSM on 450 MHz Frequency Band
BSS co-ordination of Radio Resource allocation for class A GPRS services - GSM Radio Access (R99)
BSS co-ordination of Core Network Resource allocation for class A GPRS services -GSM-3G Core Network (R99)

## 5.2 Common GSM/3G Work Areas

Title
Access to ISPs and Intranets in GPRS Phase 2 – Wireless/Remote Access to LANs (R99)
Access to ISPs and Intranets in GPRS Phase 2; Separation of General Packet Radio Service (GPRS) bearer establishment and ISP service environment setup (R99)
Advanced Addressing
Architecture of the GSM-UMTS Platform
Architecture overview of the GSM-UMTS System
Automatic Establishment of Roaming Relations
Call Forwarding Enhancements (CFE)
Calling Name Presentation – Euro (CNAP-EU)
CAMEL Phase 3
Charging and Billing for GPRS – Advice of Charge
Charging and Billing for GPRS – Hot Billing
Charging and Billing for GPRS – Pre-Paid
Enhanced QoS Support in GPRS
Follow Me
Fraud Information Gathering System applied to GPRS
General Packet Radio Service Phase 2 (GPRS) – network part
Generic signalling mechanism for service support
GPRS - Point-To-Multipoint Services
GPRS Mobile IP Interworking
Idle mode classmark
Immediate Service Termination (IST) : CAMEL free solution
Impact of Telecommunications Data Protection Directive on GSM Standards
Interworking with Mobile Satellite Systems
LAPDm performance enhancement
MexE Release 99
MS and Network-Resident Execution Environments (MS/N-RExE)
MS Antenna Test Method
Multiple Subscriber Profile (MSP) based on CAMEL ph. 3
Noise Suppression for AMR speech codec
Provision of text telephony service in GSM and UMTS
Service Continuity and Provision of VHE via GSM/UMTS
Service to GSM Handportables in trains
Specification of a bearer independent protocol for SAT applications to exchange data over the GSM network
SS7 Security
Study on Combined GSM and Mobile IP Mobility Handling in UMTS IP CN
Study on provision of facsimile services in GSM and UMTS
Support for real time services in the Packet domain for GSM/GPRS/UMTS R99
Tandem Free Operation of speech codecs in Mobile-to-Mobile Calls (MMCs) : out-band
Tandem free aspects for UMTS and between UMTS and 2G systems
USSD Enhancements
Virtual Home Environment
Codec for Low Bitrate Multimedia Telephony Service
Support of non-realtime Multimedia Messaging Service
Mandatory Speech Codec for Narrowband Telephony Service
WAP WAE User Agent / SIM toolkit interworking
Generic Logical and Physical specification for IC card and terminal interface
Specification of administrative commands and functions for IC cards
Codec(s) for Wide band Telephony Services
AMR – Wideband
Gateway Location Register (GLR)
Turbo-Charger: Feasibility Study
Pre-paging

The following WIs state in their title that they apply only for 3G system. However, it is proposed that these WIs also apply to GSM, as they impact the core network, which is common to GSM and UMTS. In case such proposal is accepted, they should be renamed and classified as common GSM/3G WIs.

UMTS Charging & Billing
UMTS Numbering, Addressing and Identities
UMTS Open Service Architecture
UMTS Core based on ATM Transport
IP-in-IP tunnelling in GPRS backbone for UMTS, phase 1
End to End UMTS QoS Management
QoS for Speech and Multimedia Codec
Multimedia in UMTS
3G Audio-Visual Terminal Characteristics
3G charging management
3G system fault management
3G system configuration management
3G system performance management

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## 6 Specifications and Reports

### Specification/Report Number and Specification/Report Title

Number	Title
21.101	Specification set
21.111	USIM and IC card requirements
21.133	Security Threats and Requirements
21.900	3GPP Working methods
21.904	Terminal Capability Requirements
21.905	3G Vocabulary
21.906	O&M requirements
21.910	Multi-system issues
22.002	Bearer Services Supported by a GSM PLMN
22.004	General on Supplementary Services
22.011	Service accessibility
22.016	International Mobile Equipment Identities (IMEI)
22.022	Personalisation of GSM ME Mobile functionality specification - Stage 1
22.024	Description of Charge Advice Information (CAI)
22.030	Man-Machine Interface (MMI) of the Mobile Station (MS)
22.034	High Speed Circuit Switched Data (HSCSD) - Stage 1
22.038	SIM application toolkit (SAT); Stage 1
22.041	Operator Determined Call Barring
22.042	Network Identity and Time Zone (NITZ), stage 1
22.043	Support of Localised Service Area (SoLSA) - Stage 1
22.053	Tandem Free Operation of speech codecs; Stage 1 service description

22.057	Mobile Station Application Execution Environment (MExE); Stage 1
22.060	General Packet Radio Service (GPRS); Stage 1
22.066	Support of Mobile Number Portability (MNP); Stage 1
22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP) - Stage 1
22.071	Location Services (LCS); Stage 1 (T1P1)
22.072	Call Deflection (CD); Stage 1
22.078	CAMEL phase 3; Stage 1
22.079	Support of Optimal Routing; Stage 1
22.081	Line Identification Supplementary Services; Stage 1
22.082	Call Forwarding (CF) Supplementary Services; Stage 1
22.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Services; Stage 1
22.084	MultiParty (MPTY) Supplementary Service; Stage 1
22.085	Closed User Group (CUG) Supplementary Services; Stage 1
22.086	Advice of Charge (AoC) Supplementary Services; Stage 1
22.087	User-to-user signalling (UUS); Stage 1
22.088	Call Barring (CB) Supplementary Services; Stage 1
22.090	Unstructured Supplementary Service Data (USSD); Stage 1
22.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 1
22.093	Call Completion to Busy Subscriber (CCBS); Stage 1
22.096	Calling Name Presentation (CNAP); Stage 1 (T1P1)
22.097	Multiple Subscriber Profile (MSP); Stage 1
22.100	UMTS Phase 1
22.101	UMTS Service principles
22.105	Services & Service capabilities
22.115	Service Aspects Charging and billing
22.121	Provision of Services in UMTS - The Virtual Home Environment
22.129	Handover Requirements between UMTS and GSM or other Radio Systems
22.135	Multicall Stage1
22.140	Multimedia Messaging Service Stage 1
22.907	Terminal concepts
22.924	Charging and accounting mechanisms
22.925	Quality of service and network performance
22.945	Study of provision of fax service in GSM and UMTS

22.960	Mobile multimedia services
22.970	Virtual Home Environment Report
22.971	Automatic establishment of roaming relationships
22.972	Multimedia
22.975	Advanced addressing
23.002	Network Architecture
23.003	Numbering, Addressing and Identification
23.007	Restoration procedures
23.008	Organisation of subscriber data
23.009	Handover procedures
23.011	Technical Realization of Supplementary Services - General Aspects
23.012	Location registration procedures
23.014	Support of Dual Tone Multi Frequency (DTMF) signalling
23.015	Technical realisation of Operator Determined Barring (ODB)
23.016	Subscriber data management - Stage 2
23.018	Basic Call Handling - Technical realisation
23.022	Functions related to Mobile Station (MS) in idle mode
23.032	Universal Geographical Area Description (GAD)
23.034	High Speed Circuit Switched Data (HSCSD) - Stage 2
23.038	Alphabets & Language
23.039	Interface Protocols for the Connection of Short Message Service Centers (SMSCs) to Short Message Entities (SMEs)
23.040	Technical realisation of SMS Point to Point
23.041	Technical Realization of Short Message Service Cell Broadcast (SMSCB)
23.042	Compression algorithm for SMS
23.046	Technical realisation of facsimile Group 3 service- non-transparent
23.053	Tandem Free Operation (TFO); Service description; Stage 2
23.054	Shared Interworking Functions - Stage 2
23.057	Mobile Station Application Execution Environment (MExE)
23.060	General Packet Radio Service (GPRS) Service description; Stage 2
23.066	Support of GSM Mobile Number Portability (MNP) stage 2
23.067	Enhanced Multi-Level Precedence and Preemption Service (EMLPP) - Stage 2
23.070	Routing of calls to/from Public Data Networks

23.072	Call Deflection Supplementary Service - Stage 2
23.073	Support of Localised Service Area (SoLSA) - Stage 2
23.078	CAMEL Stage 2
23.079	Support of Optical Routeing - Phase 1 - Stage 2
23.081	Line Identification Supplementary Services - Stage 2
23.082	Call Forwarding (CF) Supplementary Services - Stage 2
23.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service - Stage 2
23.084	MultiParty (MPTY) Supplementary Service - Stage 2
23.085	Closed User Group (CUG) Supplementary Service - Stage 2
23.086	Advice of Charge (AoC) Supplementary Service - Stage 2
23.087	User-to-User Signalling (UUS) - Stage 2
23.088	Call Barring (CB) Supplementary Service - Stage 2
23.090	Unstructured Supplementary Service Data (USSD) - Stage 2
23.091	Explicit Call Transfer (ECT) Supplementary Service - Stage 2
23.093	Call Completion to Busy Subscriber (CCBS) - Stage 2
23.094	Follow Me Stage 2
23.096	Name Identification Supplementary Service - Stage 2
23.097	Multiple Subscriber Profile (MSP); Stage 2
23.101	General UMTS Architecture
23.107	Quality of Service, Concept and Architecture
23.108	Mobile Radio Interface Layer 3 specification Core Network Protocols stage 2 (structured procedures)
23.110	UMTS Access Stratum Services and Functions
23.121	Architecture Requirements for release 99
23.127	Virtual Home Environment / Open Service Architecture
23.171	Functional stage 2 description of location services in UMTS
23.907	Quality of Service
23.908	Technical report on Pre-Paging
23.909	Technical report on the Gateway Location Register
23.910	Technical report on Super-Charger
23.911	Technical report on Out-of-band transcoder control
23.920	Evolution of the GSM platform towards UMTS
23.922	Architecture for an All IP network

23.923	Combined GSM and Mobile IP mobility handling in UMTS IP CN
23.925	UMTS Core network based ATM transport
23.927	VHE, Open Service Architecture
23.930	Iu Principles
23.960	Framework of Network functions to support multimedia services in UMTS
24.007	Mobile Radio Interface Signalling Layer 3 - General Aspects
24.008	Mobile Radio Interface Layer 3 specification; Core Network Protocols-Stage 3
24.010	Mobile Radio Interface Layer 3 - Supplementary Services Specification - General Aspects
24.011	Point-to-Point (PP) Short Message Service (SMS) Support on Mobile Radio Interface
24.012	Short Message Service Cell Broadcast (SMS-CB) Support on the Mobile Radio Interface
24.022	Radio Link Protocol (RLP) for Data and Telematic Services on the (MS-BSS) Interface and the Base Station System - Mobile-services Switching Centre (BSS-MSC) Interface
24.065	Mobile Station (MS) - Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SND-CP)
24.067	Enhanced Multi-Level Precedence and Pre-emption service (eMLPP) - Stage 3
24.072	Call Deflection Supplementary Service - Stage 3
24.080	Mobile radio Layer 3 Supplementary Service specification - Formats and coding
24.081	Line Identification Supplementary Service - Stage 3
24.082	Call Forwarding Supplementary Service - Stage 3
24.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service - Stage 3
24.084	MultiParty (MPTY) Supplementary Service - Stage 3
24.085	Closed User Group (CUG) Supplementary Service - Stage 3
24.086	Advice of Charge (AoC) Supplementary Service - Stage 3
24.087	User-to-User Signalling (UUS) - Stage 3
24.088	Call Barring (CB) Supplementary Service - Stage 3
24.090	Unstructured Supplementary Service Data (USSD) - Stage 3
24.091	Explicit Call Transfer (ECT) Supplementary Service - Stage 3
24.093	Call Completion to Busy Subscriber (CCBS) - Stage 3
24.094	Follow Me Stage 3
24.096	Name Identification Supplementary Service - Stage 3
25.101	UE Radio transmission and reception (FDD)
25.102	UE Radio transmission and reception (TDD)
25.103	RF parameters in support of RRM
25.104	BTS Radio transmission and reception (FDD)

25.105	BTS Radio transmission and reception (TDD)
25.113	BTS EMC
25.141	Base station conformance testing (FDD)
25.142	Base station conformance testing (TDD)
25.201	Physical layer -General Description
25.211	Physical channels and mapping of transport channels onto physical channels (FDD)
25.212	Multiplexing and channel coding (FDD)
25.213	Spreading and modulation (FDD)
25.214	FDD; physical layer procedures
25.215	Physical layer; Measurements (FDD)
25.221	Physical channels and mapping of transport channels onto physical channels (TDD)
25.222	Multiplexing and channel coding (TDD)
25.223	Spreading and modulation (TDD)
25.224	TDD; physical layer procedures
25.225	Physical layer; Measurements (TDD)
25.301	Radio Interface Protocol Architecture
25.302	Services provided by the physical layer
25.303	UE functions and inter-layer procedures in connected mode
25.304	UE procedures in Idle Mode
25.305	Location Services (LCS) features
25.321	Medium Access Control (MAC) Protocol Specification
25.322	Radio Link Control (RLC) Protocol Specification
25.323	Description of the Packet Data Convergence Protocol (PDCP) protocol
25.324	Description of the Broadcast/Multicast Control BMC protocol
25.331	Radio Resource Control (RRC) Protocol Specification
25.401	UTRAN Overall Description
25.402	Synchronisation in UTRAN Stage 2
25.410	UTRAN Iu Interface: General Aspects and Principles
25.411	UTRAN Iu interface Layer 1
25.412	UTRAN Iu interface signalling transport
25.413	UTRAN Iu interface RANAP signalling
25.414	UTRAN Iu interface data transport & transport signalling
25.415	UTRAN Iu interface user plane protocols



- 25.420 UTRAN Iur Interface: General Aspects and Principles
- 25.421 UTRAN Iur interface Layer 1
- 25.422 UTRAN Iur interface signalling transport
- 25.423 UTRAN Iur interface RNSAP signalling
- 25.424 UTRAN Iur interface data transport & transport signalling for CCH data streams
- 25.425 UTRAN Iur interface user plane protocols for CCH data streams
- 25.426 UTRAN Iur and Iub interface data transport & transport signalling for DCH data streams
- 25.427 UTRAN Iur and Iub interface user plane protocols for DCH data streams
- 25.430 UTRAN Iub Interface: General Aspects and Principles
- 25.431 UTRAN Iub interface Layer 1
- 25.432 UTRAN Iub interface signalling transport
- 25.433 UTRAN Iub interface NBAP signalling
- 25.434 UTRAN Iub interface data transport & transport signalling for CCH data streams
- 25.435 UTRAN Iub interface user plane protocols for CCH data streams
- 25.442 UTRAN Implementation Specific O&M Transport
- 25.921 Guidelines and principles for protocol description and error handling
- 25.922 Radio Resource Management Strategies
- 25.924 ODMA
- 25.925 Radio Interface for Broadcast/Multicast Services
- 25.926 UE Radio Access capabilities definition
- 25.931 UTRAN Functions, examples on signalling procedures
- 25.941 Document structure
- 25.942 RF system scenarios
- 25.990 Vocabulary for UTRAN
- 26.071 AMR speech Codec; General description
- 26.073 AMR speech Codec; C-source code
- 26.074 AMR speech Codec; Test sequences
- 26.075 AMR speech Codec; Performance Characterization of the GSM AMR Speech Codec
- 26.090 AMR speech Codec; Transcoding Functions
- 26.091 AMR speech Codec; Error concealment of lost frames
- 26.092 AMR speech Codec; comfort noise for AMR Speech Traffic Channels
- 26.093 AMR speech Codec; Source Controlled Rate operation
- 26.094 AMR Speech Codec Voice Activity Detector for AMR Speech Traffic Channels

26.101	AMR speech Codec; Frame Structure
26.102	AMR speech Codec; Interface to Iu and Uu
26.110	Codec for Circuit switched Multimedia Telephony Service; General Description
26.111	Codec for Circuit switched Multimedia Telephony Service; Modifications to H.324
26.112	Codec for Circuit switched Multimedia Telephony Service; Call Set-Up Requirements
26.121	Technical Specification for Tandem Free Operation within 3G networks
26.122	Technical Specification for Tandem Free Operation between 3G and 2G networks
26.901	AMR speech Codec; performance characteristics
26.911	Codec for Circuit switched Multimedia Telephony Service; Terminal Implementor's Guide
26.912	Codec for Circuit switched Multimedia Telephony Service; Quantitative performance evaluation of H.324 Annex C over 3G
26.913	Quantitative performance evaluation of real-time packet switched multimedia services over 3G
26.915	Transmission planning aspects of the services in 3G PLMN System
26.920	Architectural Model for the 3G Transcoders
26.xx1	Narrow Band (3.1kHz) Speech & Video Telephony Terminal Acoustic Characteristics
26.xx2	Narrow Band (3.1kHz) Speech & Video Telephony Terminal Acoustic Test Specification.
26.xx5	Terminal Display and Camera Characteristics For H.324 Narrow-band Video Telephony Service
26.xx6	Terminal Display and Camera Test Specifications For H.324 Narrow-band Video Telephony Service
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27.001	General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)
27.002	Terminal Adaptation Functions (TAF) for services using Asynchronous bearer capabilities
27.003	Terminal Adaptation Functions (TAF) for services using Synchronous bearer capabilities
27.005	Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)
27.007	AT command set for 3G User Equipment (UE)
27.010	Terminal Equipment to User Equipment (TE-UE) multiplexer protocol User Equipment (UE)
27.060	GPRS Mobile Stations supporting GPRS
27.103	Wide Area Network Synchronisation
27.901	Report on Terminal Interfaces - An Overview
27.903	Discussion of Synchronisation Standards
28.062	Inband Tandem Free Operation (TFO) of Speech Codecs; Service Description; Stage 3
29.002	Mobile Application Part (MAP)

- 29.006 Interworking between a PLMN and the ISDN or PSTN for support of Packet Switched data transmission services
- 29.007 General requirements on Interworking between the PLMN and the ISDN or PSTN
- 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)
- 29.011 Signalling Interworking for Supplementary Services
- 29.013 Signalling interworking between ISDN supplementary services Application Service Element (ASE) and Mobile Application Part (MAP) protocols
- 29.016 Serving GPRS Support Mode SGSN - Visitors Location Register (VLR); Gs Interface Network Service Specification
- 29.018 Serving GPRS Support Mode SGSN - Visitors Location Register (VLR); Gs Interface Layer 3 Specification
- 29.060 GPRS Tunnelling protocol (GPT) across the Gn and Gp interface
- 29.061 General Packet Radio Service (GPRS); Interworking between the Public Land Mobile Network (PLMN) supporting GPRS and Packet
- 29.078 CAMEL phase 3; Stage 3
- 30.504 Work Plan and Study Items - RAN WG4
- 30.531 Work Plan and Study Items - RAN WG3
- 31.101 UICC / Terminal Interface; Physical and Logical Characteristics
- 31.102 Characteristics of the USIM Application
- 31.110 UICC Application Identifiers
- 31.111 USIM Application Toolkit (USAT)
- 31.120 Terminal tests for the UICC Interface
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- 33.102 Security Architecture
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- 33.105 Cryptographic Algorithm requirements
- 33.106 Lawful interception requirements
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- 33.901 Criteria for cryptographic Algorithm design process

33.902	Formal Analysis of the 3G Authentication Protocol with Modified Sequence number Management
34.109	Logical Test Interface (TDD and FDD)
34.121	Terminal Conformance Specification, Radio Transmission and Reception (FDD)
34.122	Terminal Conformance Specification, Radio Transmission and Reception (TDD)
34.123-1	Mobile Station (MS) Conformance Specification, Part 1 – Conformance specification
34.123-2	Mobile Station (MS) Conformance Specification, Part 2 – ICS
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34.124	Electro-Magnetic Compatibility (EMC) for Terminal equipment - stage 1
34.907	Report on electrical safety requirements and regulations
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34.925	Specific Absorption Rate (SAR) requirements and regulations in different regions

## Annex A (informative): Document change history

<b>Status of GSM 21.101</b>		
<b>Date</b>	<b>Version</b>	<b>Information about changes</b>
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 and reports identified in WGs
October 1999	version 1.0.0	Reviewed by TSG CN, T and RAN #5 changes implemented and raised to V1.0.0 for information to TSG SA

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# History

<b>Document history</b>		

# R99 Specification sets documents overview

