Plan (1/4)

UID	Name	Rel	Acron	LoA	MCC resp
2	Evolutions of the transport in the UTRAN	NA	ETRAN	TSG	Carolyn
4	Evolutions of the transport in the CN	NA	CNTRSP	MCC	Kimmo
1216	Improvements of Radio Interface	NA	RInImp	TSG	Shinobu
1222	Low Chip Rate TDD option	Rel4	LCRTDD	TSG	Shinobu
9	RAN improvements	NA	RANimp	TSG	Hans
1273	Provisioning of IP-based multimedia services	Rel5	IMS	TSG	Alain
1539	Transparent End-to-End PS mobile streaming \	Rel4	PSTREAM	TSG	Paolo
1652	Emergency call enhancements	NA	EMC1	WG	Ban
1322	Enable bearer independent CS architecture	Rel4	CSSPLIT	TSG	Kimmo

Plan (2/4)

UID	Name	Rel	Acron	LoA	MCC resp
1333	CS multimedia services	Rel4	CSM	MCC	David
1340	Facsimile	Rel4	FAX	TSG	Alain
1517	Global Text Telephony	Rel5	GTT	TSG	Alain
1526	Bearer Modification without pre-notification	Rel4	BMWPN	TSG	David
1367	VHE enhancements	NA	VHE1	TSG	Alain
1637	OSA enhancements	NA	OSA1	WG	Per
1638	CAMEL phase 4	Rel5	CAMEL4	CHAIR	Per
1445	MExE enhancements	NA	MEXE1	TSG	Fred
1625	Wideband Telephony Service - AMR	Rel4	AMRWB	TSG	Paolo

Plan (3/4)

UID	Name	Rel	Acron	LoA	MCC resp
1541	Transcoder-Free Operation	Rel4	TrFO	MCC	Kimmo
1631	Tandem Free aspects (3G and 2G to 3G)	Rel4	TFO	MCC	Paolo
1818	Multimedia Messaging	Rel4	MMS	TSG	Fred
1826	Terminal interfaces	NA	TI	CHAIR	Fred
1536	Location Services enhancements	NA	LCS1	TSG	Alain
1542	Ensure reliable QoS for PS domain	Rel4	QoSPS	MCC	David
1557	QoS for CS services at HOs	Rel4	QoSCS	MCC	Alain
1560	UICC/(U)SIM enhancements and interworking	NA	UICC1	MCC	MichaelS
1800	(U)SIM toolkit enhancements	NA	USAT1	MCC	MichaelS

Plan (4/4)

UID	Name	Rel	Acron	LoA	MCC resp
1571	Security enhancements	NA	SEC1	TSG	Maurice
1861	Misc UE Conformance Testing Activities	NA	MISTST1	MCC	Lidia
1365	Support of Push Services	Rel4	PUSH	TSG	Alain
1142	Charging and OAM&P (to be dispatched)	?	OAM	MCC	Adrian
1924	GERAN definition	NA	GERAN	TSG	Paolo
2062	Subscription Management	Rel4	SM	TSG	Adrian
2071	UTRAN O&M procedures	Rel4	UOAM	TSG	Adrian
1993	small Technical Enhancts and Improvts	Rel4	TEI4	MCC	
2128	Mobile IPv6 in overlay of PS domain	Rel5	MIPv6	WG	Alain

Feature: *Rel4 Evolutions of the transport in the UTRAN*

✝ **IP transport in the UTRAN (R3) : On schedule. TR almost ready.**

✝ **QoS optimisation for AAL2 connections over Iub and Iur interfaces (R3) : On schedule**

✝ **Migration to modifications procedures (R3): Progressing slowly.**

Feature: *Rel5 Evolutions of the transport in the UTRAN*

- ♱ **Radio access bearer support enhancement (R2) : on schedule for ROHC (header compression). No process on anything else concerning this work item.**

Feature: *Rel4 Improvements of Radio Interface*

- ✝ **FDD/TDD BS classification (R4): On schedule**

- ✝ **Improved usage downlink resource in FDD for CCTrCH of dedicated type (R2): No progress**

- ✝ **Terminal Power saving features (R1): On schedule**
  - TR to be approved in RAN#10
  - feasibility/desirability doubts in R2

- ✝ **UTRA repeater specification (R4): On schedule**

- ✝ **DSCH power control improvement in SHO (R1): On schedule. TR to be approved in RAN#10**

- ✝ **UMTS 1800 (R4): just started**

- ✝ **Feasibility studies (R1, R2, R4): little or no progress (For HSDPA R1 has created its own TR under R2 leadership.)**

- ✝ **Conformance Test Spec. improvements in Radio Interface (T1): Not started**

Feature: *Evolutions of the transport in the CN (Rel4)*

- **There are two independent Building Blocks under this Feature:**

  - **IP transport of CN protocols**

    - **Not started but planned to be finished by March 2001 (to be part of Rel4).**

    - **Stage 3 just started without waiting for Stage 2 (is Stage 2 needed?)**

  - **FS on control and control separation in the PS domain**

    - **FS to be completed in March 2001. TR 23.873 presented for information in v.1.0.0 to SA#10. Not decided yet whther the actual split will take place or not.**

Feature: *Rel5 Improvements of Radio Interface*

✝ **Improvement of inter-frequency and inter-system measurement (R1): No progress**

✝ **Hybrid ARQ II/III (R2) : No progress**

Feature: *Low Chip Rate TDD option (Rel4)*

- **Physical layer (R1):**
  On schedule and well advanced.
  Actual CRs to be presented in RAN#11

- **Layer 2 and layer 3 protocol aspects (R2):**
  On schedule. TR almost ready

- **RF radio transmission/reception, system performance requirements and conformance testing RF (R4):**
  On schedule.

- **UE radio capability (R2):**
  On schedule. TR almost ready

- **Iub/Iur protocol aspects (R3):**
  On schedule. TR to be presented in RAN#10 for information

- **Conformance/Protocol conformance testing (T1): Not started**

Feature: RAN improvements (Rel-4)

- ☦ **Smart antenna [SmartA] (R1):**
  WI was deleted at TSG-RAN #10; any work part of L1 LCR TDD

- ☦ **RRM optimisation [RRMopt] (R3):**
  Slow progress

- ☦ **Node B synchronisation [Nbsync] (R1):**
  On schedule; TR 25.836 approved in TSG-RAN #10

- ☦ **RAB support enhancements [RABSE] (R2):**
  ROHC (header compression) on schedule;
  Little or no progress on other issues

Feature: *RAN improvements (Rel-5)*

- **Testing (T1):**
  Work has not yet started; WIs being defined

- **No other WIs approved by TSG-RAN or agreed by its WGs**

- **Some proposals from outside RAN in workplan; status unclear:**
  Header compression removal/stripping in the RAN
  Unequal error protection in PS domain in the RAN

Feature: *Provisioning of IP-based multimedia services (Rel5)*

- **Stage 1 by S1: 22.228 planned to be approved by 12/00**

- **Stage 2 by S2: 23.228 planned to be approved by 03/01 (list of open issues available)**

- **Full IM Subsystem (including Stage 3) planned for 12/01**

- **At CN: N1 active work on SIP, other CN groups work will start next year. Involment of RAN and T WGs to be clarified**

Feature: *Transparent End-to-End PS Mobile Streaming (Rel4)*

✝ **TS 26.233 General Description, provided for information v. 1.0.0**

✝ **TS 26.234 Protocols and Codecs, for information v. 1.0.0**

Multimedia Codecs for Conversational Packet Switched Services (Rel4)

✝ **TS 26.235 Packet Switched Conversational Multimedia Applications; Default Codecs, provided for information v. 1.0.0**

Feature: *Emergency call enhancements*

✝ **For IP & PS based calls (Rel5)**

Requirements should be covered by S1 in 22.967.

Too early to make a precise estimate of the time scale for Stage 3 completion. It depends on the IMS progress.

✝ **For CS based calls (Rel4)**

Expected to be on time.

Progress has been made in Stage 3.

Open issues which is recently communicated with S1 about

"Emergency call recalling capability enhancement"

Feature: *Enable bearer independent CS architecture (Rel4)*

- **S2 has finished overall Stage 2 in 23.002.**

- **N4 is progressing in parallel detailed Stage 2 and Stage 3. It should be completed on time for Rel4 (March 2001).**

Feature: GTT – Global Text Telephony (Rel4 or Rel5?)

Confusion:

✝ **S2 has not progressed the Stage 2 (24.226) and stage 1 is still not finished -> they will not be finished before March. So logically, some extra time is needed after March to perform the stage 3.**

But some stage 3 already done:

✝ **TS 26.226 Cellular Text Telephone Modem; General Description (version 2.0.0) provided for approval to TSG-SA plenary**

✝ **TS 26.230 Cellular Text Telephone Modem; Transmitter Bit Exact C-Code (version 2.0.0) provided for approval to TSG-SA plenary**

✝ **TS 26.231 Cellular Text Telephone Modem; Minimum Performance Requirements (version 2.0.0) provided for approval to the TSG-SA plenary**

-> Can the missing Stage 3 (terminal aspects, interworking) be progressed in parallel to Stages 1and 2? Are these Stages really needed?

Feature: *Bearer Modification without pre-notification (Rel4)*

- ✝ **Stage 1 [SA1]**

    - ✝ **Completed.**

- ✝ **Service Modification without pre-notification [CN3]**

    - ✝ **No contributions in CN3, Work will probably be transferred to WID Multimedia swap and fallback (to be checked by S1 and N3).**

- ✝ **Bearer Modification because of radio conditions [SA2]**

    - ✝ **No progress.**

- ✝ **Testing: not started (logical, because the feature is not finished…)**

Feature: *OSA enhancements (Rel4 and Rel5)*

- General stage 2; SA2 work on schedule

- Interactions OSA – e-commerce (Rel4); SA1 is on schedule. CN5 not started, but still planned to be completed for Rel4

- OSA APIs for MuMa CC (Rel5); work on schedule

- OSA security (Rel5); problem: WI approved by S3 without knowledge of CN5 (action to clarify the situation is identified)

- Retrieval of Terminal capabilities (Rel5); some delay, but should be OK for Rel5

- LCS - OSA interfaces (Rel4); LS S1O00043 moving this BB from Rel5 to Rel4. CN5 not started, but still planned to be completed for Rel4

- Charging aspects; To be clarified by SA2 OSA convenor

Feature: *VHE enhancements (Rel5)*

For different BBs under this feature:

- Detailed definition of the VHE user profile

- Extensions to existing (and possibly new) toolkits

- Interaction between toolkits to enable IP multimedia services

- Transparent roaming for services

All of them are for Rel5. Only the first one has started. The WG(s) to define the stage 3 have not been identified yet (potentially N5).

Feature: *CAMEL phase 4 (Rel5)*

- Considered to be a Rel5 issue (a draft specification is under development)

- One company tries to make CAMEL4 split between Rel4 and Rel5 in SA1.

Progress on CAMEL4 BBs:

- Charging notification to the CSE; work not started

- Call Party Handling; work on schedule

- Mid call procedure for MO and MT calls; work on schedule

- Interactions with Optimal Routing; no progress

- Inclusion of flexible tone tone injection; work on schedule

- CSE control over MT SMS; work on schedule

- CAMEL applicability to media streams like VoIP; work not started

Feature: MExE Enhancements (Rel4 and Rel5)

✝ **MExE Rel4 completed**

✝ **MExE Rel4 main enhancements:**
  - ✝ third MExE classmark for a new small-footprint Java platform
  - ✝ support of SDR concepts (software download)
  - ✝ security enhancements

✝ **MExE Rel5 WIC will be presented to TSG#11**

✝ **MExE Rel5 main enhancements:**
  - ✝ support of VHE User Profile
  - ✝ investigate ECMA "Common Language Infrastructure" Support as Classmark 4
  - ✝ USAT/OSA/CAMEL interaction to provided advanced services
  - ✝ investigate support of terminal management
  - ✝ Security enhancements

Feature: *Wideband Telephony Service - AMR (Rel4/5)*

✝ **TS 26.171 v. 1.0.0 AMR-WB General Description**

✝ **TS 26.173 v. 1.0.0 AMR-WB C-source Code**

✝ **TS 26.190 v. 1.0.0 AMR-WB Transcoding Functions**

✝ **TS 26.191 v. 1.0.0 AMR-WB Error Concealment**

✝ **TS 26.192 v. 1.0.0 AMR-WB Comfort Noise Aspects**

✝ **TS 26.193 v. 1.0.0 AMR-WB Source Controlled Rate Operation**

✝ **TS 26.194 v. 1.0.0 AMR-WB Voice Activity Detector (VAD)**

✝ **TS 26.201 v. 1.0.0 AMR-WB Frame Structure**

✝ **TS 26.202 v. 1.0.0 AMR-WB Interface to Iu and Uu**

✝ **AMR-WB Channel Coding & Protocols: on-going in GERAN**

Feature: *Tandem-Free Operation aspects (Rel4)*

- **28.062 In-band Tandem Free Operation (TFO) of Speech Codecs; Stage 3 - Service Description Version 1.0.0 is provided for information**

- **any decision related to the Release 4 Stage 1 and Stage 2 TFO specifications postponed until the next S4 meeting, to allow potential contributors to provide draft versions of these specifications by that time and possibly forward them to SA#11 for approval as part of Release 4**

Feature: *Transcoder-Free operation (Rel4)*

✝ **Version 4.0.0 of TS 23.153 (stage 2) approved in plenary CN#10**

✝ **Since the stage 2 activities has been completed, the stage3 activities shall take place within the appropriate 3GPP WGs. A workshop will be established each time a particular need will be identified during the stage 3 definition.**

Feature: *Multimedia Messaging Service (MMS)*
(Rel4 and Rel5)

✝ **MMS Rel4 at some risk**

  ✝ **good progress during the last meetings on application protocol framework, MMS streaming, IP based MMS, and other issues**

  ✝ **more work necessary on architectural issues, MMS billing, Instant Messaging, and other issues**

✝ **Further MMS enhancements needed for Rel5 (no WIC yet)**

Feature: *Terminal Interfaces (Rel4 and Rel5)*

- **AT Commands enhancements**
  - **Specification of AT commands for new services**
    - **no input for Rel4 except on ASCI**
  - **Alternatives to AT commands (TBD)**
    - **some discussions but no substantial work yet, possibility for Rel5**

- **Synchronisation**
  - **vObjects and Other Constructs for Use in Data Synchronisation**
    - **draft TS distributed to WGs for comments, some risk for Rel4**
  - **Continues evolution of Synchronisation protocol**
    - **Smooth Upgrade from Rel99 Sync to "SyncML" compatibility in Rel5**

- **Terminal Local Model**
  - **Progress achieved but unlikely to be complete in Rel4**

Feature: LCS (split on Rel4 and Rel5)

- **One new BB added (S2): Open LCS interfaces in UMTS and GERAN (which is to provide functionally similar open interfaces as in GSM R98/99 LCS architecture).**

  - **Approved as basis by S2, refinements needed by ad-hoc meeting with all the interested WGs**

  - **Not clear if for Rel4 or Rel5 (proposed to Rel5 by MCC, based on the calendar)**

- **Another BB to be added (S1): Location service request to obtain more positive location information**

- **For Rel4: LCS support in the CS domain, in the PS domain, UE positioning in the UTRAN**

- **For Rel5: Event based and Periodic LCS**

Feature: UICC/(U)SIM enhancements and interworking (Rel4)

- **Common PCN Handset Specification (CPHS)**
  - **on schedule; draft CRs sent to S1 and T2 for comment**

- **FS on UICC/ME Performance Enhancements**
  - **started; expected to be presented for information at TSG-T #11**

- **report on SIM/USIM Interworking**
  - **started; expected to be presented for info at TSG-T #11**

- **UICC/USIM database specification**
  - **not started; Jan T3 meeting will discuss whether move to Rel5**

Feature: (U)SIM toolkit enhancements (Rel4)

- **USAT local link**
  - **on schedule; draft CRs sent to S1 and T2 for comments**

- **UICC API**
  - **on schedule; main task is the test specification for the Java API (as defined in release 99). Is presented to TSG-T #10 for information.**

- **Protocol Standardisation of a (U)SIM Toolkit Interpreter**
  - **on schedule; stage 1 presented to TSG-T #10 for information. v1.0.0 of stage 2 expected at TSG-T #11**

- **Enhancements to (U)SIM toolkit secure messaging**
  - **work not yet started, but ad hoc meetings are planned. The is some possibility that the CRs will not be finalised by TSG-T #11**

Feature: Security Enhancements (Rel4) Page 1 of 2

- **UE triggered authentication during connections**

    - **Work ongoing, liaison with 3GPP2/AHAG to determine requirements**

- **Evolution of GSM CS algorithms (e.g. A5/3 development and deployment)**

    - **SAGE to complete – funding to be finalised (no problem foreseen)**

- **Evolution of GSM PS algorithms (e.g. GEA 2 deployment)**

    - **Need to complete backward evolution to ensure maximum penetration / higher overall security for roaming users**

Feature: *Security Enhancements (Rel4) Page 2 of 2*

- **Protection for user plane data**
  - **Not started**

- **Network domain security**
  - **Progressing well. Draft report finalised for SA#10**

- **MAP application layer security**
  - **Progressing well. Draft report finalised for SA#10**

- **Enhanced HE control of security (including positive authentication reporting)**
  - **Not started**

Feature: *Support of Push Services (Rel4)*

- ✝ **Moved from "Feasibility Study" to "real" feature (S2 proposal)**
- ✝ **The Stage 3 definition (if needed) needs to be clarified**

Feature: *Real Time Fax (Rel4)*

- ✝ **Completed**

Feature: *Mobile IPv6 in overlay of PS domain (Rel5)*

- ✝ **New proposed feature to optionally support Mobile IP v6 transparently on top of the PS domain, allowing both support of inter-PLMN mobility and efficient use of network resources within a PLMN.**

Feature: *CS multimedia services (Rel4)*

- ✝ **Proposed to be deleted because: 1) never approved for Rel4, 2) already handled in R99, 3) no active work on it for more than 6 months.**

Feature: *Ensure reliable QoS for PS domain (Rel4?)*

Still not clear if this can be completed in time to be in Rel4. Stage 2 still ongoing at SA2.

Feature: *QoS for CS services at HOs (inter-MSC and SRNS change) (ex-Rel4)*

Proposed for deletion (the feature was proposed by MCC/IGC 6 months ago, never approved, and no active work has started yet).

Feature: *Miscellaneous UE Conformance Testing Activities*

No work started yet. Core specifications not stable enough.

T1 is working in the definition of the work items.

Feature: *GERAN definition (Rel4, Rel5)*

- ✝ **GERAN/UTRAN interface evolution 1 (PS) -> ongoing** *Rel4/5*

- ✝ **GERAN/UTRAN interface evolution 2 (CS) -> ongoing** *Rel4/5*

- ✝ **GERAN radio interface evolution -> ongoing** *(Rel5)*

- ✝ **700 MHz spectrum support** *(Rel4)*

- ✝ **Real Time QoS for PS including VoIP -> ongoing** *(Rel5)*

- ✝ **Location service using GERAN -> ongoing** *Rel4/5*

- ✝ **Wideband telephony services** *(Rel5 ?)*

General remark: no specific problems for GERAN F, BB, WT

Feature: *Charging and OAM&P (Rel4/5)*

✝ **Six SA5 Building Blocks with work item descriptions drafted and sent to SA#10 for approval:**

  ✝ **Principles, high-level requirements and architecture, Configuration Management, Fault Management, Performance Management, Charging Management (x 2)**

✝ **Three SA5 Building Blocks requested by other TSGs:**

  ✝ **Billing, Charging and Management for IPM (SA1), Charging Aspects for QoS in PS Domain (SA2). (These will be incorporated into the above 6 Building Blocks following liaison with S1 and S2.)**

  ✝ **LCS Network Mangement for UMTS (S2). (Low Priority and unresourced)**

✝ **TSG Approval Targets: Rel4 - 06/01 (TSG#12); Rel5 - 03/02 (TSG#15)**

Feature: *Subscription Management (Rel5)*

✝ **Operational Requirements and Specifications (TR 32.140).**

  ✝ **Will support complex services including Voice, Multimedia, Data services, Value Added Services, End-to-end applications**

✝ **Co-ordination expected with other working groups on e.g.:**

  ✝ **VHE Enhancements (SA1), (U)SIM Toolkit enhancements (T3), MExE enhancements (SA1 and T2).**

  ✝ **Charging and OAM&P (SA5 Feature), Principles, high-level requirements and architecture, Configuration Management, Charging Management (SA5 BBs).**

  ✝ **Core Network work item <u>to be identified</u> jointly between CN and SA5 by 03/01.**

✝ **Completion of requirements planned for 09/01**

✝ **TSG Approval Target: 12/01 (TSG#14)**

Feature: **UTRAN Operations and Maintenance procedures (Rel4)**

✝ **Objective: To capture procedures and guidelines for identifying solutions to manage a multi-vendor UTRAN effectively.**

✝ **Stable draft produced (TR 32.800 V0.0.2)**

✝ **Consistency checks planned with:**

  ✝ **RAN3 documents (25.430 & 25.433)**

  ✝ **Other SA5 documents (32.101/2, 32.104, 32.106 & 32.111)**

✝ **TSG Approval Target: 06/01 (TSG#12)**