

3GPP TSG-T (Terminals), Meeting #11
Palm Springs, USA, 19-22 March 2001

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MCC Review of the Work Plan at Plenaries #11

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General Plan

- **Complete List of Features (Release 4 and Release 5)**
- **Status of Release 4 Features**
- **Status of Release 5 Features**
- **Features which release is pending of TSG #11 decisions**
- **Conclusion**

List of Features (1/2)

<i>Unique ID</i>	<i>Title</i>	<i>Release</i>
2	Evolutions of the transport in the UTRAN	4 and 5
4	Evolutions of the transport in the CN	4 and 5
1216	Improvements of Radio Interface	4 and 5
1222	Low Chip Rate TDD option	4
9	RAN improvements	4 and 5
1273	Provisioning of IP-based multimedia services	5
1539	Transparent End-to-End PS mobile streaming application	4
1652	Emergency call enhancements	4 and 5
1322	Enable bearer independent CS architecture	4
1333	CS multimedia services	4
1340	Facsimile	4
1517	Global Text Telephony	4?
1526	Bearer Modification without pre-notification	delete?
1367	VHE enhancements	5
1637	OSA enhancements	4? and 5
1638	CAMEL phase 4	5
1445	MExE enhancements	4 and 5



List of Features (2/2)

<i>Unique ID</i>	<i>Title</i>	<i>Release</i>
1625	Wideband Telephony Service - AMR	4
1541	Transcoder-Free Operation	4
1631	Tandem Free aspects for 3G and between 2G and 3G systems	4
1818	Multimedia Messaging	4
1826	Terminal interfaces	4 and 5
1536	Location Services enhancements	4 and 5
1542	Ensure reliable QoS for PS domain	4 and 5
1557	QoS for CS services at HOs (inter-MSC and SRNS change)	delete?
1560	UICC/(U)SIM enhancements and interworking	4
1800	(U)SIM toolkit enhancements	4
1571	Security enhancements	4 and 5
1861	Miscellaneous UE Conformance Testing Activities	4 and 5
1365	Support of Push Services	5
1142	Charging and OAM&P	4 and 5
2062	Subscription Management	4
2071	UTRAN Operations and Maintenance procedures	4
2230	Advanced Speech Call Items enhancements_REL-4	4
x	GERAN Wls	4 and 5



Release 4 features



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Evolutions of the Transport in the UTRAN

– Rel-4 part

- *IP Transport in the UTRAN (R3)* – Should have been Rel-4 but not fully completed (around 25% remaining): TR 25.933 presented to RAN #11 for information. No CRs for RAN3 specifications are provided.
 - ⇒ It is **proposed to move the WI to Rel-5**.
- *QoS optimisation for AAL2 connections over lub and lur interfaces (R3)*. **Completed** at RAN#11 (WI sheet and TR 25.934 to be presented at TSG RAN#11 for approval). CRs for RAN3 specifications provided for approval.
- *Migration to modification procedures (R3)*. The name of the WI title was changed to “Transport bearer modification procedure on lub, lur, and lu”. **Completed** (WI sheet , TR 25.954 and CRs for RAN3 specifications provided for approval at RAN#11).

Evolutions of the transport in CN – Rel-4 part

- ***IP transport of CN protocol:***
 - No Stage 2 seems to be needed (no work performed but Stage 3 completed...)
 - Stage 3 specification (TS 29.205 v.2.0.0 "SS7 Signalling Transport in Core Network") **completed**, sent for approval at CN#11. The specification includes:
 - Signalling Architectures,
 - IP, STM Based transport
 - MTP and M3UA
- ***FS on transport and control separation in PS domain:*** the FS has been **concluded** (TR 23.873): no agreement achieved.

Improvements of Radio Interface - Rel-4 part

- *FDD BS classification (R4)* – Not completed. Expected **completion 09/01**
- *TDD BS classification (R4)* – Not completed. Expected **completion 06/01**
- ⇒ Can these two WI remain in Release 4?

- *Terminal power saving features (R1)*
 - TR 25.840 v2.3.0 **completed**, to be presented in RAN #11
 - In R2, gated transmission was shown to be less good than Cell FACH state for power saving. However, there may be benefits on signalling load and delay aspects, which needs to be studied by R3; it is asked to **wait for approval to June RAN #12**
 - In R3, TR 25.938 v2.0.0 **completed**, to be presented for approval in RAN #11
- ⇒ Can this WI remain in Release 4?

- *UTRA repeater specification (R4)* – Work **completed**. TS 25.106 to be presented to RAN for approval to be raised to v4.0.0

- *DSCH power control improvement in SHO (R1)*: **completed** at RAN#11

- *UMTS 1800 (R4)* – Work **not completed**. A number of issues pending.
 - ⇒ Guidance is asked to RAN.

Improvements of Radio Interface - FS

(FS = Feasibility Studies)

- **FS on Radio link performance enhancements (R1): on schedule**
- **FS on High Speed Downlink Packet Access (R2): Completed: TR 25.950 to be presented in v.2.0.0 to RAN#11**
 - In R1, this has been the main topic for the discussion.
 - A number of simulations and FS are done.
 - R1 created its own TR under R2 leadership.**=> WI to be derived from this FS for Rel-5**
- **FS on USTS: on schedule: TR 25.854 to be presented for information to RAN #11**
- **FS on Improved common DL channel for Cell FACH state**
 - Nothing has been identified for Rel-5. RAN will be asked to extend the feasibility study to 06/01
- **FS on UE antenna efficiency test method performance requirements: On schedule. Completion date : 06/01**

Low chip rate TDD option

Completed.

- Physical Layer (R1) –TR 25.928 to be presented at RAN #11 for approval

CRs provided for approval at RAN#11 on:

- Layer 2 and layer 3 protocol aspects (R2)
- RF radio transmission/reception, system performance requirements and conformance testing RF (R4)
- UE radio capability (R2)
- Iub/Iur protocol aspects (R3)

Other aspects:

- Conformance/Protocol conformance testing (T1) : not started
- LCR TDD interworking with GERAN completed

RAN improvements - Rel-4 part (1/2)

- ***RRM optimization for lur and lub (R3)***
Completed. CRs presented for approval to RAN #11 on:
 - Congestion handling of DCH
 - DPC Rate Reduction in soft handover
 - Introduction of common measurements over lur
- ***Node B synchronisation for TDD (R1, R3)***
Completed.
 - CRs to both the approved TR 25.836 v4.0.0 (R1 aspects) and to the core specifications will be presented for approval to RAN #11
 - CRs to TR 25.838 (R3 aspects) to be presented

RAN improvements - Rel-4 part (2/2)

- *RAB support enhancement (R2)*

Completed.

- TR 25.844 completed: to be presented for approval to RAN #11 as v2.0.0
- Robust header compression was successfully standardised in IETF:
RFC 3095 RObust Header Compression (ROHC): framework and four profiles: RTP, UDP, ESP, and uncompressed.
- Recommendation: ROHC in Rel-4 and CRs presented for approval to RAN #11

Transparent End-to-End PS Mobile Streaming Applications

- **Completed:** TS 26.233 (General description) and TS 26.234 (Protocol and codecs aspects) both completed

Emergency call enhancements

– Rel-4 part

Rel-4: For CS based calls

WI considered **completed** (in S1 and N1)

- Emergency call categories has been completed
- No work done on callback feature, no inputs, SA1 have removed requirement.
- Revised WID to remove callback feature

Enable bearer independent CS architecture (Rel4)

Globally completed.

- Overall Stage 2 completed by S2 in TS 23.002 at SA#10.
- Detailed stage 2 and stage 3 to be presented in v.2.0.0 by N4 and N3 at CN#11:
 - TS 23.205 v.2.0.0 (N4) Bearer-independent CS CN; Stage 2
 - TS 29.232 v.2.0.0 (N4) Media gateway controller - media gateway interface; Stage 3
 - TS 29.205 v.2.0.0 (N4) Application of Q.1900 Series to Bearer Independent CS CN Architecture; Stage 3
 - TS 29.414 v.2.0.0 (N3) CN Nb data transport and transport signalling
 - TS 29.415 v.2.0.0 (N3) CN Nb interface User Plane protocols
- Open issues like relationship with codec control not to be studied (N4 agreement).
- Lawful interception in progress at S3

Real time Facsimile (Rel-4)

Completed at SA#9



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Global Text Telephony (Rel-4?)

Delayed until June but still wanted for Rel-4

- Main problem: location of interworking functions between PSTN Text Telephony and GTT-Voice: in the transcoders or in new CN node controlled by CAMEL?
 - To be decided at SA 2 #18 in May.
 - TS 26.231 defining the modem minimum performance for GTT proposed in v.2.0.0 by S4 to SA#11.
- ⇒ Can the WI remain in Rel-4?
- ⇒ Work expected from T2 to be clarified (no work on terminal aspects so far: to be deleted if no guidance).

Bearer Modification without Pre-Notification

Proposed **to be deleted**.

- Service Modification without pre-notification [CN3]
 - No contributions have been made to CN3.
 - Supporting companies will not continue with this WI.
 - Work will probably be transferred to WI Swap and fallback.
 - CN3 will request to NP#11 to delete SMWOP.
 - SA1 now need to remove the requirements for SMWOP.
 - Bearer Modification because of radio conditions [SA2]
 - No progress.
 - Testing not started.
- ⇒ Do plenaries #11 accept to delete it?

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

Proposed for deletion: no active work never started.

⇒ Do plenaries #11 accept to delete it?

MExE Enhancements - Rel-4 part

Completed

Main enhancements:

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

Wideband AMR

- **Completed** for Rel-4 (26 series)

Note: A list of Uncovered Network Aspects of the AMR-WB Feature to be discussed and decided at SA#11.

Characterisation Phase AMR-WB (Phase 1) is under way.

GERAN WB-AMR aspects expected to be completed at GERAN #4.

Tandem Free Operation

- **Completed** (TS 28.062 – Stage 3)
 - CRs by S4 to 02.53 to produce 22.053 (Stage 1) and to 03.53 to produce 23.053 (Stage 2)

Multimedia Codecs

- *Multimedia Codecs and Protocols for Conversational PS Services: **completed** (TS 26.235)*
- *Audio visual terminal characteristics:*
 - Harmonization of requirements for terminal “acoustics” in GSM and 3G (TS 43.050 / TS 26.131)
 - Harmonization of test methods for terminal “acoustics” in GSM and 3G (TS 51.010 / TS 26.132)

Transcoder Free Operation

Completed

- TS 23.153 (Out of Band Transcoder Control Stage 2 - N4) already approved at SA#10.
- TR 25.953 (TrFO in UTRAN - R3) to be presented in v.2.0.0 to RAN#11.
- Stage 3 is covered by Enable Bearer Independent CS Architecture

Multimedia Messaging Service

Completed

- **Main enhancements:**

- Support for Streaming in MMS
- Interworking between MMSEs described in detail
- Addressing scheme further elaborated
- Functional description enhanced with detailed service behaviour description
- Forwarding of a Multimedia Message without prior Retrieval
- Support for Prepaid Service in MMS
- Address Hiding in MMS
- Support for Reply-Charging in MMS

Note 1: Stage 2 performed by T2

Note 2: Further MMS enhancements planned for Rel-5 (WID is planned for TSG#12)

Terminal Interfaces - Rel-4 part

– AT Commands enhancements

- Specification of AT commands for new services
 - several outstanding issues identified, missing input, **no extension for Rel-4 requested**
- Alternatives to AT commands
 - some discussions but no substantial work yet:
 - ⇒ work item **proposed for deletion**

– Synchronisation

- vObjects and Other Constructs for Use in Data Synchronization
 - draft TS distributed for comments at TSG#10, work item **not completed** yet
 - ⇒ proposed **to be moved to Rel-5**
- Continues evolution of Synchronization protocol
 - ⇒ Upgrade from Rel-99 Sync to “SyncML” **to be completed at TSG#12** as part of Rel-4 if acceptable

– Application and User Interaction in the UE

- formerly known as Terminal Local Model
- **Completed:** presented for approval to TSG-T#11

UICC/(U)SIM enhancements and interworking

- ***Common PCN Handset Specification (CPHS)***
 - **Completed** at TSG-T #11
- ***FS on UICC/ME Performance Enhancements***
 - started but proposed for transfer to ETSI Project Smart Card Platform (EP SCP) (i.e. **for deletion** from the 3GPP work plan)
 - ⇒ Do plenaries #11 accept to delete it?
- ***Report on SIM/USIM Interworking***
 - **started**; presented for information to TSG-T #11
- ***UICC/USIM database specification***
 - **to be deleted** (if there is interest in the future, it should be done in EP SCP)
 - ⇒ Do plenaries #11 accept to delete it?

(U)SIM toolkit enhancements

- *USAT local link*
 - **completed** at TSG-T #11
- *UICC API testing*
 - **completed**; main task is the test specification for the Java API (as defined in release 99). Presented to TSG-T #11 for approval .
- *Protocol Standardisation of a SIM Toolkit Interpreter*
 - **Stage 1 completed**: presented to TSG-T #11 for approval.
 - **Stage 2** presented to TSG-T #11 for information and expected at TSG-T #12 for approval (remains in Rel-4)
- *Enhancements to (U)SIM toolkit secure messaging*
 - little work has been done
 - ⇒ proposed to be **moved to Rel-5**

Security Enhancements

- **UE-triggered authentication during connections**
 - WI **deleted** at S3#17 due to no supporting companies
⇒ Do plenaries #11 accept to delete it?
- **Enhanced HE control of security (including positive authentication reporting)**
 - Delayed to **Post Rel-5**
⇒ Do plenaries #11 accept to postpone it?
- **Network Domain Security**
 - Ad-hoc 24-25 April to progress this for **June** approval
- **IMS Security**
 - Ad-hoc 26 April to progress this for **June** approval

Miscellaneous UE Conformance Testing Activities

and any other UE Testing activity

- T1 is defining the work items and seeking supporting companies.
- Several work items will be presented for approval at **TSG #12**

Advanced Speech Call Items enhancements

- Created for Rel-4 to maintain the specs only, i.e. not a new feature
- No inputs to last CN1 meeting.
- WI is considered **completed** (in CN1)

Charging and OAM&P

- **Work on schedule:** started 01/2001 on Rel-4 issues (OAM Architecture, and Management of Configuration, Fault, Performance and Charging)
- **Should be completed by June**

UTRAN Operations & Maintenance procedures

- **Objective: To capture procedures and guidelines for identifying solutions to manage a multi-vendor UTRAN effectively.**
- **Draft produced (TR 32.800) - estimated 75% complete**
- **Consistency checks underway with:**
 - **RAN3 specifications (25.430 & 25.433) - estimated 20%complete**
- **TSG Approval Target: 06/2001 (TSG#12)**

GERAN WI status - Rel-4 part

Work on progress on:

- **GERAN/UTRAN interface evolution of IuPS**
- **GERAN/UTRAN interface evolution of IuCS**
- **Low chip rate TDD interworking with GERAN**
- **Gb over IP & Gb enhancements (Stage 2 & Stage 3)**
- **700 MHz spectrum support**
- **Wideband telephony services (UMTS) GSM support**
- **LCS for GERAN Stage 2 (CS mode & Timing Advance positioning)**



Release 5 features



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Evolutions of the transport in UTRAN – Rel-5 part

- Evolution of transport in UTRAN and GERAN (R3). **No work done** so far on this WI.

Evolutions of the transport in CN – Rel-5 part

- FS on SS7 signalling transportation in the CN with SCCP-User Adaptation (SUA).

Improvements of Radio Interface - Rel-5 part

- *Improvements of inter-frequency and inter-system measurement (R1) – No progress*
- *Hybrid ARQ II/III (R2)*
 - **Work in progress:** A number of research has been done in R1 and R2 in the framework of HSDPA study item.
- *Improved usage of downlink resource in FDD for CCTrCHs (R2)*
 - **No progress** since RAN #10

RAN improvements - Rel-5 part

- ***RRM optimization for lur and lub (R3)***
 - Work task "Separation of resource reservation and radio link activation"
 - ⇒ proposed to be **continued in Rel-5**
- ***RAB support enhancement (R2)***
 - Issues other than ROHC: no progress
 - ⇒ proposed to be **continued in Rel-5**
- ***Testing (T1)***
 - Work has not yet started
- ***Some proposals (not approved yet)***
 - Header compression removal/stripping in the RAN
 - Unequal error protection in PS domain in the RAN

IP-based Multimedia Services

Globally on time.

- **Stage 1: globally completed (TS 22.228 in v.5.0.0).
Service examples still to be provided in separate TR.**
- **Stage 2: 80% complete (TS 23.228 in v.2.0.0 at SA#11)**
- **Detailed stage 2 and Stage 3 started at N1 (TS 23.218,
24.228 and 24.229 started)**
- **Security aspects started at S3 (joint meeting held
with S2)**
- **Work expected from T2 needs to be clarified**

**Among the remaining items: interworking between IMS
and CS domain for basic voice calls, use of
SIP/OSA/CAP, emergency voice calls (with/without
USIM)**

Emergency call enhancements

– Rel-5 part

Rel-5: For IP & PS based calls

- Requirements covered by S1 in 22.228, with some open points (e.g. with/without USIM)
- Too early to make a precise estimate of the time scale for Stage3 completion. It depends on the IMS progress.

Push Services

On time:

Stage 2 80 % stable at SA#12 (23.974),

But Stage 3 is not started and not yet identified.

VHE improvements

- **Nothing for Rel-4. For Rel-5: no work really started.**

CAMEL phase 4 (1/2)

- **Stage 2 and Stage 3: draft TSs under development (still in v.0.x.y)**
- **Progress on CAMEL4 BBs:**
 - **Charging notification to the CSE: some progress**
 - **Call Party Handling: ad-hoc scheduled for this 3-5/April**
 - **Mid call procedure for MO and MT calls: on schedule**
 - **Interactions with Optimal Routing: almost complete**
 - **Inclusion of flexible tone tone injection: almost complete**
 - **CSE control over MT SMS: on schedule**
 - **CAMEL applicability to media streams like VoIP: work on standstill. Service requirement and architecture is open.**

CAMEL phase 4 (2/2)

- New functionalities added by SA1 as CAMEL4 BBs:

- Enhancements of dialled services: work has progressed**
- Provision of location information of called subscriber: work has progressed**
- Notification of GPRS mobility management to CSE: work has progressed**

MExE Enhancements - Rel-5 part

MExE Rel-5 WID for approval at TSG-T#11

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

GERAN WI status - Rel-5 part

- Evolution of transport in UTRAN and GERAN
- Evolution of the transport for A interface
- GERAN support for IP multimedia
- Alignment of 3G functional split and lu
- GERAN enhancements for streaming services
- Real Time QoS for packet services including VoIP (UTRAN)
- Wideband telephony services (UMTS) 8-PSK support
- GERAN MS + BTS Conformance test for WB AMR
- LCS for GERAN Stage 2 (E-OTD and GPS positioning)
- LCS for GERAN Stage 3

S4 WI status (Rel-5)

- **Wideband Codec: 8-PSK performance left for Rel-5**
 - Note. A list of Uncovered Network Aspects of the AMR-WB Feature to be discussed and decided at SA#11.
 - Characterisation Phase AMR-WB (Phase 2) is under preparation
- **Audio visual terminal characteristics:**
 - Harmonization of requirements for terminal “acoustics” in GSM and 3G (TS 43.050 / TS 26.131 v. 5.x.y)
 - Harmonization of test methods for terminal “acoustics” in GSM and 3G (TS 51.010 / TS 26.132 v. 5.x.y)

Subscription Management

- **Operational Requirements and Specifications (TS 32.140)**
 - Subscription Management is a feature that permits operators to provision services for a specific customer subscription, i.e. create/amend/delete subscription data (30% complete)
- **Co-ordination planned with other working groups on e.g.:**
 - VHE enhancement (S1), (U)SIM Toolkit enhancement (T3), MExE enhancement (S1/T2), HSS interface (CN). Draft 32.140 for information to these groups expected by 04/2001.
 - Charging and OAM&P
 - OAM-AR: Principles + Architecture, OAM-CM: Configuration Management (60% complete)
 - OAM-CH: Charging Management (0% complete)
- **Completion of requirements planned for 09/2001**
- **TSG Approval Target: 12/2001 (TSG#14)**

***Features which release is
pending of TSG #11 decisions***

LCS enhancements (Rel-4 and 5)

- New WI on “*open LCS interface for UMTS and GERAN*” foreseen to be **completed in June**
- ⇒ Can SA#11 agree to still have it in Rel-4?
- UE positioning in UTRAN completed by RAN3: IPDL for TDD methods is ready: to be included in Rel-4. Other methods to be studied for Rel-5
- GERAN LCS progressing (stage 2 and 3), CS mode and Cell Identifier and Timing Advance positioning methods for PS mode expected for completion in Rel-4 (TS 43.059).

Reliable QoS for PS domain 1/3

- **PROPOSAL OF COMPLETE RE-STRUCTURATION OF QoS ACTIVITIES (not yet reflected in the Work Plan):**
 - For Rel-4: QoS in UMTS only
 - For Rel-5: End-to-end QoS
 - ⇒ Seek for plenaries #11 guidance
 - ⇒ This proposal fits to the current progress on QoS (see next 2 slides)

Reliable QoS for PS domain 2/3

- **Status of current work for QoS in UMTS only (proposed to be Rel-4):**
 - **Stage 2 of QoS in UMTS only (23.107): almost completed. Remaining open points: QoS for Signalling bearers; Delay Values for conversational services.**
 - **Stage 3 already covered (e.g. 24.008 by N1), or not needed as some choices are left to the operator in Rel-4 (e.g. 29.061 by N3).**
 - **UTRAN aspects completed:**
 - **Mapping of end-to-end QoS parameters, RAB quality of service negotiation and re-negotiation over lu (TR 25.946 and 25.851: sent in v.2.0.0 to RAN#11);**
 - **QoS negotiation in relocation: new WI submitted to RAN#11 (already completed)**

Reliable QoS for PS domain 3/3

- **Status of current work for end-to-end QoS (proposed to be Rel-5):**
 - **Stage 2 of end-to-end QoS (23.207): lot of open points.**
 - **No Stage 3 work started. Joint meeting planned between CN WGs and S2 in May.**

OSA enhancements 1/2

- Stage 1 (22.127) and Stage 2 (23.127) completed for Rel-4.
- Stage 3 parts of TS 23.127 (S2) need to be removed as agreed at SA#10 because of overlap/conflict with 29.198 (CN5).
- Major achievement: CN5/ ETSI SPAN12/ Parlay, in co-operation with JAIN, produced a common technical basis for OSA Stage 3 specifications. The 29.198-family contains the subset corresponding to requirements set by SA1.

OSA enhancements 2/2

- Some parts of 29.198 are submitted to TSG#11 in v.1.0.0, some others for approval as v4.0.0 ; some will only be available in Rel-5
- TSG approval target for all **Rel-4** parts of 29.198-xy: **06/2001** (TSG#12)
 - ⇒ Do plenaries #11 accept to have Rel-4 in June?
- Major problem is co-ordination: S1 just contacted S5 (Charging), N5/S5 work overlap (Charging), S3/N5 communication (Security), S1/T2 communication (Retrieval of Terminal capabilities)



Conclusion



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Conclusion

- **The content of Rel-4 is globally unchanged compared to what was foreseen at SA#10**
- **Lot of work has already started on Rel-5 Features**
- **TSG plenaries #11 are asked to conclude on:**
 - ⇒ **the specific questions identified by an arrow**
 - ⇒ **all the features listed under “Features which release are pending of TSG #11 decisions”**