3GPP
A GLOBAL INITIATIVE

Review of the Work Plan at Plenaries #16

History:

SP-020307: review of the Work Plan by MCC before TSG#16.

SP-020376: includes the comments from CN, RAN and T #16.

SP-020392: includes final comments from RAN #16 and (most of) the results of SA#16

Content

- **Review of R'99, Rel-4 and Rel-5 testing activities**
- **Review of progress on all features presently anticipated for Rel-5**
- **Features with unclear status (Rel-5 or Rel-6?)**
- **Review of Rel-6 features**
- **Summary of Completion Dates**
- **Conclusion**

In *Black*: Name of the task

In Red: important statement

In Green: question/answer to/from plenary

Testing activities

UE testing R99

- **Package 1 prose test cases (highest priority) updated to March 02**

- **Package 1 TTCN ready for industry verification by July.**

- **Update of other packages (prose) to latest core spec:**
  - **T#17: update of Package 2 + Pack. 1 to June 02**
  - **T#18: update of Package 3 + previous Packs. to Sep 02**
  - **T#19: update of Package 4 + previous Packs. to Dec 02**

UE Testing Rel-4 (1/2)

- **Not started yet:**
  - *Testing of RAB support for RoHC (delayed to March 03)*
  - *Feasibility study on conformance testing of UE MExE capability (Sep 02)*

- **Presented for approval:**
  - *WID on Testing of IETF aspects of 3GPP RoHC*

UE Testing Rel-4 (2/2)

- **Ongoing activities (% complete, foreseen completion date):**
  - *LCR_TDD, Testing Layer 2 and 3 protocol aspects (SIG)* **(20%, Dec 02 for prose and Dec 03 for TTCN)**
  - *Extensions to R99 Test cases (SIG, covers the completion of FDD prose and TTCN)* **(45%, Dec 02 for prose and Mar 03 for TTCN)**
  - *Maintenance of the R99 test specification and test cases (SIG)* **(50%, ongoing)**
  - *Creation of the Release 99 TCs for TDD, prose and TTCN (SIG)* **(25%, Sep 02 for prose and Mar 03 for TTCN)**
- **Completed activities:**
  - *LCR_TDD, Testing RF Radio Transmission and Reception (RF)*
  - *Testing Emergency call enhancements for CS based calls (SIG)*

UE Testing Release Independent

- **Testing UMTS 1800/1900:**
  - **RF & SIG part completed**
  - **TTCN expected for Mar 03**
- **Optimisation of Test Time, RF Aspects (FDD and TDD)**
  - **70% completed, delayed to March 03**

UE Testing Rel-5

WI under study and <u>seeking supporting companies</u>
(no change since last meeting)

- **Improvements of Radio Interface**
  - **Testing improvement of inter-frequency and inter-system measurement**
  - **Testing Hybrid ARQ II/III**
  - **Testing Improved usage of downlink resource in FDD for CCTrCHs of dedicated type**
  - **Testing Terminal Power saving features**
  - **Testing DSCH power control improvement in soft handover**
- **RAN Improvements**
  - **Testing Radio access bearer support enhancements – except ROHC (ROHC belongs to Rel-4)**
- **Emergency call enhancements**
  - **Stage 3 for emergency calls and packet emergency calls in general (Core requirement and testing moved to Rel6)**

Rel-5 Features

List of Rel-5 Features (1/2)

UID	Title
2	Evolutions of the transport in the UTRAN
4	Evolutions of the transport in the CN
2476	High Speed Downlink Packet Access
1216	Improvements of Radio Interface
9	RAN improvements
1273	Provisioning of IP-based multimedia services
34001	Extended Transparent End-to-End PS Streaming Service
1517	Global Text Telephony
1637	OSA enhancements for Rel-5
1638	CAMEL phase 4
2464	Rel-5 MExE enhancements

List of Rel-5 Features (2/2)

UID	Title
1625	Wideband Telephony Service - AMR
1826	Terminal interfaces
1536	Location Services enhancements
1800	(U)SIM toolkit enhancements
1571	Security enhancements
2243	Intra Domain Connection of RAN Nodes to Multiple CN Nodes
2556	End to End QoS for PS Domain including IMS
2569	Messaging enhancements Rel-5
13000	Service Change and UDI Fallback
30001	small Technical Enhancements and Improvements for Rel5
31013	UE Functionality Split
several	GERAN improvements
2520	User Equipment Management

Evolutions of the transport in the UTRAN

IP Transport in the UTRAN (R3)

- *Completed at TSG-RAN #15.*

Evolutions of the transport in the CN

Feasibility Study on SUA (SCCP User Adaptation)

Completed at TSG-CN #14. The conclusion is that SUA will not be part of Rel-5.

12

HSDPA

Or "High Speed Downlink Packet Access"

- **This WI was completed at TSG-RAN #15 except RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing (R4)**
  - **BS requirements finished**
  - **UE requirements for fixed reference channel finished**
  - **UE requirements for variable reference channel pending**
  - **New completion date: September 2002 (except Tx diversity)**

Improvements of Radio Interface (1/2)

Release 5 Items finished at TSG-RAN #15:

– *UMTS1800/1900* (R4).

– *Enhancement on the DSCH hard split mode* (R1).

Release 5 items finished at TSG-RAN #16:

– *BS Classification for 1.28 Mcps TDD option* (R4)*: 2 BS classes with different RF requirements.*

– *TDD BS classification* (R4): *2 BS classes with different RF requirements.*

Improvements of Radio Interface (2/2) Feasibility Studies

FSs finished:

- *Mitigating the effect of CPICH interference at the UE (R4): Completed. A Rel-6 WI was approved.*

- *FS on the re-introduction of the downlink SIR measurement (R4): Finished at TSG-RAN #14. This Study Item did not trigger any WI.*

RAN improvements (1/3)

- **Completed (1/2):**
  - *RL Timing Adjustment* **(R3)**
    - **TR 25.878 and CRs approved at TSG-RAN #15.**
  - *Separation of resource reservation and radio link activation* **(R3)**
    - **TR 25.879 and CRs approved at TSG-RAN #15.**
  - *Node B synchronisation for 1.28 Mcps TDD* **(R1)**
    - **TR 25.868 and CRs approved at TSG-RAN #15.**
  - *Iur Neighbouring cell reporting Efficiency Optimisation* **(R3)**
    - **CRs approved at TSG-RAN #15.**
  - *Iur Common Transport Channel Efficiency Optimisation* **(R3)**
    - **TR 25.884 and CRs approved at TSG-RAN #15.**

RAN improvements (2/3)

- **Completed (2/2):**
  - *Re-arrangement of Iub Transport Bearers* **(R3)**
    - TR 25.880 and CRs approved at TSG-RAN #15.
  - *RAB support enhancement for Rel-5* **(R2)**
    - RFC 3095 context relocation in SRNS relocation completed. TR 25.860 and CRs approved at TSG-RAN #16.
  - *Support of SSDT in UTRAN* **(R1)**
    - Completed. CRs approved at TSG-RAN #16.
  - *Beamforming requirements for UE* **(R1)**
    - Completed at TSG-RAN #14.

RAN improvements (3/3)

- **Ongoing:**
    - *Introduction of Direct transport bearers between SRNC and Node B (Study Item, R3)*
        - **Open issues related to the use of an AAL2 switch on: establishment delay (related to ATM transport option only), reliability (failure of AAL2 switch?) and knowledge by the RNC of the availability of the feature. R3 is not in a position to estimate the completion date for this SI. Check at RAN->SI closed, no WI approved.**
    - *Iur-g way forward in RAN (GERAN-related work in R3)*
        - **LS from R3 to RAN and GERAN on the separation of the Iur and Iur-g issues, proposing that the CR for Iur-g is conditionally approved by R3, but not included in the next version of the RNSAP Rel-5 until final decision taken by RAN and GERAN on a better separation of the Iur and Iur-g issues. CRs approved by RAN but to be endorsed by PCG.**

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IMS (1/7) – General issues (1/2)

Or "IP-based Multimedia Services"

- **Stage 1 in 22.228 already in v.5. since TSG #14**

- **Overall Stage 2 in 23.228 in v.5 since SA#13.**
  - **Use of pre-Rel-5 USIM: SA2 CR rejected at SA#15. Revised CR at SA#16 to derive IMS identities from identities stored on Pre-Rel5 UICC, hence to allow them to be used to access IMS. Approved at SA#16. Related CRs approved at CN#16.**
  - **Lot of other corrections and clarifications all approved at SA#16, e.g. on implicit registrations, call barring, media negotiation, number of media components per PDP Context, etc.**

- **Detailed Stage 2 and Stage 3:**
  - **Still open issues and IETF draft dependencies on stage 3, but estimated to be 90-95% completed.**

IMS (2/7) – General issues (2/2)

- **Stage 2 TS 23.218 on call model (100 %): "frozen" at CN#15**

- **Stage 3 TS 24.228 on information flows (90%) "frozen" at CN#16**

- **Stage 3 TS 24.229 on protocol details (95%) "frozen" at CN#16**

- **Significant IETF progress**

- **TS 26.236 on "Transport Protocol for PS Conversational Multimedia applications" approved at SA#15**

- **Performance characterization of codecs for PS / IMS Conversational Multimedia applications : a TR 26.9xy on the issue still to be started (not critical for CN work), but: is it really needed for Rel-5 ? If yes, need funding for tests**

IMS (3/7) – Security issues (1/2)

- *Access Security for IMS* : TS 33.203 ("Access Security for IP-based Services", Stage 2) approved at SA#15.

- Integrity Protection: issue solved by vote and CRs at TSG#16 to move mechanism into main body of 33.203. CN Stage 3 covered by CRs provided for approval in CN#16

- *Security of SIP signalling between network nodes* : Stage 2 in 33.210 ("Network domain security; IP network layer security") approved at SA#15. Stage 3 work based on 33.210 in CN1 now completed (presented at CN#16).

IMS (4/7) – Security issues (2/2)

- *User authentication*: stage 2 and IETF information still required to allow stage 3 work to complete - also some work on key transport required (June 2002)

- *Lawful interception*: 33.108 (Handover Interface, Stage 3) : Completed in June, for SA#16 approval. To be checked if it applies to IMS.

IMS (5/7) – Other issues (1/2)

- *Interface at Go (GGSN-PCF)*: June 2002 (see end to end QoS).

- *SIP Compression*: CN1 work is done but one open item on error case to be solved by IETF. Completion depends on IETF progress on SigComp.

- *Charging*: Stage 1 (22.115) and Stage 2 (23.815) completed (including pre-paid), Stage 3 in 32.225 (v.1. At SA#15) to be completed at TSG SA#17 by SA5 (Detailed review On-line Charging & Diameter protocol needed).

IMS (6/7) – Other issues (2/2)

– **Header compression in UTRAN: completed for Rel-4 as RoHC**

– **Header compression in GERAN: for Iu, re-use RoHC. No intention to support it for Gb.**

– **CAMEL in IMS (23.278): see CAMEL slides (June 2002? No consensus at CN#15)**

– *Reminder: Header removal in GERAN not in Rel-5: Stage 3 changes might be ready by December 2002. No WI for Header removal in UTRAN.*

IMS (7/7) - Interfaces

- interfaces at Mi (CSCF – BGCF), Mj (BGCF – MGCF), Mk (BGCF – BGCF): complete.

- interfaces at Mw (CSCF – CSCF) and Gm (UE to CSCF): now 90%

- interfaces at ISC (IMS Service Control), Mr (CSCF – MRFC): complete

- interface at Mp (MRFC – MRFP): use H.248, no specific work required by 3GPP, complete.

- interface at Si (HSS – IM-SSF): see slide on Camel.

- interface at Go (GGSN – PCF): see slide on end-to-end QoS (June 2002)

- interfaces at Cx (HSS – CSCF) and Dx (CSCF – SLF) : 29.228 and 29.229 (Cx and Dx based on Diameter) approved at CN#16

- interface at Sh (HSS – SIP AS and HSS – OSA SCS): 29.328 (IMS Sh interface) and 29.329 (Sh protocol details) approved at CN#16

- CN1 part on Mg interface (BGCF to MGCF - interworking with CS) completed.

- *Reminder: Sr (Application Server – MRFC) removed from Rel-5*

25

Extended Streaming

(in full: Extended Transparent End-to-End Packet Switched Mobile Streaming Applications)

Feature completed at SA#15:

- Stage 1: TS 22.233 and CRs to 22.105 approved at SA#15

- Stage 2: CRs to TS 26.233 and TS 26.234 approved at SA#15

- Stage 3: felt not strictly necessary, will not be produced;

- TR 26.937 RTP usage model started, not critical

- Note: PSS Rel-6 Work Program: to be defined at a Joint meeting SA1/SA4 (Rome 11 July, 2002)

Global Text Telephony

- **"Almost completed" at SA#12: CR still needed to support Cellular Text Modem in Bearer Independent Circuit-Switched Core Network (June 2002): to be clarified by CN. ->CN not aware of this open item.**

  SA4 delegate Question: should GTT be a "Release independent Feature" ?
  (e.g. if GTT is requested to be implemented since DD/MM/YY from an "Authority/Regulator", otherwise the license will be revoked, a R99/Rel-4 compliant 3G system will not implement GTT, as requested to be made available Rel-5 onwards…)
  -> CN: The way the 3GPP specs are transposed into SDO standards might solve the issue.

OSA Rel-5

- Rel-5 is completed after approval now at CN#16 of remaining Stage 3 work on:
  - *OSA APIs for Multi-media*
  - *Retrieval of Terminal Capabilities*
  - *Framework*
  - *Generic User Interaction*
  - *Charging*
  - *Policy Management*
  - *Presence & Availability Management*
  - *Call Control mapping to ISC*
  - *WSDL APIs for HTTP/SOAP transport*

- **Stage 1 and Stage 2 have been aligned to the reduced scope of OSA Rel-5**

- Corresponding aligned Parlay 4.0 and ETSI OSA 2.0 specifications will now also be produced.

CAMEL phase 4 (1/3)

- **Stage 2 (TS 23.078) and Stage 3 (TS 29.078): Draft TSs in the form of mega CRs approved by CN#16.**

Progress on CAMEL4 BBs:

Completed:

- **Interactions with Optimal Routing**

- **Call Party Handling**

- **Mid call procedure for MO and MT calls**

- **CAMEL control over MT SMS**

- **Inclusion of flexible tone injection**
- **Provision of location information of called subscriber**
- **Notification of GPRS mobility management to CSE**

CAMEL phase 4 (2/3)

- **Inclusion of ODB data in the CSE-HLR interface**

- **Location information during an ongoing call**

- **GPRS Any Time Interrogation**

- **Transfer of the IMEI (with SW version) to the CSE**

- **Functional Split into Subsets (completed according to current (after SA#15) CAMEL4 stage 1) - functional subsets still needs looking at by SA1**

Removed from Rel-5:

- **"Charging notification to the CSE" (removed at SA#16 by SA1's CR).**

- **"Enhancements of dialled services" (removed at SA#15).**

CAMEL phase 4 (3/3)

CAMEL control of IMS services

stage 2, general: New TS 23.278 v2.0.0 for approval at CN#16 (80% complete).

Si interface (HSS – IM-SSF): Stage 2 in 23.278: 80% completed, Stage 3: Completed (CRs against 29.002 presented at TSG 16)

stage 3:   New TS 29.278 is not yet available for approval due to lack of time in CN2 meetings, but MAP changes have been completed.

CAPv3 will be used as a base for CAMEL-IMS interworking, stage3

Stages 2 and 3 (including MAP CRs) targeted to September. Clarify if still part of Rel5. -> CN recommendation is to keep it in Rel-5

31

MExE Enhancements Rel-5

MExE Improvements and Investigations:

- **Completed at TSG T#15**. **Main enhancements:**
  - **ECMA "Common Language Infrastructure" Support as Classmark 4**
  - **General enhancements and improvements**
  - **security enhancements**

MExE Security Analysis:

- **work item deleted at TSG T#16**

GERAN (1/4)

Ongoing Work Items for Release 5 (all in progress, status to be checked at next TSG GERAN#10 end of June):

- **GERAN/UTRAN interface evolution 1/2 (evolution of Iu PS/CS)**
- **GERAN Inter BSC NACC improvements over the Gb Interface**
- **8PSK AMR HR**
- **GERAN enhancements for streaming services 1 & 2**
- **Intra Domain Connection of RAN Nodes to Multiple CN Nodes: Overall System Architecture started at GERAN#8**
- **Uplink TDOA feasibility study started at GERAN#7**
- **GERAN improvement 3: Evolution of the transport for A interface**
- **GERAN support for IP multimedia: HEADER and bearer design**
- **Alignment of 3G functional split and Iu**
- **Wideband telephony services**
- **Location services: interoperability aspects**

GERAN (2/4)

Work Items related to Testing for Release 5 not started:

- GERAN improvements 2: MS conformance test for Intra BSC NACC

- GERAN support for IP multimedia : MS and BTS conformance test

- Alignment of 3G functional split and Iu : MS and BTS conformance test

- Enhanced Power Control : MS and BTS conformance test

- Wideband telephony services (UMTS) : MS and BTS conformance test

- Location services (UMTS) : BTS conformance test

GERAN (3/4)

Work Items for Release 5 completed:

- **Location Services (LCS) for GERAN in A/Gb Mode**

- **Real Time QoS for packet services including VoIP**

- **Enhanced Power Control and signaling support**

GERAN (4/4)

Work Items just started at GERAN:

- **Enhanced A/Gb Feasibility Study**

- **Multiple TBF in A/Gb mode**

- **Flexible Layer One for GERAN**

- **Proposed WI (not formally approved yet) on Flow control supporting an MS with multiple data flows with different QoS over the Gb interface**

WB-AMR (1/2)

Globally completed.

Presented for Completion:

- **Codec specifications: Completed**

- **Characterisation tests: phase 2 one experiment tbc not critical**

- **AMR Wide Band and Narrow-Band Interworking : technical work done: Completed**

- **Interworking of AMR WB with Fixed Network Wideband Legacy Codecs: for some modes, transcoding from G.722.2 is needed due to reduced codec modes in speech telephony service (9->5)**

- **AMR WB Floating point : TS 26.204 v. 2.0.0 release 5 approved at SA #15: Completed**

- **TFO AMR WB : TS 28.062 Release 5 provided through CRs to Release 4 version: Completed**

WB-AMR (2/2)

- **CN aspects (all completed by June 2002):**

  – **Codec selection and GSM-UTRAN interworking**

  – **TFO and TrFO signalling: TFO completed, TrFO (made by CN4)**

  – **Radio Access Bearer optimisation**

  – **Radio Access Bearer renegotiation (impact at least on 23.018)**

  – **Billing, accounting and call detail record aspects**

Reminder: Tones and announcements , WB Conferencing & WB Voice Group calls and Adaptation of subscriber data in HLR/VLR removed from Rel-5 at SA#15

Terminal Interfaces Rel-5

– **Terminal Local Model enhancements**
  completed at TSG#15

Reminder: vObjects and Other Constructs for Use in Data Synchronization (previously part of Wide Area Data Synchronization) moved to GUP at TSG T#15

LCS in Rel-5 or "LCS enhancements 1"

- ## **The LCS enhancements Rel-5 are:**

  – *Specification of Le Interface (GMLC - external LCS Client):* **completed**

  – *User privacy: split in Rel-5/Rel6.*

    • *Rel-5 part: Service Type Privacy, Requestor, Codeword. Stage 3 CRs* **approved in CN #16.** *Corrective CRs for Stage 2 approved at* **SA #16.**

    • *Introduced in Rel6: Flexible privacy settings, Anonymous target and anonymous requestor*

  – *Deferred location reporting at cell change :* corresponding CR was not agreed for Rel-5 in SA2. The issue should be *moved to Rel-6 (already covered by the work item LCS2).*

  – *UE positioning:*

    • **UE positioning enhancements for 1.28 Mcps TDD: completed at RAN #15**

    • **Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning completed at RAN #12.**

    • **Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 Positioning methods moved out of Rel-5.**

  – *LCS for GERAN in A/Gb Mode:* **completed** at GERAN

  – *LCS for GERAN in Iu Mode:* **almost completed** at GERAN

UICC/(U)SIM enhancements and interworking

- *ISIM application in TS 31.103:* approved at T16
- *Test Specification for TS 23.048 (Secure messaging) REL-5*: WI approved at T#15. Technical work not started
- *Test Specification for TS 43.019 (USIM API JavaCard™) REL-4*: WI approved at T#15. TS 53.013 REL-4 for information at T#16.

(U)SIM toolkit enhancements (REL-5)

- *USAT Interpreter:* new TS 31.112 USAT Interpreter; stage 2; Architecture description and TS 31.113 USAT interpreter; stage 3; Byte Codes approved at T#13. TS 31.114 on Protocol administration approved at T#15
- *USAT Interpreter Test*: First Draft version of TS 31.121 REL-5 presented at T3#23 for information.

Security Enhancements Rel-5

- *Network domain security*
  - MAP application layer security (Automatic Key Management):
    - Rel-5 CR on 33.200 approved at SA#15.
    - Completion by CN of stage 3 not finished at TSG 16 (was unclear at TSG #15). CN4 not able to predict a completion date. SA to decide if in Rel-5 or not.
  - NDS/IP:
    - TS 33.210 approved at SA#15.
    - Completion by CN of stage 3 finished at TSG 16 (was unclear at TSG #15)
    - WID for NDS Authentication Framework (NDS/AF) approved

  Reminder: FIGS was deleted from Work Plan by SA WG3 at TSG15.

Iu-Flex

Full name: "Intra Domain Connection of RAN Nodes to Multiple CN Nodes"

Work completed at TSG 15 (except for GERAN):

- **No Stage 1 defined for this feature**

- **Stage 2 completed in TS 23.236 at SA#13**

- **Stage 3 CN completed at CN#14 (CN1 aspects) and CN#15 (CN4 aspects)**

- **Stage 3 RAN completed:TR 25.875 and CRs approved at RAN #15.**

- **Stage 3 GERAN: Just started at GERAN #8 , unlikely to be completed by June GERAN plenary**

End-to-End QoS (1/2)

Work completed in June.

- **Stage 2 in TS 23.207 completed**
- **Stage 3 in TS 29.207 ("Policy control over Go interface") and TS 29.208 ("End-to-end QoS signalling flows") completed at TSG 16 by CN3.**

Progress on items still opened at TSG#15 (1/2):

- **SDP to UMTS QoS mapping for both streaming and conversational services applications. Mechanism clarified by SA2. Almost completed.**
- **Handling of charging ID: Mechanism clarified by SA2. CN3 creating CRs to 29.208. Completed.**

End-to-End QoS (2/2)

Progress on items still opened at TSG#15 (2/2):

- **QoS parameter values for various media types: preliminary mapping of SDP parameters to UMTS bearer QoS parameters for applications using codecs has been defined both for conversational and streaming services applications (included as informative annexes of the Rel-5 TSs 26.234 and 26.235). Finalisation of the tables is expected by SA#17**

- **Note : no impact on RAN work. CN: TR on Mapping of RAB parameters to End-to-end QoS parameters needed?**

Messaging Enhancements: MMS Rel-5

- **MMS (Multimedia Messaging Service) enhancements**
  3GPP part completed
  - **3GPP MMS REL-5 TS 23.140 finalized including the previously open MM7 stage 3**
  - **Late requirements approved at SA#15 have been fulfilled (different charging models and automatic bearer selection)**
  - **Open item:**
    - **MM1 (interface MMS User Agent and MMS Server/Relay) stage 3 will be defined by WAP Forum**
  - **Main enhancements MMS Rel-5**
    - **Address resolution and Mobile Number Portability**
    - **MM7 (MMS Relay/Server – MMS VAS Applications) Support of persistent storage in MMS**
    - **Enhanced interworking issues**

Messaging Enhancements: EMS Rel-5

EMS (Enhanced Messaging Service) enhancements

Completed at TSG#15

- **main enhancements**
  - **use of extended objects, with compression**
  - **bitmap graphics, including colour**
  - **hyperlink IE**
  - **vector based graphics format**
  - **monophonic and polyphonic sound formats**

Service Change and UDI Fallback (SCUDIF)

- **CN#15 referred back CRs on SCUDIF to the WGs for inclusion of two remaining issues:**
  - **interworking with ISUP networks (new requirement from SA1)**
  - **clarification of handling of pre-R99 mobiles**
- **The related CRs from CN3 and CN1 are presented to CN#16 for approval, which complete SCUDIF**

UE functionality split

- **TR on Feasibility Study from S1 completed for Rel-5.**

- **Conclusion of the FS: care is needed when implementing functionally split UE. No specification work foreseen at this time (no WID on the actual Feature at present: to be elaborated by interested companies).**

User Equipment Management – *Feasibility Study*

- **Rel-5 is completed after approval now at SA#16 of:**
  - **TR 32.802 v2.0.0:** User Equipment Management (UEM) feasibility study, produced in co-operation with T2

Charging and OAM&P – Rel 5

- **90% complete: approval target delayed 06/02 to 09/02**

- **32.225 IMS Charging:**
  - **Detailed review On-line Charging & Diameter protocol needed**

- **32.200 Charging Principles:**
  - **Alignment of stage 2/3 for MMS Charging needed**
  - **Addition of LCS Charging (CS & PS) needed**

- **32.205 CS Charging:**
  - **Addition of AMR WB parameters in CDR needed**
  - **Addition of support for MNP needed**

- **32.600/300-series Network Infrastructure Management:**
  - **All Requirement, IS/NRM & SS specs need more time for completion**

- **32.403 Performance measurements**
  - **Addition of WSMT measurements needed**

Other deleted items

Emergency call enhancements deleted at SA#14

All PS emergency call enhancements deleted of Rel-5.

Note that a conflict between service numbers and emergency numbers has been identified in CN1 as an open issue for Rel-5. SA/SA1 should resolve this issue.

VHE enhancements deleted at TSG#14

No "graphical display" addition to "Display name on UE"

Features with Unclear Status (Rel-5 or Rel-6?)

Network Sharing (NetShare)

- **S1 activities continuing: work ongoing to cover:**
    - **Identification of the main scenarios in which network sharing can manifest**
    - **Identify the requirements applicable to any of the scenarios, (to be mainly user's requirement, and possibly security and charging requirements)**
    - **Analyse more in depth the available technical solutions, and check if the existing requirements are sufficient**

- **Stage 2 started at SA2. One LS sent to R3 to provide guidance but not addressing timing issue.**

- **Stage 3 CN: Discussed at CN1 and CN4: agreed not to have any WID for Rel-5 part, but no CR was agreed. CN work depends on RAN decisions: no progress possible at CN.**

Shared Network support in connected Mode

– **Shared Network support in connected (R3) – Rel-5.**

- **Currently, no consensus could be reached within RAN WG3 on selecting one of the proposed solutions, each having their own specific merits and drawbacks.**

- **In the RAN3 meetings since the last TSG, considerable time has been spent on Shared Networks, given also the large amount of contributions. Even though progress was low, progress is being made which would make it possible to conclude the work item before the next TSG. However this will depend on the time available in the coming RAN3 meetings.**

Questions to plenaries:

1) Relationship between "Network Sharing" and "Shared Network support in connected Mode" still to be clarified.-

2) Is there any split of work desirable / possible between Rel-5 and Rel-6?

>RAN view: "to be kept separate. Shared network support in connected mode in Rel-5 (September)"

55

Release 6 features

Or "non-Rel-5 features"

List of Rel-6 Features (1/2)

UID	Title
2499	**Support of Presence Capability**
31028	**Presence Service Enhancements**
1365	**Support of Push Services**
42005	**Rel-6 MExE enhancements**
2062	**Subscription Management**
1652	**Emergency call enhancements**
2527	**Emergency calls without UICC/SIM in netw. with IMS**
50041	**Uplink TDOA feasibility study**
15010	**Rel-6 OSA enhancements**
2031	**C SIM API**

List of Rel-6 Features (2/2)

UID	Title
35009	Trace Management
2544	Multimedia Broadcast and Multicast Service
31006	Speech Recognition and Speech Enabled Services
31008	Generic User Profile
31010	Digital Rights Management
31012	FS on WLAN-UMTS Interworking
30000	FS on Priority Service
32016	QoS Improvements
33002	Support for subscriber certificates
32021	IMS Phase 2

Improvements of Radio Interface (1/2)

Release 6 items in progress:

– *Improving Receiver Performance Requirements for the FDD UE (R4).* On progress. 1 CR with new requirements presented to RAN#16, other companies may present more CRs at a later stage. Completion by December 2002.

– *Improvement of inter-frequency and inter-system measurement (R1).* No Progress. Completion date September 2002.

– *Multiple Input Multiple Output antennas (MIMO) (R1):* On progress. Joint discussion with 3GPP2 on channel modelling has started in April. Completion date: March 2003.

– *FDD BS classification (R4):* On progress, 50% completed. Estimated completion by December 2002.

– *Improved usage of downlink resource in FDD for CCTrCHs (R2):* No progress. Completion date December 2002.

– *Terminal power saving feature (R2):* No issues identified

59

Improvements of Radio Interface (2/2) Feasibility Studies

– *Radio link performance enhancements* (R1): Work in progress.

– *Deployment of UTRA in additional spectrum arrangements* (R4). Work in progress, 60% completed, completion date moved to December 2002. TR 25.889 has been sent to ITU WP8F upon request.

– *Improvement of inter-frequency and inter-system measurements for 1.28 Mcps TDD* (R1) Small progress. Behind schedule. Completion date September 2002.

– *Fast Cell Selection (FCS) for HS-DSCH* (R1): No progress. Completion date: December 2002.

– *UTRA Wide Band Distribution Systems* (R4) Completion date March 2003, 40% completed.

– *FS on UE antenna efficiency test method performance requirements* (R4). Scope of the Study unclear, be solved by next R4. Completion expected in December 2002

RAN improvements – Rel-6

– **Improvement of RRM across RNS and RNS/BSS (R3)**

No progress. Completion date December 2002.

– **Beamforming Enhancements(R1)**

- **Ongoing. TR 25.887 provided for information (v.1.0.0) at TSG-RAN #15. Completion date December 2002.**

– **SRNS Relocation Procedure Enhancement (Study Item, R3)**

- **Gain not yet evaluated. Completion date: September 2002.**

– **OFDM analysis for UTRAN evolution (Study Item, R1)**

- **Approved at TSG-RAN #16. Completion date: June 2002.**

Subscription Management

- **Moved from Rel-5 to Rel-6**
- **SM is closely linked to GUP which was also moved to Rel-6**
- **Stage 1 TS 32.140 submitted to SA#15 for Information is 95% complete**
- **Stages 2 and 3 are 10% complete.**

Problems:

- **No Rapporteur available for Rel-6 work**
- **Changed participation in SA5 reduces the number of supporting organisations of this Work Item to only two (2)**

- **Rel-6 WID to be submitted in 09/02 if solution to the above problems found**

Trace Management

- **Moved from Rel-5 to Rel-6**

- **32.421 Trace Concepts and Requirements (70% complete)**
  - **submitted to SA#16 (06/02) for Information**

- **Trace Impacts on Network Signalling Interfaces (10% complete)**
  - **monitors progress of requests made to other 3GPP WGs**
  - **LS sent to all concerned WGs to inform about SA5's requirements**

- **32.422 Trace Control and Configuration Management enhancement (40% complete)**

- **32.423 Trace Data Definition and Management (30% complete)**

- **52.008 GSM Subscriber and Equipment Trace (50% complete) – moved to Rel-6 as well**

Multimedia Broadcast/Multicast Service (MBMS)

- **Workshop on MBMS held May 6-7th in UK involving WGs of different TSGs**

- **Stage 1 CRs resulting from the workshop on:**
  - **Proposed CR on Multicast Joining Outside the Multicast Area**
  - **Clarification of requirement related to paging messages**
  - **additional MBMS CRs foreseen during next period from SA1**

- **Stage 2 on time: TR 23.846 (FS on MBMS) presented for information at SA#16**

- **Stage 2 to be performed by SA2 (Global Stage 2) and by RAN2 (Stage 2 in the AN)**

- **Stage 3:**
  - **WID for CN Part approved at CN#16.**
  - **RAN started looking at requirements (LS to workshop); work expected to start in June**

Presence

- "Presence" and "Presence enhancements", both of them anticipated to belong to Rel6, merged by SA1

- Stage 1 was **completed**. Merging "presence" and "presence enhancements"done.

- Stage 2 **on-going**: TR 23.841 presented for approval at SA#16. Alignments to include "presence enhancements" potentially needed.

- Stage 3 and other aspects (security, charging, testing) **not started** technically, but CN1 has started a TR outline and has nominated a rapporteur

- WID for security aspects planned

CN#16 expected stage 3 deliverables in September, but this assumption might change at CN#17

Support for Subscriber Certificates

- **Work ongoing in SA3.**

Push Services

- **SA1's requirements provided for Information at SA #16 in 22.174 v 1.0.0 . WID for Rel-6 presented at SA#16.**

- **SA2 will work on Stage 2 for Rel-6 (a FS was done for Rel-5). Not yet started.**

- **Other aspects not started**

Wireless LAN (WLAN)

- **SA1 work ongoing (TR 22.934 presented for information to SA#15)**

- **Work on-going at S2, WID for S2 activities on WLAN presented for approval**

- **Stage 3 not started (not yet defined)**

- **WID for security aspects planned**

MExE Enhancements Rel-6

- *WID MExE Rel-6 Improvements and Investigations*
  WID approved at TSG-T#15.
  - **Work has started.**

- *WID MExE Run-Time Independent Framework Feasibility Study*
  WID approved at TSG-T#15.
  - **Work has started.**

UICC/(U)SIM enhancements and interworking (REL-6)

- **C SIM API: Moved to Rel-6 by T#15. New draft specification presented at T3-23. Presentation to T for approval scheduled for T#17.**

(U)SIM toolkit enhancements (REL-6)

- *USAT Interpreter Rel-6 enhancements (security plug-ins and error handling)*: **for approval at T#16.**

- *USAT Interpreter Test*: **First Draft version of TS 31.121 presented at T3#23 for information.**

- **TS 31.115 and TS 31.116 on security mechanism for SAT for approval as REL-6 at T#16**

LCS enhancements 2

- **2 WIDs (one for S1 and one for S2 activities) presented at SA#16**

- **LCS activites identified for Rel-6 (WI re-presented at SA#16-rejected at SA#15):**

  - **Improvements on Le interface**

  - **Enhanced network support for user privacy and subscriber data handling**

  - **Enhanced GMLC-GMLC interface**

  - **Relationship between Location Services and Presence service**

  - **New events for triggered location reports**

- **UE positioning:**

  - **Study Item on Enhancements to OTDOA Positioning using advanced blanking methods approved at RAN #16; completion date March 2003.**

IMS Phase 2 (1/2)

- **WID now created by SA1: approved at SA #16. It includes the Rel-5 postponed items and the newly created ones.**

- **Newly created:**
  - **Radio optimisation impacts on PS domain architecture**
  - **IMS Messaging**
  - **IMS Group management (on last two items: to be later clarified if part of IMS Phase 2 or if independent features)**

IMS Phase 2 (2/2)

- **Moved from Rel-5:**
  - **Identification portability (was number portability) in IMS**
  - **IMS local services**
  - **IMS to PS interworking: Finalisation date moved to March 2003 by CN#15. CN1 part on Mm interface (CSCF to external IP multimedia network) 85% complete.**
  - **IMS to CS interworking: Finalisation date moved to December 2002 by CN#15. No split deliverable.**
  - **interface at Mc (MGCF – IM-MGW): 29.232 based on existing H.248 specification. WI approved.**

Emergency call enhancements Rel-6

Emergency calls from UEs without UICC/(U)SIM in Networks containing an IMS

- SA2 work completion target moved from TSG T#16 to TSG#18

- Stage 3 (mostly by CN1) must re-target its completion date. Major impact on GPRS and IMS stage 3 specs – completion date unknown, probably after TSG#18.

Emergency call enhancements for IP & PS based calls with (U)SIM:

- Requirements covered by SA1 in 22.228

- Stage 3 work has started in CN1, but completion depends on the related IMS progress still under discussion in SA2. Still open at SA2.

OSA – Rel 6

In line with SA1 OSA Rel-6 WID approved at SA#15 (03/02) in SP-020065 (S1-020590), and as currently reflected by the 3GPP Work Plan:

- **Support of a generic network interface function (still under discussion at SA1)**

- **Local services**

- **Support for MMS Relay/Server to VASP Connectivity**

- **Support for the Push-Service**

- **Enhanced User Notification**

- **Support for GUP to enable applications access to the Users Profile**

Plus Rel-5 work moved by SA1/2 into Rel-6:

- **User Profile Management, Retrieval of IP Session Information, 'Retrieval of Visited Network Capabilities (Journaling and Information Services)**

Other Release 6 features (1/2)

- **Generic User Profile:**
  - Work ongoing in SA1, SA2 and T2. Nothing to report to plenaries at this stage.
  - WID planned for Security Aspects

- **Digital Rights Management:**
  - Stage 1 document presented to SA for approval (TS 22.242, Version 2.0.0), WID for Security Aspects approved

- **Speech Recognition and Speech Enabled Services**
  - Stage 1 (TR 22.243) is stable in SA1, sent for information to SA#16. No work started elsewhere. To be clarified by SA1.
  - Does Aurora part belongs to Rel-5?

76

Other Release 6 features (2/2)

- ## *FS on Priority Service*

  - **TR 22.950 on FS being presented for approval at SA #16**

Summary of Completion Dates

Summary

- **The two following slides provide a summary of the Completion Dates for the Features that (partially) belong to Rel-5.**

- **Abbreviations used in next slides:**
  - **"UID" = Unique ID (Reference in the Work Plan)**
  - **"CD" = Completion Date (unit=TSG#)**
  - **"?" = ambiguity, to be clarified at TSG#16**
  - **"+" = and (the feature can be split and the resulting BBs can be completed independently)**

Completion Date (1/2)

UID	Title	CD
2	Evolutions of the transport in the UTRAN	15
4	Evolutions of the transport in the CN	14
2476	High Speed Downlink Packet Access	15
1216	Improvements of Radio Interface	16
9	RAN improvements	15+16+?
1273	Provisioning of IP-based multimedia services	16
34001	Extended Transparent End-to-End PS Streaming Service	15
1517	Global Text Telephony	12
1637	OSA enhancements for Rel-5	16
1638	CAMEL phase 4	16+17(IMS)
2464	Rel-5 MExE enhancements	15

Completion Date (2/2)

UID	Title	CD
1625	Wideband Telephony Service - AMR	16
1826	Terminal interfaces	15
1536	Location Services enhancements	16
1800	(U)SIM toolkit enhancements	15
1571	Security enhancements	16+Ze?
2243	Intra Domain Connection of RAN Nodes to Multiple CN Nodes	15+GERAN?
2556	End to End QoS for PS Domain including IMS	16
2569	Messaging enhancements Rel-5	15
13000	Service Change and UDI Fallback	16
30001	small Technical Enhancements and Improvements for Rel5	NA
31013	UE Functionality Split	15
several	GERAN improvements	GERAN10?
2520	User Equipment Management	16

Conclusion

Conclusion

- **Almost all features anticipated at TSG#15 to be completed by TSG#16 are now complete, unless listed below.**

- **Content of Rel-5 should now be considered as "frozen".**

- **The complete set of features proposed to belong to Rel-5 is provided in the slides 9 to 51, summarized in slides 80 and 81.**

- **Open points: TSG#16 should decide on the open points listed here, in particular tell if Network Sharing, Ze (related to MAP security) and CAMEL for IMS belong to Rel-5 or not.**