# *Review of the*
# *Work Plan at Plenaries #16*

# *Content*

- **Review of R99, 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**

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# *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)*

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# *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**

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# *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 |

# *Evolutions of the transport in the UTRAN*

**IP Transport in the UTRAN (RAN3)**

- *Completed at TSG#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 Rel5.*

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# *HSDPA*

## *Or "High Speed Downlink Packet Access"*

- **This WI was completed at TSG-RAN #15 except for 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**

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# *Improvements of Radio Interface (1/2)*

**Release 5 Items finished at RAN #15:**

- *UMTS1800/1900 (RAN4).*

- *Enhancement on the DSCH hard split mode (RAN2).*

**Release 5 items finished at RAN #16:**

- *BS Classification for 1.28 Mcps TDD option (RAN4): 2 BS classes with different RF requirements.*

- *TDD BS classification (RAN4): 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* **(RAN4): Completed. A Rel-6 WI was approved.**

– *FS on the re-introduction of the downlink SIR measurement* **(RAN4). Finished at TSG-RAN #14. This Study Item did not trigger any WI.**

# *RAN improvements (1/3)*

- **Completed (1/2):**
  - *RL Timing Adjustment* (RAN3)
    - **TR 25.878 and CRs approved at RAN #15.**
  - *Separation of resource reservation and radio link activation* (R3)
    - **TR 25.879 and CRs approved at RAN #15.**
  - *Node B synchronisation for 1.28 Mcps TDD* (RAN1)
    - **TR 25.868 and CRs approved at RAN #15.**
  - *Iur Neighbouring cell reporting Efficiency Optimisation (RAN3)*
    - **CRs approved at RAN #15.**
  - *Iur Common Transport Channel Efficiency Optimisation (RAN3)*
    - **TR 25.884 and CRs approved at RAN #15.**

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# *RAN improvements (2/3)*

- **Completed (2/2):**
  - *Re-arrangement of Iub Transport Bearers* **(RAN3)**
    - **TR 25.880 and CRs approved at RAN #15.**
  - *RAB support enhancement for Rel-5* **(RAN2)**
    - **RFC 3095 context relocation in SRNS relocation completed. TR 25.860 and CRs submitted to RAN #16 for approval.**
  - *Support of SSDT in UTRAN* **(RAN1)**
    - **Completed. CRs to be submitted to RAN#16 for approval.**

# *RAN improvements (3/3)*

- **Ongoing:**
  - *SRNS Relocation Procedure Enhancement*
    - **Completion date: June. Gain not yet evaluated, but this could be done during the Working Item phase. RAN3 proposes to close the study phase but did not reach any consensus to RAN about the way forward for this item. Check at RAN.**
  - *Introduction of Direct transport bearers between SRNC and Node B (RAN3)*
    - **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. RAN3 is not in a position to estimate the completion date for this SI. Check at RAN.**
  - *Iur-g way forward in RAN (R3)*
    - **LS from RAN3 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 RAN3, 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.**

# 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.
  - Lot of other corrections and clarifications 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:**
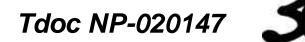  - Still open issues and IETF draft dependencies on stage 3, but estimated to be 90-95% completed.

# *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%) to be "frozen" at CN#16**

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

- **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**

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# *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).

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# *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.

# *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 issue remains on error case.  Completion depends on IETF progress on SigComp.

- *Charging*: CRs on Stage 1 Change to 22.115 to include Pre-paid, Stage 2 completed (TR 23.815 presented in v.2 at SA#15, also including pre-paid), Stage 3 in 32.225 (v.1. At SA#15) to be completed by June by SA5.

# IMS (6/7) – Other issues (2/2)

- Header removal in GERAN: Stage 3 changes ready by December 2002 (no WI for Header removal in UTRAN)

- 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)

# *IMS (7/7) - Interfaces*

- interfaces at Mi (CSCF – BGCF), Mj (BGCF – MGCF), Mk (BGCF – BGCF): status to be checked at CN#16 (these interfaces use SIP).

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

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

- interface at Mc (MGCF – IM-MGW): 29.232 based on existing H.248 specification - work required to be done by CN3 and CN4 for Rel6

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

- interface at Si (HSS – IM-SSF): WI being defined (Stage 3 not done). 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) for approval at CN#16

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

*Reminder: Sr (Application Server – MRFC) moved to Rel-6*

# *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

- *LS to SA4 on PSS Rel-6 Work Program*

- TR 26.937 "RTP usage model" in progress, not yet ready, but not critical

- 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 Cordless Terminal Mobility in Bearer Independent Circuit-Switched Core Network (June 2002): to be clarified by CN**

*SA4 Question: should this be a "Release independent Feature" ? (e.g., if a R99/Rel-4 compliant 3G system is implemented, but GTT is not made available, one regulatory body could revoke the 3G license …)*

# *OSA (1/2)*

- **Stage 1 is completed – CRs on:**
  - **Reduction of scope of OSA R5 (moved to later Release): User Profile Management, OSA support of a Generic Network Interface Function, Presence Service, Retrieval of IP Session Information, 'Retrieval of Visited Network Capabilities (Journaling and Information Services)**

  - **A more Flexible Event Notification mechanism**

  - **Clarifications of the terms used for the control of GPRS Sessions and IM Sessions**

  - **Charging Requirements**

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# OSA (2/2) – BBs on schedule

- **All the Items below are targeted June 2002**
  - *OSA APIs for Multi-media* : 70 % completed
  - *Retrieval of Terminal Capabilities*: completed except for IMS aspects, still to be addressed by SA2.
  - *Framework*: Stage 3: 65 % (ongoing dialogue between N5 and SA3).
  - *Generic User Interaction*: Stage 2: architectural mapping in CS/PS/IMS still needs to be documented, Stage 3: 65 %
  - *Charging*: work ready (Stage 3: 95%), CR in 06/2002
  - *Policy Management*: work ready (Stage 3: 95%), CR in 06/2002
  - *Presence & Availability Management*: work ready (Stage 3: 90%), subset for 3GPP needs still to be created and reviewed, CR in 06/2002
  - *Call Control mapping to ISC*: Stage 3: 70%
  - *WSDL APIs for HTTP/SOAP transport*: 90% (automatic mapping rules from UML created, WSDL APIs generated, CRs need to 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 sent to CN#16 for approval.**

**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**

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# *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 CAMEL4 stage 1)**

**SA1 agreed removal of the feature** **"Charging notification to the CSE". If SA#16 approves related CR, this BB will be removed from the WP for Release 5.**

**"Enhancements of dialled services" is removed from the WP according to SA#15 decision.**

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# *CAMEL phase 4 (3/3)*

## *Support of CAMEL by the IMS*

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

**Si interface: 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**

**Stage 3 targeted to September. Clarify if still part of Rel5.**

# *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*:

- T2 proposes deletion of the work item

# *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**

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# *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: transcoding needed due to reduced codec modes (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 expected to be completed by June 2002):**

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

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

  – **Radio Access Bearer optimisation  completed**

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

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

*Reminder: Tones and announcements , WB Conferencing & WB Voice Group calls and Adaptation of subscriber data in HLR/VLR moved to Rel6 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"*

- ## LCS enhancements in Rel-5:

  – *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 for approval in* **CN #16**. *Corrective CRs for Stage 2 for approval in* **SA #16**.

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

  – *Deferred location request: might not belong to Rel-5. Check again at SA#16.*

  – *UE positioning:*

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

    • **Open interface between the SMLC and the SRNC within the UTRAN to support UTRAN Rel-4 Positioning: not started, moved to Rel-6.**

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

  – *LCS for GERAN in Iu Mode:* **on-going** *at GERAN*

# *UICC/(U)SIM enhancements and interworking*

- *Test Specification for TS 23.048 REL-5*: WI approved at T#15. Technical work not started

- *Test Specification for TS 43.019 REL-4*: WI approved at T#15. TS 53.013 REL-4 presented for information at T#16.

# *(U)SIM toolkit enhancements (REL-5)*

- *USAT Interpreter Test*: First Draft version of TS 31.121 REL-5 presented at T3#23 for information.

- TS 31.115 and 31.116 specifying security mechanisms for (U)SIM toolkit applications moved to Rel-6.

TSG T to clarify what remain in Rel-5 for these features.

# *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 finished at TSG 16 (was unclear at TSG #15)
    - 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.**

# *End-to-End QoS (2/2)*

## Progress on items still opened at TSG#15:

- SDP to UMTS QoS mapping for both streaming and conversational services applications. Mechanism clarified by SA2. CN3 creating CRs to 29.208. Almost <span style="color:red">completed.</span>

- Handling of charging ID: Mechanism clarified by SA2. CN3 creating CRs to 29.208.

- Comments from TSG#15: QoS parameter values for various media types:  further guidance would be required in order to complete the work. <span style="color:green">Still valid?</span>

- Note : no impact on RAN work.

# *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: the actual Feature is for next Release (no WID on the actual Feature at present: to be elaborated by interested companies).**

# *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 as an open issue for Rel-5 in CN1.*

*VHE enhancements deleted at TSG#14*

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

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# *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: agreed not to have any WID for Rel-5 part, but no CR was agreed.**

- **Questions to plenaries:**

- **1) Relationship with RAN WI "Shared Network support in connected Mode" (see next slide) still to be clarified.**

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

# *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.**

# *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 |
| 2520 | User Equipment Management |

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# *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.*
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.*
No progress.

– *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

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# *Improvements of Radio Interface (2/2) Feasibility Studies*

- *Radio link performance enhancements* **(R1): Work in progress. TR on Tx-diversity will be provided for RAN #16 for information.**

- *Deployment of UTRA in additional spectrum arrangements* **(R4). Work in progress, 60% completed, end 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.**

- *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, but it will be solved by next RAN4. Completion expected in December 2002

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# *RAN improvements – Rel-6*

- Improvement of RRM across RNS and RNS/BSS (RAN3)

    No progress. Proposed completion date is RAN #18.

- Beamforming Enhancements(RAN1)

    - Ongoing. TR 25.887 to be provided for information (v.1.1.0) at RAN#16.

# *Charging and OAM&P*

- **TSG approval target is 06/2002. Check status.**

# *Subscription Management*

- **Stage 1 in TS 32.140 submitted to SA#15 for Information, targeted to 06/2002. Check status.**

# *Multimedia Broadcast/Multicast Service (MBMS)*

- **Workshop on MBMS held May 6-7$^{th}$ 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**

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

- **Stage 3:**
  - **WID for CN Part presented to NP#16 by CN1.**
  - **RAN started looking at requirements (LS to workshop); work expected to start in June**

# User Equipment Management - *Feasibility Study*

- **TR 32.802 v1.0.4 submitted to SA#15 for information. Targeted to 06/2002.** Check status.
- **WID for Security aspects planned**

# Trace Management

- **Targeted to 06/2002.** Check status.
- **Work from other WGs (CN1, RAN2, RAN3) not started yet.**

# *Presence*

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

- Stage 1 was completed but now needs to be updated to include "presence enhancements"

- Stage 2 on-going: TR 23.841 presented for approval at SA#16. Does it include "Presence enhancements"?

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

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# *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**

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

  - **New events for triggered location reports**

# *IMS Phase 2 (1/2)*

- **WID now created by SA1: presented for approval 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**

# *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 Rel-5/Rel-6 possible, so the whole item is moved to Rel6. CN1 part on Mg interface (BGCF to MGCF - interworking with CS) completed.**

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# *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.

# *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.
  - Does Aurora part belongs to Rel-5?

# *Other Release 6 features (2/2)*

- ## *FS on Priority Service*

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

- ## *OSA Rel6*

  – **WI on stage 1 approved at SA#15, to be renamed not to refer to any release (e.g. "OSA enhancements 2").**

# *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)**

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# *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 | ? |
| 1571 | Security enhancements | 16 |
| 2243 | Intra Domain Connection of RAN Nodes to Multiple CN Nodes | 15+? |
| 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? |

# *Conclusion*

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- **Features anticipated at TSG#15 to be completed by TSG#16 are indeed now complete.**

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

- **The complete set of features proposed to belong to Rel-5 is provided in the slides 9 to 50, summarized in slides 78 and 79.**

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