MCC Review of the
Work Plan at Plenaries #13

List of Rel 5 Features (1/2)

Unique I	Title
2	Evolutions of the transport in the UTRAN
4	Evolutions of the transport in the CN
2476	High Speed Downlink Packet Access
34001	Extended Transparent End-to-End Packet Switched Streaming
1216	Improvements of Radio Interface
9	RAN improvements
1273	Provisioning of IP-based multimedia services
1652	Emergency call enhancements
1517	Global Text Telephony
1367	VHE enhancements
1637	OSA enhancements
1638	CAMEL phase 4
2464	MExE enhancements Rel-5
1625	Wideband Telephony Service - AMR
1826	Terminal interfaces

List of Rel 5 Features (2/2)

Unique I	Title
1536	Location Services enhancements
1560	UICC/(U)SIM enhancements and interworking
1800	(U)SIM toolkit enhancements
1571	Security enhancements
1365	Support of Push Services
1142	Charging and OAM&P
2062	Subscription Management
2243	Intra Domain Connection of RAN Nodes to Multiple CN Nodes
several	GERAN issues
2499	Support of Presence Capability
2507	Display of Service Provider name on UE
2520	User Equipment Management
2527	Emergency calls without UICC/SIM in netw. with IMS
2556	End to End QoS for PS Domain (including IMS)
2569	Messaging enhancements Rel-5
2544	Enhancement of Broadcast and Introduction of Multicast

Evolutions of the Transport in the UTRAN

IP Transport in the UTRAN (R3) – Rel-5.

- Ad Hoc meeting #4 in August. Most of the study areas are complete. TR 25.933 v1.4.0 will be presented to RAN #13 for information. **WI is not complete.**

- Agreements have been reached for the following topics:
  - Iu-cs user plane protocol stack: RTP/UDP/IP/Data Link Layer/Physical Layer with RTCP as optional.
  - Iu-ps user plane protocol stack: GTP-u/UDP/IP/Data Link Layer/Physical Layer.
  - Header compression based on RFC 2507 and its negotiation on RFC 2509.

- **Contentious issues:**
  - Signalling bearer protocol stack: Despite long discussions, no agreement could be reached.

Evolution of transport in UTRAN and GERAN (R3) – Rel-5.

- No work was done on this WI. **WI is not complete.**

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Evolution of the transport in the CN

Feasibility Study on SCCP-User Adaptation:

Work on schedule:

– **The TR 29.903 on FS on SS7 signalling transportation in the CN with SCCP-User Adaptation (SUA) is 50 % complete.**

– **To be presented for approval at CN#14.**

HSDPA (1/2)

Or "High Speed Downlink Packet Access"

- **General issues (R2)**

  - **On schedule.**

  - **Joint R2/R3 meeting in August.**

  - **Substantial progress. TR 25.855 provided for approval at RAN #13:**

    - **Stage 2 description near-complete.**

    - **To be transferred to a TS (approval in RAN) to cover normative text (and for reference purposes by ITU).**

- **Physical Layer (R1)**

  Agreements on:

  - **TTI length for FDD and 1.28 Mcps TDD**

  - **Signalling scheme**

  - **HARQ combining schemes**

  - **Control channel structure**

HSDPA (2/2)

- **Layer 2 and 3 aspects (R2)**

  Major decisions on HARQ protocol:
  - **Asynchronous downlink**
  - **Synchronous uplink**

- **Iub/Iur protocol aspects (R3)**

  Work has started:
  - **TR 25.877 contains proposed study areas for Iub and Iur interfaces.**
  - **Issue of flow control over Iub discussed.**

- **RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing (R4)**
  - **Presentation has been given, but work has not started.**

Improvements of Radio Interface (1/3)

- **Items on schedule:**

  - *BS Classification for 1.28 Mcps TDD option (R4)*

  - *FDD BS classification* **(R4)**

  - *Hybrid ARQ II/III* **(R2) – In progress as part of HSDPA WI**

  - *Multiple Input Multiple Output antennas (MIMO)* **(R1)**
    TR outline created

  - *Enhancement on the DSCH hard split mode (R1)*
    TR to be presented for information to RAN #13

Improvements of Radio Interface (2/3)

- **Items in progress:**

    – *Improvements of inter-frequency and inter-system measurement* (R1)

    – *UMTS 1800* (R4) – In progress (release independent)

    – *UMTS 1900* (R4) – In progress (release independent)

- **Items no progress on:**

    – *Improved usage of downlink resource in FDD for CCTrCHs* (R2)

    – *Terminal power saving feature* (R2) – No work identified

- **Out of schedule:**

    – *TDD BS classification* (R4) – finished in RAN#12 but discussion resumed

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Improvements of Radio Interface - FS (3/3)

Feasibility Studies on:

- *Fast Cell Selection (FCS) for HS-DSCH* **(R1) – Just started**
- *Radio link performance enhancements* **(R1)**
  - **Tx-diversity : In progress with MIMO discussion**
  - **Other topics : Enhancement of SSDT has been discussed.**
- *USTS* **(R1) – In progress. System simulation results have been presented for various cases. RAN #13 is to be asked to derive Rel-5 WI for this feature.**
- *UE antenna efficiency test method performance requirements* **(R4) – In progress / On schedule**
- *The re-introduction of the downlink SIR measurement (R4)*
  - **In progress / On schedule**
- *UTRA Wide Band Distribution Systems(R4)* **– In progress but behind schedule**
- *Mitigating the effect of CPICH interference at the UE***(R4)**
  - **In progress but behind schedule**

RAN improvements (1/2)

- **On schedule:**
  - **RL Timing Adjustment (R3)**
    - **TR 25.878 v0.2.0; open issue on timing adjustment mechanism.**
  - **Separation of resource reservation and radio link activation (R3)**
    - **A proposal was included in the TR on how delayed activation could work when reserved resources remain tied to a certain UE context. The other case is FFS.**
    - **TR 25.879 v0.2.0; several open issues are left.**
  - **Improvement of Radio Resource Management across RNS and RNS/BSS (R3)**
    - **TR 25.881 v0.2.0; there were several open issues.**
  - **Node B synchronisation for 1.28 Mcps TDD (R1)**
    - **TR 25.868 for information at RAN#13.**

RAN improvements (2/2)

- **Ongoing:**

  – **Re-arrangement of Iub Transport Bearers (R3)**

    • **Several open issues have been identified.**

- **No progress:**

  – **RAB support enhancement (R2)**

IP-based Multimedia Services (1/3)

- **Stage 3 delayed until March 2002, Security aspects delayed until June 2002**

- **Stage 2 not fully stable for:**
  - **Charging (prepay and "post pay")**
  - **SIP compression**

  => *Additional SA2 drafting meeting in October*

- **Stage 3 not yet defined for:**
  - **The items above**
  - **SIP (IETF dependencies should be completed by March 2002)**
  - **Detailed stage 2 and Stage 3 progressing at N1: TS 24.228v120 planned for approval in CN#14, while TS 23.218v052 and TS 24.229v040 are planned for March 2002)**
  - **Security (S3 and T3): on T3 aspects, discussion has started, but little progress yet. Concept of ISIM being discussed. See next slide for SA3 activities.**

IP-based Multimedia Services (2/3)

- **Security aspects ("Access Security for IMS"):**
  - **Stage 2 targeted for March 2002 approval**
  - **Stage 3 targeted for June 2002 approval**
  - **Completion dependent upon progress in IETF on Extensible Authentication Protocol (EAP), Security Mode Set-up and Integrity Protection**
  - **Work on mechanism for integrity of SIP messages ongoing in SA3**
  - **Requirements draft developed by SA3 for input to IETF in October 2001**

IP-based Multimedia Services (3/3)

- **Other aspects not yet stable:**
    - **Header removal/compression in UTRAN and/or GERAN**
    - **Number portability in IMS**
    - **IMS local services**
    - **CAMEL and OSA in IMS and SIP Application Server (ISC interface)**
    - **interworking with external IP and CS networks**
    - **Specification of MRF**
    - **UE functionality split**

Global Text Telephony

- **Completed** and closed at SA#12

VHE enhancements

- "**dormant** mode": very little activity related to this WI

Emergency call enhancements

For IP & PS based calls

> **Work ongoing**

– Requirements covered by S1 in 22.228

– Stage 3 completion by N1 depends on the related IMS progress now under discussion in S2

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

• No work done in SA2 (impacts on 23.221, 23.060 and 23.228 still to be specified)

• Stage 3 targeted for TSG#15

• To be confirmed if it is still applicable to Rel5

CAMEL phase 4 (1/3)

- **Stage 2 and Stage 3: Draft TSs are under development.**
  - **First official Rel-5 versions of CAMEL specs will be inputs for CN plenary in December in form of one major CR to Rel-4 version.**
  - **IMS CAMEL needs adjustment in the target date taking the whole IMS work into account. The "Skeleton" of the IMS CAMEL will be part of December version.**

CAMEL phase 4 (2/3)

Progress on CAMEL4 BBs:

Almost complete:

- **Interactions with Optimal Routing**

- **Inclusion of flexible tone injection:** CPH interaction is FFS

- **Provision of location information of called subscriber**

On schedule for December:

- **CAMEL control over MT SMS**

- **Call Party Handling**

- **Notification of GPRS mobility management to CSE**

CAMEL phase 4 (3/3)

Delayed:

- **Charging notification to the CSE**

- **Enhancements of dialled services**

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

- **Location information during an ongoing call**

- **GPRS Any Time Interrogation**: no progress yet

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

Work just started:

- **CAMEL support by the IMS (see slide on IMS)**

"CAMEL support by the IMS" is added under WI "Provisioning of IP-based multimedia services" instead of BB "CAMEL applicability to media streams like VoIP" which is deleted

MExE Enhancements Rel-5

- **MExE Improvements and Investigations on schedule for December 2001**

  - **main enhancements**
    - **investigate ECMA "Common Language Infrastructure" Support as Classmark 4**
    - **investigate support of terminal management**
    - **General enhancements and improvements**
    - **security enhancements**

- **MExE Security Analysis no progress due to lack of input, rescheduled for June 2002**

Wideband AMR

- **AMR-WB Algorithm + test sequences: completed (c/o S4)**

- **AMR-WB Characterisation : Phase 1Ais completed, Phase 1B is on-going, Characterisation Phase 2 is under way (c/o S4)**

- **Tandem Free Operation: inclusion of AMR-WB is under way in S4**

- **AMR-WB Floating-Point version: new WID presented at SA#13**

- **AMR-WB work in progress:**

- **A list of Network / Security / Charging Aspects of the AMR-WB Feature to be progressed c/o related WGs; in particular:**

- **Signalling related to AMR-WB under discussion in CN; expected resolution at CN#13**

- **AMR-WB Service requirements c/o S1: no input received so far**

- **AMR-WB architectural aspects c/o S2 : no input received so far**

Extended Transparent End-to-End Packet Switched Mobile Streaming Applications

- WI approved at previous SA plenary (work just started).

- TS 26.233 and TS 26.234 in Release 5: work in progress to be concluded by March (one major CR to be provided on Rel-4 version of both specs)

- Discussion between S4 and S1 (all requirements potentially not provided in the first release)

- There were 2 entries for this feature in the Work Plan (under S1 and under S4 responsibilities): this has been re-arranged into one and the main responsibility is assigned to S4.

- Multimedia Codecs and Protocols for Conversational Packet-Switched Services: TS 26.235 in Release 5: under Change Control

Other codec issues

- **Work in progress on Acoustic issues, e.g. Ambient Noise Rejection, Speech and Noise Bandwidth, …**

- **Audio visual terminal characteristics: Work in progress on Harmonization of requirements for terminal "acoustics" in GSM/GERAN and 3G (specifically TS 43.050 / TS 26.131 in Release 5); test methods in TS 51.010 / TS 26.132.**

Terminal Interfaces Rel-5

– **Wide Area Data Synchronization**
  - **vObjects and Other Constructs for Use in Data Synchronization**
    little progress, rescheduled for June 2002

– **Terminal Local Model enhancements**
  little progress, rescheduled for March 2002
  - **aspects of UE Functionality Split to be accommodated**

LCS in Rel-5

– **Re-submission to SA#13 of the WID on LCS for Rel-5 (was rejected at SA#12 because of unclear scope)**

– **LCS activities for Rel-5 are:**

- **LCS in GERAN PS domain,**

- **Event driven deferred LCS request,**

- **Periodic location reports,**

- **Standardization of the Le interface (a stand-alone WI was already approved on this topic in SP-010180),**

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

– **Work on-going, Stages 1, 2 and 3 planned to be completed by December 2001**

UICC/(U)SIM enhancements and interworking

– **work has started on "UICC/USIM Transport Protocol" but some risk of delay until March 2002.**

(U)SIM toolkit enhancements

– **"USAT Interpreter" now Rel-5 (was Rel-4). Two new specifications for approval at T#13 and a further one for approval is expected at T#14.**

– **work on the test specification for "USAT Interpreter" not yet started.**

Presence

Potential delay:

- **Requirements being defined by S1**
- **S2 just starting the related work: a WID is presented at SA#13 to clarify S2 involvement**
- **T3: work has not yet been started.**

Display of Service Provider Name

- **Graphical representation (Rel-5 part):**
  - **Requirements defined**
  - **T3 part not done**
- **All the other items are Rel-4 and have been completed**

Security Enhancements Rel-5 (1/2)

- **Network domain security**

    - **MAP application layer security (Automatic Key Management):**

        - **material available, but no proposal for Zb interface at present. Contribution needed to 33.200 to meet Rel-5 target date**

    - **Control plane protection IP-based CN (e.g., GTP, CAP, MAP/IP, provided by IPsec)**

        - **TS 33.210 expected completion June 2002**

Security Enhancements Rel-5 (2/2)

- **Protection for user plane data (GTP-U)**

  - **WI deleted due to lack of support**

- **FIGS**

  - **No contribution to SA WG3 and no progress. Consideration of deletion if no support.**

Push Services

Work delayed until March but clear willingness to still have it in Rel5

- **The question of the establishment of the bearer to support Push Service is still not solved: "always on", NRCA or SMS-based.**

- **It is hoped that the Stage 1 will allow to solve this question (the Stage 1 is expected to be approved by December 2001).**

- **The Stage 2 in TR 23.974 is however presented for approval at SA#13. The Stage 2 is put on hold until SA approves the Stage 1.**

Iu-Flex

Also known as "Intra Domain Connection of RAN Nodes to Multiple CN Nodes"

Work on schedule:

- **The Stage 2 in TS 23.236 is presented to SA#13 for approval. An LS is sent to RAN3, RAN2, GERAN2, CN1 and CN4 to ask them to review the Stage 2 and provide the corresponding Stage 3.**

- **Stage 3 expected on:**
  - **RAN node selecting CN node in A / Gb / Iu interface mode**
  - **New (resp. old) CN node selecting old CN (resp. new) node**
  - **SGSN selecting MSC**

GERAN Work Items (1/2)

All on-going (most to be completed by March /June 2002)

- **Evolution of transport in UTRAN and GERAN (BB of UTRAN Feature)**

- **GERAN/UTRAN interface evolution of Iu-ps : impacted by TR on OVS, i.e. "optimised speech" (in progress)**

- **GERAN/UTRAN interface evolution of Iu-cs**

- **Evolution of the transport for A interface: define a new A/Ater interface**

- **GERAN support for IP multimedia: header adaptation, RAB design, signalling, MS & BTS Conformance tests**

- **Alignment of 3G functional split and Iu: GERAN user / control plane, Iu-rg, voice over PS and CS concept, NB speech, MS & BTS Conformance tests**

- **GERAN enhancements for streaming services: SDU discard, use of ECSD**

- **Real Time QoS for packet services including VoIP (UTRAN): Handover PS**

- **Wideband telephony services: support in GERAN, MS + BTS Conformance test for AMR Wideband**

- **Location service (UMTS) : LCS interoperability aspects to GERAN, LCS in A/Gb mode, Iu mode, MS + BTS Conformance test for LCS**

GERAN Work Items (2/2)

Features or Building Blocks removed from the WP :

- **Low chip rate TDD interworking with GERAN**

- **Gb over IP (GERAN improvements 1)**

- **Gb enhancements (Intra NACC Building block) (GERAN improvements 2)**

- **Delayed TBF (GERAN Improvements 4, Gb enhancements 2)**

GERAN "New/updated" Work Items

All on-going (most to be completed by March /June 2002)

- **Work Item for the "GERAN MS Conformance test for inter-system and intra-system Packet Data real time Handover"**

- **Update of GERAN LCS Work Item for A/Gb mode**

- **Update of GERAN LCS Work Item for Iu mode**

- **Building Block WI GERAN user/control plane**

End-to-End QoS

Work ongoing

- **Stage 2 in TS 23.207 already in version 5 (v.5.1.0)**

- **Main issues on Stage 2: try to reduce the number of possible solutions from 6 down to ideally 1**

- **Stage 3 work started by CN3 (TS 29.207), foreseen to be completed by March 2002**

- **Work with GERAN on Optimised Speech Transport under discussion (joint meeting S2/GERAN beginning of August)**

Messaging Enhancements Rel-5

- **MMS stage 2 enhancements behind schedule but still planned for December 2001**

    - **main enhancements**
        - **MM7 VAS server interface**
        - **enhanced interworking issues**
        - **extended User Agent capabilities for MMS**
        - **support of network based mailbox model in MMSE**
    - **Stage 3 might again be defined by WAP Forum**

- **EMS enhancements on schedule for December 2001**

    - **main enhancements**
        - **line or vector based image format under discussion**
        - **monophonic and polyphonic sound formats**
        - **more complex elements (forms, menus, session ID etc)**
        - **hyperlink IE**
        - **EMS delivery request**

Enhancement of Broadcast and Introduction of Multicast

- **Service renamed Multimedia Broadcast/Multicast Service (MBMS)**

- **Stage 1 (22.146 v.2.0.0): presented at this meeting for approval.**

- **Stage 2: S2 present a WID at SA#13 on S2's work for this feature. Discussions at SA2 to check whether it should be Rel-5 or Rel-6 (no firm decision).**

- **Security section is minimal but S3 expertise is required**

- **Charging section has basic requirements defined**

Summary of Completion Dates

Summary

- **The two following slides provide a summary of the Foreseen Completion Dates, sorted by date**
- **Abbreviations used in next slides:**
  - **"UID" = Unique ID (Reference in the Work Plan)**
  - **"FCD" = Foreseen Completion Date**
  - **"/" = or (no clear estimation)**
  - **"+" = and (the feature can be split and the resulting BBs can be completed independently)**
  - **"several" = the feature consists in a lot of independent BBs with different completion dates**
  - **When the year is omitted: Dec = Dec 01, Mar = Mar 02, June = June 02**
  - **In Red: Features particularly relevant**

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Foreseen Completion Dates (1/2)

UID	Title	FCD
1517	Global Text Telephony	Completed
4	Evolutions of the transport in the CN	Dec-01
2476	High Speed Downlink Packet Access	Dec-01
1625	Wideband Telephony Service - AMR	Dec-01
1536	Location Services enhancements	Dec-01
1800	(U)SIM toolkit enhancements	Dec-01
2569	Messaging enhancements Rel-5	Dec-01
2243	Intra Domain Connection of RAN Nodes to Multiple CN Nodes	Dec/Mar
1638	CAMEL phase 4	Dec+Mar
2464	MExE enhancements Rel-5	Dec+June
34001	Extended Transparent End-to-End Packet Switched Streaming	Mar-02
1652	Emergency call enhancements	Mar-02
1560	UICC/(U)SIM enhancements and interworking	Mar-02
1365	Support of Push Services	Mar-02
2556	End to End QoS for PS Domain (including IMS)	Mar-02
2499	Support of Presence Capability	Mar/June
1273	Provisioning of IP-based multimedia services	Mar*+later
1571	Security enhancements	Mar+June

* Except the IMS Security, to be completed by June

Foreseen Completion Dates (2/2)

UID	Title	FCD
several	GERAN issues	Mar+June
2544	Enhancement of Broadcast and Introduction of Multicast	No estima
1367	VHE enhancements	No info
1637	OSA enhancements	No info
1142	Charging and OAM&P	No Info
2062	Subscription Management	No Info
2520	User Equipment Management	No Info
2507	Display of Service Provider name on UE	No Prog
2527	Emergency calls without UICC/SIM in netw. with IMS	No Prog
2	Evolutions of the transport in the UTRAN	several
1216	Improvements of Radio Interface	several
9	RAN improvements	several

Conclusion

Conclusion

- **Given the data provided in the slide "Foreseen Completion Dates (1/2)", it is proposed to define the Completion Date of Release 5 as March 2002, with an exception for IMS Security ("stable" stage 3 to be approved in June).**

- **To achieve this, some discussions are encouraged to release the work load of some WGs by pushing out to Rel-6 some IMS aspects strictly speaking not required.**

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