MCC Review of the Work Plan at Plenaries #14

This presentation does not include the results of TSG RAN, T and CN #14

Content

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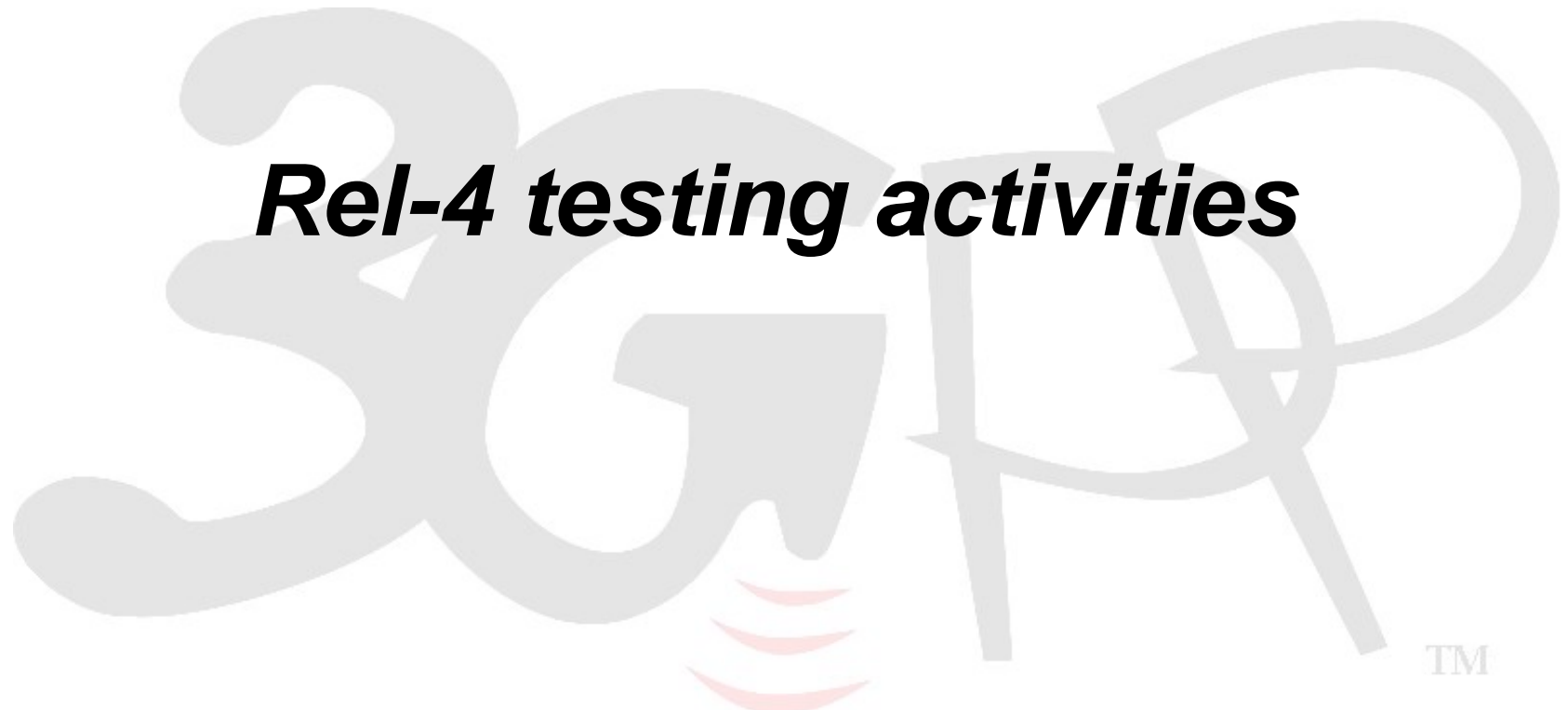- **Review of Rel-6 features**
- **Summary of Foreseen Completion Dates**
- **Conclusion**

In *Black*: Name of the task
In Red: important statement
In Green: question to plenary

Rel-4 testing activities

UE Testing Rel-4 (1/2)

- **Just started (part 1 to be finished by June 02, part 3 by Mar 03):**
  - *Conformance Test Aspects of UMTS 1800 and 1900*
  - *LCR TDD, Testing Layer 2 and layer 3 protocol aspects (SIG)*

- **Not started yet (to be finished by Sep 03):**
  - *Testing of RAB support for RoHC*
  - *Testing Emergency call enhancements for CS based calls (SIG)*

UE Testing Rel-4 (2/2)

- **Ongoing activities (% complete, foreseen completion date):**
  - *LCR_TDD, Testing RF Radio Transmission and Reception (RF)* (80 %, June 02)
  - *Optimisation of Test Time, RF Aspects (FDD and TDD) (RF)* (40 %, June 02 for both)
  - *Extensions to R99 Test cases (SIG, covers the completion of FDD prose and TTCN)* (20%, June 02 for Part 1, Sep 02 for Part 3)
  - *Maintenance of the R99 test specification and test cases (SIG)* (50%, ongoing)
  - *Creation of the Release 99 TCs for TDD, prose and TTCN (SIG)* (20%, Sep 02 for Part 1 and Mar 03 for Part 3)

Rel-5 Features

List of Rel 5 Features (1/2)

Unique I	Title
2	Rel5 Evolutions of the transport in the UTRAN
2476	High Speed Downlink Packet Access
1216	Rel5 Improvements of Radio Interface
9	Rel5 RAN improvements
4	Rel5 Evolutions of the transport in the CN
1273	Provisioning of IP-based multimedia services
34001	Extended Transparent End-to-End PS Streaming Service
1652	Emergency call enhancements
1517	Global Text Telephony
1367	Rel5 VHE enhancements
1637	Rel5 OSA enhancements
1638	CAMEL phase 4
2464	MExE enhancements Rel-5
1625	Wideband Telephony Service - AMR
1826	Terminal interfaces (Rel5 improvements)

List of Rel 5 Features (2/2)

Unique I	Title
1536	LCS Rel5 enhancements
1560	UICC/(U)SIM Rel5 enhancements and interworking
1800	(U)SIM toolkit Rel5 enhancements
1571	Security Rel5 enhancements
1365	Support of Push Services
1142	Charging and OAM&P (Rel5)
2062	Subscription Management
2520	User Equipment Management
2243	Intra Domain Connection of RAN Nodes to Multiple CN Nodes
2320	GERAN Rel5 improvements
2499	Support of Presence Capability
2507	Display of Service Provider name on UE
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
13000	Service Change and UDI Fallback

Evolutions of the Transport in the UTRAN

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

- RAN WG3 believes that the IP-Transport Work Item will be completed by March 2002 and ready for the TSG RAN#15 meeting. TR 25.933 v1.5.0 presented to RAN #14 for information.

- Agreements have been reached for the following topics:
  - All solutions in study area section are now described, except some details on User plane transport signalling and Interoperability with R99 ATM nodes. Most of the agreements have been reached. There is no major technical issue. Therefore, RAN WG3 believes that the IP-Transport Work Item is now completed by 90%.

- Contentious issues:
  - No consensus in RAN WG3 on M3UA or SUA.

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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HSDPA (1/2)

Or "High Speed Downlink Packet Access"

- **General issues (R2)**
  - Completion date: March 2002.
  - Joint R1/R2 meeting in November.
  - Substantial progress:
    - Corrections and updates to Stage 2 description in TS 25.308

- **Physical Layer (R1)**
  - Key items have been almost agreed.
  - UE capability, downlink signalling coding and detailed timing issues are open issues.

HSDPA (2/2)

- **Layer 2 and 3 aspects (R2)**
  - **Detailed CRs to core specifications have been started, to be approved in March (RAN #15)**

- **Iub/Iur protocol aspects (R3)**
  - **Preliminarily study of flow control for MAC-hs SDUs between two UTRAN elements, impacts on the NBAP protocol, and HSDPA transport bearer efficiency over the Iub and Iur interfaces.**

- **RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing (R4)**
  - **Work is about 20% complete, but unlikely to be finished by March. An Ad Hoc may be necessary.**

Improvements of Radio Interface (1/4)

- **Items on schedule:**

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

    - *FDD BS classification* (R4)

    - *TDD BS classification* (R4): Completion date moved to March 02. Only disagreement: ACLR for Local Area BS

    - *Hybrid ARQ II/III* (R2) –Covered in HSDPA WI

    - *Multiple Input Multiple Output antennas (MIMO) (R1)*

    - *Enhancement on the DSCH hard split mode (R1)*

Improvements of Radio Interface (2/4)

- **Items finished:**
  - *UMTS1800/1900* **(R4). WIs completed, the CRs to WG4 specifications are presented for approval at RAN#14**
- **No progress on:**
  - *Improved usage of downlink resource in FDD for CCTrCHs* **(R2)**
  - *Terminal power saving feature* **(R2)**

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Improvements of Radio Interface (3/4) Feasibility Studies

- **FSs finished:**

  – *FS on UE antenna efficiency test method performance requirements* (R4). It was agreed to follow the work done by CTIA, although some non-technical issues have aroused.

  – *FS on the re-introduction of the downlink SIR measurement* (R4). It is agreed that the SIR meas. is not necessary, same information can be obtained with existing meas.

- **FSs ongoing:**

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

  – *Improved Common DL Channel for Cell-FACH State* (R2) – It is proposed to delete this SI.

  – *Fast Cell Selection (FCS) for HS-DSCH* (R1)

Improvements of Radio Interface (4/4)
Feasibility Studies

FSs ongoing:

– *Radio link performance enhancements* **(R1)**

– *USTS* **(R1).**

– *Beam forming* **(R1)**

– *UTRA Wide Band Distribution Systems* **(R4) Completion date moved to June 2002, further work will be based on the local area BSs scenarios studied under the BS Class WI.**

– *Mitigating the effect of CPICH interference at the UE* **(R4). Almost finished. The WI will be proposed at RAN#14**

– *Deployment of UTRA in additional spectrum arrangements* **(R4). Work just started**

RAN improvements (1/2)

- **On schedule:**
  - *RL Timing Adjustment* (R3)
    - TR 25.878 v0.3.0; RAN3 awaits RAN2 progress.
  - *Separation of resource reservation and radio link activation* (R3)
    - It is expected that some/several of the potential optimisations can be completed before RAN#15.
    - TR 25.879 v0.3.0; several open issues are left.
  - *Improvement of Radio Resource Management across RNS and RNS/BSS* (R3)
    - TR 25.881 v2.0.0 will be submitted to TSG RAN#14. This is considered to be complete by RAN WG3.
  - *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)
    - Requirements and two possible solutions for identified study areas are currently present in the technical report. Completion date is RAN #15.
  - *SRNS Relocation Procedure Enhancement*
    - Some work has been done. Completion date is RAN #15.
  - *RRM optimization for Iur and Iub*
    - Some work has been done. Completion date is RAN #15.

- **No progress:**
  - *RAB support enhancement* (R2)
    - New work approved at RAN #13: RFC 3095 context relocation in SRNS relocation

Evolution of the transport for CN

- **SUA Feasibility Study**
  - TR 29.903 Feasibility study on SS7 signalling transportation in the core network with SCCP-User Adaptation (SUA)
    - *Finished*
    - Unfortunately it has **not** been possible to reach **consensus** in CN4 on whether or not to recommend that CN4 proceed with specifying the possible use of SUA for the transport of the BSSAP+, CAP and MAP protocols.
    - CN plenary are asked to decide how any further work should proceed.

IMS (1/4)

Or "IP-based Multimedia Services"

- **Stage 3 delayed until March 2002, Security aspects delayed until June 2002 (confirmed at TSG SA#13)**

- **Stage 2 not fully stable for:**
  - **Charging => done for offline charging but online charging might be postponed to Rel6**
  - **IMS Signalling PDP context => still ongoing**

IMS (2/4)

Now provided for information from CN1 :

- **Stage 2 TS 23.218v100 on call model (50 %)**

- **Stage 3 TS 24.228v180 on information flows are 80% ready, but not for formal change control.**

- **Stage 3 TS 24.229v100 on protocol details (60%).**

Approval (formal change control) of TSs 23.218, 24.228, 24.229 planned for CN#15 (march 2002).

Lot of dependencies to IETF work for Stage 3.

Check foreseen completion dates for IETF drafts.

IMS (3/4)

- **Security aspects ("Access Security for IMS"):**
  - **Stage 3 targeted for June 2002 approval**
  - **33.203 v 1.0.0 for information to SA#14. Completion SA#15 or SA#16 dependent upon progress in IETF on Extensible Authentication Protocol (EAP), Security Mode Set-up and Integrity Protection. IMS ad-hoc 1 Feb 2002 to progress.**
  - **Work on mechanism for integrity of SIP messages progressed in SA3. Ongoing until Feb 2002.**
  - **Requirements draft developed by SA3 was input to IETF in October 2001. Work ongoing to get requirements into IETF draft**
  - **Concept of ISIM has been agreed. Joint session S3/T3 held Nov 2001.**

IMS (4/4)

- **Aspects not yet stable:**

  – **CAMEL in IMS: see separate slide**

  – **interworking with external IP (TS 29.162) and CS networks (29.163): work on-going at N3, but lot of dependencies on respectively IETF and ITU-T: March 2002 completion date debatable**

  – **Stage 3 not yet fully defined for SIP and SIP compression (IETF dependencies should be completed by March 2002)**

- **Other aspects still not stable. To be confirmed if planned for Rel-5 or Rel-6:**

  – **Header removal/compression in UTRAN and/or GERAN**

  – **Number portability in IMS**

  – **IMS local services**

  – **Specification of MRF: little progress**

  – **OSA in IMS and SIP Application Server (ISC interface)**

  – **Lawful interception**

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Extended Streaming

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

- **Stage 1 to be presented for info**

- **TS 26.233 and TS 26.234 in Release 5: work in progress to be concluded by March (CRs produced on Rel-4 version of both specs)**

- **Updated Transport Protocol specification for PS Conversational Multimedia presented in v.1.0.0**

- **PSM SWG internal working draft Multimedia Messaging Service (MMS) Media formats and codecs presented in v.1.0.0**

Emergency call enhancements

For PS and IMS, was Rel-5, now is Rel-6.

For Rel-5 the decision is to use the CS emergency call feature.

For Rel-6 :

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

- SA2 work targeted for TSG#16 ?

- Stage 3 (mostly by CN1?) targeted for 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.

Global Text Telephony

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

VHE enhancements

- **Very little activity related to this WI in Rel5. Move to Rel6?**

OSA (1/3)

- **Stage 1 is completed: many items moved to Rel6**

- **Stage 3:**
  - **TSG approval target (SA1/2, CN5 in co-operation with SA3/5,CN1,T2) remains 03/2002**
  - **CN5#14 request indication of priorities from SA1 as substantial amount of work might also be needed in new areas and not all requirements are clear yet;**
  - **N5 also request guidance from SA2 on architectural impact for new SCFs.**
  - **Incremental approach will be taken in order to first concentrate on the work that can be finished before March 2002.**

OSA (2/3)

- **Areas recommended by the SA2 VHE/OSA ad-hoc which can be completed before March 2002 and thus have highest priority:**
  - **Multi media call / session control**
  - **Policy management**
  - **Presence**
  - **Support for technologies additional to CORBA (XML based API with WSDL/SOAP/XML : Web-service support for OSA).**

- **SA2 VHE/OSA ad-hoc strongly suggested not to work yet on (postponed to Rel6?):**
  - **User Profile (SA2 work needed and UP ad-hoc not finished)**
  - **Authorization (SA2 work needed)**
  - **Network capabilities (unclear requirement)**

OSA (3/3)

- **Remaining requirements fulfilment will be best effort:**
  - **Journaling**
  - **Terminal capabilities**
  - **Information Transfer (mapping to IMS needed)**
  - **Information Service**

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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 March 2002 in form of one major CR to Rel-4 version.**
  - **New specification TS 23.278 v1.0.0 is submitted to CN#14 plenary meeting for information (CAMEL Phase 4 - Stage 2 IMS Interworking).**
  - **Work split between N2 and N4 to be discussed at CN#14 for the Si interface (HSS to IM-SSF)**

CAMEL phase 4 (2/3)

Progress on CAMEL4 BBs:

Complete:

- Interactions with Optimal Routing

- CAMEL control over MT SMS

- Provision of location information of called subscriber

On schedule for March 2002:

- Call Party Handling

- Mid call procedure for MO and MT calls

- Inclusion of flexible tone injection

- Notification of GPRS mobility management to CSE

- Inclusion of ODB data in the CSE-HLR interface

- GPRS Any Time Interrogation

CAMEL phase 4 (3/3)

Delayed:

- **CAMEL support by the IMS**
- **Charging notification to the CSE**
- **Enhancements of dialled services**
- **Location information during an ongoing call**

MExE Enhancements Rel-5

MExE Improvements and Investigations:

- **On schedule for March 2002. Main enhancements:**
  - **investigate ECMA "Common Language Infrastructure" Support as Classmark 4**
  - **General enhancements and improvements**
  - **security enhancements**

MExE Security Analysis:

- **Little progress due to lack of input, scheduled for June 2002**

WB-AMR (1/2)

To be completed by March 2002

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

- **AMR-WB Characterisation : Phase 1A is completed, Phase 1B is completed, Characterisation Phase 2 is under way (TR 26.976 presented at TSG#14 for information)**

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

- **AMR-WB Floating-Point version: TS 26.204 on C-code (v. 1.0.0) presented at SA#14 (for information)**

WB-AMR (2/2)

- **Activities on WB-AMR (CN aspects) in progress:**
  - **End to end bandwidth support for AMR-WB;**
  - **Codec selection and GSM-UTRAN interworking:**
  - **TFO and TrFO signalling;**
  - **AMR-WB and narrrowband interworking;**
  - **Radio Access Bearer optimisation;**
  - **Radio Access Bearer renegotiation (impact at least on 23.018)**
  - **Interworking with fixed broadband networks;**
  - **Tones and announcements;**
  - **Billing, accounting and call detail record aspects;**
  - **WB Conferencing and WB Voice Group calls;**
  - **Adaptation of subscriber data in HLR/VLR;**
  - **Legal interception.**

Terminal Interfaces Rel-5

– **Wide Area Data Synchronization**

- **vObjects and Other Constructs for Use in Data Synchronization scheduled for June 2002, work item might be merged with Generic User Profile (Rel-6)**

– **Terminal Local Model enhancements
on schedule for March 2002**

- **aspects of UE Functionality Split to be accommodated**

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LCS in Rel-5

– ## 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.**
- **UE positioning:**
  - **UE positioning enhancements for 1.28 Mcps TDD – RAN#15**
  - **Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning – finished at RAN#13 (TS 25.452 + CRs to existing specifications)**
  - **Open interface between the SMLC and the SRNC within the UTRAN to support UTRAN Rel-4 Positioning – RAN#14 but could be delayed to RAN#15**

– **Work on-going, Stages 1, 2 and 3 planned to be completed by March 2002**

UICC/(U)SIM enhancements and interworking

– **"UICC/USIM Transport Protocol" – no work has been done since TSG-T #11, so is proposed for deletion at TSG-T #12. (similar interface enhancements are underway in ETSI Project SCP (Smart Card Platform).**

– **"C SIM API" – Draft specification presented for information to TSG-T #14**

(U)SIM toolkit enhancements

– **"USAT Interpreter" Two new specs were approved at TSG-T #13 and the third (and final) one is presented for information at TSG-T #14 (approval expected at TSG-T #15).**

– **work on the test specification for "USAT Interpreter" has started. Expected to be complete in September 2002.**

Security Enhancements Rel-5 (1/2)

- **Network domain security**

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

    - **Good progress on 33.200 - Rel-5 "document" showing expected content to SA#14 for information, CRs to be produced for SA#15 approval**

    - **TS 33.210 draft to SA#14 for information, good chance of March 2002 approval**

Security Enhancements Rel-5 (2/2)

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

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

- **FIGS**

  – **Still no contribution to SA WG3 and no progress. Considered for deletion from Work Plan.**

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Charging and OAM&P

- 50% complete; none under CR

- TSG approval target shifted from 03/2002 to 06/2002

Subscription Management

- 60% complete (32.140)

- Co-ordination continuing with VHE (SA1), GUP (SA1), HSS Interface (CN4), OSA Management (CN5), UE Management (SA5)

- TSG approval target shifted from 12/2001 to 03/2002

User Equipment Management - *Feasibility Study*

- 75% complete (32.802)

- Joint SA5-T2 session held in Cancun (11/2001)

- TR 32.802 v1.0.0 submitted to T/SA#14 (12/2001) - for Information

- TSG approval target remains 03/2002

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Iu-Flex

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

Work potentially delayed:

- **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 started at N1 and N4 (WID for CN work presented at CN#14)**

- **Check at N4, R2, R3, G2**

GERAN (1/3)

Ongoing Work Items for Release 5 (all in progress):

- **GERAN improvements 2: MS conformance test for Intra BSC NACC**
- **GERAN improvements 3 (new transport layer on interface A)**
- **GERAN support for IMS**
- **Alignment of 3G functional split and Iu**
- **GERAN enhancements for streaming services 1**
- **GERAN enhancements for streaming services 2**
- **GERAN/UTRAN interface evolution 1 (evolution of Iu PS)**
- **GERAN/UTRAN interface evolution 2 (evolution of Iu CS)**

GERAN (2/3)

New/restructured Work Items in GERAN for Release 5:

- **GERAN Inter BSC NACC improvements over the Gb Interface**
  - Modification of Gb protocols for GERAN Inter BSC NACC over the Gb interface
  - Modification of core network protocols for GERAN Inter BSC NACC for Gb interface

- **Alignment of 3G functional split and Iu**
  - GERAN user / control plane
  - Iu rg interface

- **Enhanced Power Control**
  - Realization of Enhanced power control and signalling support
  - GERAN MS Conformance test for Enhanced Power Control
  - GERAN BTS Conformance test for Enhanced Power Control

GERAN (3/3)

New/restructured Work Items in GERAN for Release 5 (ctd):

- **8PSK AMR HR**
- **Definition of channel coding, performance requirements and signaling support**
- **GERAN MS Conformance test for 8PSK HR**
- **GERAN BTS Conformance test for 8PSK HR**
- **Uplink TDOA feasibility study**

Closed Work Items in GERAN:

- **Real Time QoS for packet services including VoIP (UTRAN)**
- **Realization of Enhanced power control and signalling support**

Presence

On schedule:

- **Stage 1 completed**
- **Stage 2 being actively progressed at S2**
- **WID for N1's work presented at CN#14**
- **Impact on UE still to be clarified**

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 options**

- **Potential reduction on the scope of End-to-end QoS**

- **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 March 2002

  - **main enhancements**
    - MM7 (interface MMS Relay/Server – MMS VAS Applications) (stage 2 + stage 3)
    - enhanced interworking issues (stage 2 + stage 3)
    - support of network based mailbox model in MMSE (stage 2)
  - MM1 (interface MMS User Agent and MMS Server/Relay) stage 3 will be defined by WAP Forum, no alternative MM1 for Rel-5

- **EMS** enhancements on schedule for March 2002

  - **main enhancements**
    - use of extended objects, with compression (completed)
    - bitmap graphics, including colour (completed)
    - hyperlink IE (completed)
    - line drawing or vector based image format
    - monophonic and polyphonic sound formats

Service Change and UDI Fallback (SCUDIF)

Previously known as "Bearer modification without pre-notification"

- **Stage 3 work started by CN3, foreseen to be completed by March 2002**

- **CRs to be presented to CN#15**

- **LS sent to SA4, to include H.324M codec in TS 26.103 (by March 2002)**

UE Testing Rel-5

WI under study and <u>seeking supporting companies</u>

– **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 (to be confirmed if it applies Rel-5)**
– **Emergency call enhancements**
  - **Stage 3 for emergency calls and packet emergency calls in general (Core requirement and testing moved to Rel6)**

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

UE functionality split

- **TR on Feasibility Study started by S1 and T2, presented for info at SA#14**

Moved to Release 6?

Display of SP name on UE

- **Requirements defined by S1**

Check the status in T2.

Push Services

- **SA2 awaiting for SA1's requirements to be provided by March 2002.**

Postponed to Rel6?

Multimedia Broadcast/Multicast Service (MBMS)

- **Stage 1 (22.146): in v.5.0.0. Stage 1 approved at SA#13 for Release 5 but it should be checked at SA#14 if still applicable to Rel5.**

- **Stage 2: work ongoing (dedicated meeting mid-december). Discussions at SA2 to check whether it should be Rel-5 or Rel-6 (no firm decision).**

- **No other work started.**

Confirm whether it should be Rel-5 or Rel-6

Release 6 features

Release 6 features

- **Generic User Profile:**
  - **Work ongoing in an ad hoc**

- **Digital Rights Management:**
  - **Stage 1 document to capture requirements is now being drafted as part of Rel-6**

- **FS on WLAN-UMTS Interworking:**
  - **Work ongoing**

- **Speech Recognition and Speech Enabled Services**
  - **Stage 1 presented to SA #15**

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**

Foreseen Completion Dates (1/2)

UID	Title	FCD
1517	Global Text Telephony	Completed
4	Evolutions of the transport in the CN	Completed
1625	Wideband Telephony Service - AMR	Mar-02
1800	(U)SIM toolkit enhancements	Completed
2569	Messaging enhancements Rel-5	Mar-02
2464	MExE enhancements Rel-5	Mar+June
2243	Intra Domain Connection of RAN Nodes to Multiple CN Nodes	Mar-02
1536	Location Services enhancements	Mar-02
1638	CAMEL phase 4	Mar-02
2476	High Speed Downlink Packet Access	Mar-02
34001	Extended Transparent End-to-End Packet Switched Streami	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	MBMS	No estima
1367	VHE enhancements	No info
1637	OSA enhancements	Mar-02
1142	Charging and OAM&P	Mar-02
2062	Subscription Management	Jun-02
2520	User Equipment Management	Mar-02
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

- **Still March 2002 for Release 5, with an exception for IMS Security ("stable" stage 3 to be approved in June).**