3GPP TSG CN/T/RAN/SA #22
Maui, Hawaii, 9-18 December 2003

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Review of the Work Plan at Plenaries #22

This version includes updates from CN, RAN and T#22.

Content

- **Review of testing activities**
- **Review of on-going features (Rel-6/Rel-7)**
- **Conclusion**

In *Black*: Name of the task

In Red: important statement

In Green: question to the plenary

“FCD” = Foreseen Completion Date

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Testing activities

UE testing

- **Release 99:**
  - **Stability of T1 Test Cases:**
    - **Both Signalling Test Cases and RF test cases are progressing well. However, the global completion date of October 2004 for all of them (398 in total) is unlikely to be completed.**
  - **Reminders:**
    - **When the baseline change (e.g. from March 02 to March 03), the test cases need to be re-validated.**
    - **Certifications targeted to be issued by GCF starting 1st quarter 2005 (date to be reviewed by GCF)**
- **Testing of Later Releases:**
  - **Not started yet, but WID being prepared for:**
    - **testing of LCRTDD**
    - **WID to cover Conformance Testing A-GPS Rel 6 Minimum Performance Requirements**

UE Testing Release Independent

- **Completed:**
  - **Testing UMTS 1800 (SIG/RF)**
  - **Testing UMTS 1900 (SIG/RF)**
- **Ongoing activities:**
  - **Optimisation of Test Time, RF Aspects (FDD and TDD) (80% for FDD, 70% for TDD, Sep 03)**
- **Not started:**
  - **New Bands (800 MHz, 850 MHz, 1.7/2.1 GHz)**

GERAN UE Testing

Note: GERAN Rel-5 Testing TSs also cover the testing of earlier Releases (refer to 51.010 Part 2)

- **MS conformance test for Intra BSC NACC (Rel-4):** *Completed at GERAN #17*
- ***GERAN MS Conformance test for LCS* (Rel-5): *COMPLETED***
- **Not started yet (Rel-5):**
  - ***GERAN MS Conformance test for GERAN interface evolution Completion expected by June 2004***
  - ***GERAN MS Conformance test for Enhanced Power Control (*)***
  - ***GERAN MS Conformance test for 8-PSK Half Rate (*)***
  - ***GERAN MS Conformance test for AMR Wide Band (*)***

Alignment between the different test regimes for GERAN capable MS : test cases to be added to TS 51.010 Completion expected by Apr. 2004

(*) Completion expected not before Feb. 2004 (it was by November 2003)

GERAN BTS Testing

- ***GERAN BTS Conformance test for 8PSK HR COMPLETED***
- ***GERAN BTS Conformance test for AMR WB COMPLETED***
- **Not started yet (Rel-5) :**
  - ***GERAN BTS Conformance test for GERAN interface evolution Completion expected by June 2004***
  - ***GERAN BTS Conformance test for Enhanced Power Control (*)***
  - ***GERAN BTS Conformance test for LCS (*)***

(*) Completion not before February 2004 (it was expected by November 2003)

GERAN Rel-6 Testing activities
(all just started, or even not started yet)

•Seamless support of streaming services in A/Gb mode (MS) : CLOSED, no work needed

Support of the Multimedia Broadcast Multicast Service (MBMS) in GERAN (MS): 0%, completion expected by June 2004

•GERAN Conformance tests for the Flexible Layer One (MS/BTS) : 0 %, completion expected by June 2004 (it was Jan. 2004)

•Addition of frequency bands to GSM (TAPS) – Conformance tests :

0%, completion expected *not before February 2004* (it was Nov. 03)

•*GERAN MS testing for Multiple TBF in A/Gb mode :* 0%, completion expected by *January 2004*

•Support of Conversational Services in A/Gb mode via the PS domain:

0%, NOT STARTED (WID to be approved)

•GERAN MS Conformance test for Advanced Receiver Performance: START in *August 2004, completion* expected by November 2004

•Reduction of PS service interruption in Dual Transfer Mode / MS/BTS Conformance testing : START in *June 2004, completion* expected by November 2004

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Review of on-going features

Will belong to Rel-6 or to Rel-7

List of on-going Features (1/4)

Unique_ID	Feature
2	Evolutions of the transport in the UTRAN
1216	Improvements of Radio Interface
2468	Multiple Input Multiple Output antennas (MIMO)
9	RAN improvements
32045	PS domain and IMS impacts for supporting IMS Emergency calls
32023	Location Services enhancements 2
1571	Security enhancements
32021	IMS Phase 2
11032	Interoperability and Commonality between IMS using different "IP-connectivity Networks"
1365	Support of Push Services
42009	Multimedia Messaging (MMS) enhancements
42005	Rel-6 MExE enhancements
2062	Subscription Management
2499	Support of Presence Capability

List of on-going Features (2/4)

Unique_ID	Feature
50056	Enhanced A/Gb feasibility study
2544	Multimedia Broadcast and Multicast Service
	MBMS User Agent
31006	Speech Recognition and Speech Enabled Services
31008	Generic User Profile
31010	Digital Rights Management
31012	WLAN-UMTS Interworking
31015	Priority Service
31018	Network Sharing
32016	QoS Improvements
33002	Support for subscriber certificates
15010	Rel-6 OSA enhancements
34300	Performance characterisation of default codecs for PS conversational multimedia application

List of on-going Features (3/4)

Unique_ID	Feature
31030	Study on Privacy Capability
35010	OAM&P
35016	Charging Management
1800	Rel-6 UICC/USIM enhancements and interworking
34022	Packet Switched Streaming Services Rel-6
34023	AMR-WB extension for high audio quality
12006	Enhancement of dialled service for CAMEL
32060	Bandwidth and resource savings in CS networks
	3GPP Enablers for services like Push to Talk over Cellular (PoC)
33018	FS on (U)SIM Security Reuse by Peripheral Devices on Local Interfaces

List of on-going Features (4/4)

Unique_ID	GERAN Features
50063	Flexible Layer One for GERAN
50401	Addition of frequency bands to GSM
50130	Seamless support of streaming services in A/Gb mode
51101	Single Antenna Receiver Interference Cancellation (SAIC)
50500	Support of Conversational Services in A/Gb mode via the PS domain
50600	Multiple TBF in A/Gb mode
50096	Alignment between the test-regimes for GERAN capable MS
50541	Uplink TDOA location determination for GSM/GPRS (deleted)
50444	Uplink TDOA location determination for GSM, CS domain
50445	Uplink TDOA location determination for GSM, PS domain
50101	Advanced Receiver Performance (ARP)
50109	Reduction of PS service interruption in Dual Transfer Mode

Evolutions of the transport in UTRAN

- **Basket Feature for potential work items regarding transport in UTRAN.**
- **No work ongoing under this feature**

Rel-6 Improvements of Radio Interface

- **UMTS 850. (R4) WI finished and CRs presented at TSG RAN#22**
- **UMTS 800. (R4) WI finished and CRs presented at TSG RAN#22**
- **UMTS 1.7/2.1GHz. (R4) Very good progress, 90% of the work completed, first CR for the introduction of the channel arrangement presented at RAN#22, the WI will be finished by March 2004**
- **Improvement of inter-frequency and inter-system measurement (R1). In progress, limited impact to the specifications expected. Completion Date is March 2004**
- **Improving Receiver Performance Requirements for the FDD UE (R4). WI Closed in September. Discussions on future work under this topic concluded that new WIs, with precisely defined scopes, could be opened**

Rel-6 Improvements of Radio Interface. Feasibility Studies (1/3)

- **Improvement of inter-frequency and inter-system measurements for 1.28 Mcps TDD (R1)**
  - **25.888 V6.0.0 approved at RAN#21.**
  - **SI finished in RAN#21, will not lead to any WI (solutions are in fact implementation issues in the RNC)**
- **Deployment of UTRA in additional spectrum arrangements (R4). Study finished at RAN#20**
- **UTRA Wide Band Distribution Systems (R4) Work on going, new simulations presented. Completion date March 2004**
- **Low Output powers for FDD BSs (R3) at RAN#22 SI responsibility was transferred from RAN4 (which finished its work) to RAN3. Since, the SI was discussed in RAN3. RAN4 was contacted about the definition of the 'antenna connector' location in connection with repeater usage to determine the Iub signalling impact. Completion date moved to March 2004**

Rel-6 Improvements of Radio Interface. Feasibility Studies (2/3)

- **OFDM analysis for UTRAN evolution (R1):**
  - **Description Sheet revised to reduce the scope in order to comply with the June 2004 scheduled completion.**
- **Radio link performance enhancements (R1):**
  - **3 independent topics under study:**
    - **Tx diversity for multiple antennas**
    - **HSDPA enhancements**
    - **Power Control enhancements (for TDD)**
  - **It has been discussed to split the study in 3, this decision my be adopted if the work needs to continue later that the expected completion, which is March 2004**
- **Uplink Enhancements for Dedicated Transport Channels (R1)**
  - **Many techniques being studied. Deadline for the study phase is moved from December 2003 to March 2004**

Rel-6 Improvements of Radio Interface. Feasibility Studies (3/3)

- **Analysis of higher chip rates for UTRAN TDD evolution (R1)**
  - RAN1: Contributions on: HSDPA system level results,Link level results for Release 99 channels, UE and UTRAN complexity analysis
  - RAN4: Coexistence with Rel5 TDD studied, coexistence with FDD to be presented

  Completion date moved from December 2003 to June 2004
- **Uplink Enhancements for UTRA TDD (R1)** 14 contributions were submitted: reference techniques in earlier releases, on possible candidate enhancement techniques, on HARQ and on improvements for RACH. But no major agreement was reached to include into the TR. Completion date moved from March 2004 to September 2004

Multiple Input Multiple Output antennas (MIMO)

RAN1:In progress. TR 25.876 was updated to v 1.2.0 and new structure/text for TDD sections was proposed. Four different techniques are proposed: from Lucent (PARC), Nortel (MPD), Mitsubishi (DSTTD) and Samsung (PU2RC).

RAN2, RAN3, RAN4: No contributions

Completion date postponed from March 2004 to September 2004

Rel-6 RAN improvements (1/2)

- **Network Assisted Cell Change from UTRAN to GERAN – Network Side Aspects (R3) Although no input to TR 25.901 could be agreed, a number of open issues were discussed and agreement was reached on:**
  - UTRAN NACC Signalling Architecture (storing in local RNC),
  - Format of GERAN <-> 3G RIM Messages
  - Transfer of NACC information across the Iu to the CRNC

  Completion date moved to March 2004
- **Remote Control of electrical antenna tilting (R3) A solution for the introduction of RET Antenna Control into the existing UTRAN architecture was discussed and introduced in the TR 25.802 for further study. Detailed proposals for interface aspects and protocol structure for this solution are under discussion.**

  Frequent LSs with SA5.

  No impact on RAN WG4 specifications foreseen

Rel-6 RAN improvements (2/2)

- **Beamforming Enhancements (R1). WI finished at RAN#22 (December 2004). CRs presented, only the approval of the related TR is pending**

- **RAB support enhancement (R2): Generic Building Block with the Work Task:**
  - **Work ongoing on the optimization of support of voice over IMS. CRs expected in March 2003**
  - **Iu enhancements for IMS support in the RAN (R3) Progress in RAN3 depends on investigation on other groups, due to the varying nature of traffic on the signalling RAB. Completion in March 2004**

- **Rel6 RRM optimization for Iur and Iub: (R3) Generic Building Block with the Work Task:**
  - **Improved access to UE measurement data for CRNC to support TDD RRM (R3) Email discussion on how UE measurements would be forwarded and also a draft of the new procedures was provided. In RAN3#39 a first draft CR covering the whole WI was presented. Completion date March 2004**

RAN improvements - Feasibility Studies

- **Improved access to UE measurement data for CRNC to support TDD RRM (R3):SI is finished at RAN #21, a WI has been created.**

- **Evolution of the UTRAN Architecture (R3): Large number of contributions addressing requirements and architecture proposals (to be studied) were introduced in the TR 25.897 which is now available in v0.4.0 (R3-031853). At RAN3 #39, there was no time to treat this WI. Completion date March 2004**

PS domain and IMS impacts for supporting IMS Emergency calls

- **Service requirements for CS domain in TS 22.101 and for IMS aspects in TS 22.228. Originally Completed, but new input provided. Work now completed**
- **SA2 work completion to be completed by June 2004 (postponed twice already)**
- **Stage 3 Completion date September or December 2004 (was June 2004 and before was December 2003).**
- **Dependencies from IETF, SA1, SA2, SA3 and T3 (maybe RAN and GERAN on priority).**

LCS enhancements 2 (1/2)

It consists of several independent LCS-related improvements

- **Stage 1 completed by SA1 at SA#20, minor clean-up now ongoing to align stage 1 with other TSs.**
- **Stage 2: two items to be completed by June 2004 (LCS support for IMS public identities and FS on Galileo applicability to LCS). Other items completed by December 2003 by CRs on 23.271. No contribution on Galileo since May 2003. Can LCS support for IMS public identities and FS on Galileo be shifted to later release if needed?**
- **Stage 3 not started by CN1 (no WID so far). Most aspects to be done by OMA. No RAN nor GERAN impacts foreseen for these aspects. OMA FCD needed.**

LCS enhancements 2 (2/2)

- **RAN aspects ("UE Positioning"):**
  - **UE Positioning Enhancements: Basket task. Work has been done (mainly in RAN1) on IPDL enhancements using advanced blanking method.**
  - **Open SMLC-SRNC Interface within the UTRAN to support Rel4 positioning (R2): Finished**
  - **A-GPS minimum performance specification (R4): Work started, FCD June 2004 (moved from March 2004)**

Security Enhancements Rel-6

- **Network domain security**
  - **NDS/IP: TS 33.210 under Change control, WI 90% complete**
  - **NDS/AF (Application Framework): TS to be presented to SA#22 for information. Completion by 03/2004. 70% Complete**
- **Key Management of group keys for Voice Group Call Services: ongoing – 40%. Under discussion, no output yet.**
  - **GERAN A/Gb mode security enhancements :**
    - **Change in the focus of this work item to address the A5/2 problem. 43.020 is also affected and new algorithm specifications are introduced. completion by 03/2004. 65% Complete**
  - **G-MILENAGE Algorithm: completed at SA#18.**

IMS Phase 2 (1/3)

Different independent items:

- **Stages 1 & 2 completed (in resp. 22.228 and 23.228) for:**
  - **IMS Local services.**
    - **Stage 3: not started. No input.**
  - **Mm interface (UE-based interworking to external IP multimedia network)**
    - **Stage 3 (TR 29.962) completed by CN3 at CN#20. CN1 delayed their part to June 2004 (open issue on preconditions at session establishment for Rel-5).**
  - **Interworking between IMS and CS networks**
    - **Stage 3 in TS 29.163 approved at CN#21.**
  - **Mn interface (IM-MGW to MGCF) enhancements**
    - **Stage 3 in TS 29.332 (CN4): No progress since CN#20. Delayed to June 2004 (was December 2003)**
    - **Stage 3 in TS 29.163 (CN3): March 2004**
  - **Mp (MRFC - MRFP) interface protocol definitions**
    - **Target for Stage 3 in TS 29.333 (CN4): No progress since CN#20. Delayed to June 2004 (was December 2003)**

IMS Phase 2 (2/3)

- **Stages 1 and 2 completed for (contd):**
  - **Lawful Interception in the 3GPP Rel-6 architecture**
    - **WID approved at SA#19. 80% Complete: Completion date is now June 2004 (was December)**

- **Other Items:**
  - **Gq (PDF – P-CSCF) interface, policy control**
    - **Stage 2 is 50% complete. Draft TS 29.209 (CN3): target completion date is still March 2004**
  - **IPv6/IPv4: IP v4-based IMS**
    - **WID on "Interworking aspects and migration scenarios for IPv4-based IMS Implementations" presented at SA#21. Corresponding TR to be presented for information at SA#23 and for approval at SA#24 (June 2004).**
  - **Enhancements to Cx and Sh interfaces:**
    - **WID approved at CN#20. CRs on definition of public identities and sharing of public identities approved. Completion date is March 2004**
  - **IMS Group Management:**
    - **Stage 2 completed**
    - **Stage 3 to be completed by June 2004**

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IMS Phase 2 (3/3)

80% of Stage 2 completed and Corresponding stage 3 to be completed by:

- **March 2004 for Review additional SIP Capabilities against IMS**
- **June 2004 for IMS Conferencing**
- **June/September 2004 for IMS Messaging**

Additional SIP Capabilities support not covered by Rel-5: This covers various minor enhancements to SIP, and the main work involves taking new RFCs for SIP as they are approved by IETF, and stating how 3GPP supports those extensions. As these RFCs keep coming out, the release 6 work will be completed by the release 6 freeze date, whenever that is.

Note: Stage 3 of IMS Phase 2 is closely dependent to the progress made by IETF

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Interoperability and commonality between IMS using different IP connectivity networks (IMSCOOP)

- **3GPP part of the work on “Commonality” and “Interoperability” done.**
- **Work expected to be done at 3GPP2 for “Interoperability”.**
- **Stage 3 95% complete at December 2003.**

Push Services

- **Stage 1: Stable, in TS 22.174**
- **Stage 2: TR 23.976 presented for info at SA#21. Planned to be completed by March 2004 (was September then December 2003).**
- **Stage 3 not started. Not before June 2004.**

MMS (Multimedia Messaging Service) Enhancements (1/2)

- Stage 1 done by SA1. Progress was made in two areas of Service requirements from SA1
  - The provision of a high bandwidth communication capability for USAT. Subject proved very controversial.
  - Use of MMS to transfer data between applications.
- Stages 2 and 3 handled by T2 (except MM1 stage 3 handled by OMA).
- Enhancements are planned in the following and other areas:
  - Consider and accommodate the needs of IMS
  - Support for enhanced charging methods
  - Terminal capability negotiation enhancements
  - Security and privacy enhancements
  - Enhancements to MM1 and MM4 reference points
  - Enhancements of the interworking with external messaging systems
  - Addressing enhancements
  - Support of Digital Rights Management for MMS
  - Support of Over-The-Air provisioning of MMS parameters
- Planned completion date March 2004 (challenging)
- SA4 responsible for codec and media types. Work to be completed by March 2004.
- SA5 doing the charging (32.270). To be completed by March 2004.

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MMS (Multimedia Messaging Service) Enhancements (2/2)

- **Two new WIDs (BBs) suggested to TSG-T#22**
  - **Handling of private addressing schemes in MMS**
    - **A need for handling subscriber-specific, flexible addressing in MMS is identified. Examples for Services which need such subscriber-specific and flexible addressing are Virtual private Networks (VPN) and Address Hunting Services, which make use of private numbering schemes.**
  - **FS Multiple MMS Relay/Server Architecture**
    - **Intention is to analyse the impacts of multiple MMS Relay/Servers in one MMSE on the MMS Reference Architecture, and to investigate potential alternative architectures that support multiple MMS Relay/Servers within one MMSE which ensures backwards compatibility.**
- **Planned completion date June 2004**

MExE Enhancements Rel-6

- ***WID MExE Rel-6 Improvements and Investigations***
  - **Completed at TSG-T#19.**

- ***WID MExE Run-Time Independent Framework Feasibility Study***
  - **Completed at TSG-T#18.**
    TR 22.857 Runtime Independent Framework Feasibility Study approved at TSG-T#18.

Comment from TSG T#19: no real new service offered by this feature.

Subscription Management

- **32.140/32.141 SM Requirements/Architecture – SA Approved.**
- **32.171/32.172 (SM Resources IRP: Requirements / Network Resources Model)**
  - sent to SA#22 (12/2003) for Information - SA Approval target 03/2004.
- **32.173 Protocols (IRP Solution Set) – SA Approval target 06/2004.**
  Work on GUP has been analysed and GUP Stage 3 (CN4) may be re-used for the SM IRP Solution Sets (provided T2 will deliver Stage 3 GUP on time).
- **TSG Approval target delayed from 03/2004 to 06/2004.**

Presence

- **Stage 1 in TS 22.141 approved at SA#13**
- **Stage 2 in TS 23.141 approved at SA#17**
- **Work in SA4 Codec and Formats: Current status: work in progress (10%)**
- **SA4 work in TS 26.141 now foreseen to be completed by March 2004 (it was December 2003)**
- **Stage 3 in the CN defined by CN1, CN4 and CN5. CN1 work to be completed by March 2004 in a new TS (it was December 2003). CN5 completed. CN4 work started.**

Multimedia Broadcast/Multicast Service (1/2)

- **Stage 1 completed in TS 22.146; now stable**
- **Overall Stage 2 (SA2) in TS 23.246 approved at SA#21, important CRs to come until March 2004.**
- **CN1 work is planned to be completed by June 2004 (it was December 2003 them March).**
- **CN3 studying use of Radius or Diameter for Gmb interface, also to be completed by June 2004 (was March).**
- **CN4 also involved.**
- **Security Work: Draft TS 33.246 MBMS Security to be presented to SA#22 for information. 55% complete. Completion March 2003.**
  - **Decision to be made on use of Terminal and UICC-based solutions (based on security scenarios).**
- **LS sent from SA4 summarising the status on MBMS after the ad-hoc held mid-October 2003.**

Multimedia Broadcast/Multicast Service (2/2)

- **Support of MBMS in GERAN : 25%, completion expected by June 2004 (it was February 2004).**

- **Introduction of MBMS in RAN (R2):** Ad hoc organized 13-14 October between SA1, SA2, SA4, RAN1 to 4, GERAN1 and 2 to clarify the user and bearer requirements and to define a “minimal set” of MBMS services.
  - In RAN1, the simulation result for S-CCPCH performance in with rel5 L1 were discussed.
  - In RAN2, new agreements have been included in TS25.346 v2.4.0 (notification, capability, User Plane, mobility, measurements, System Information, Access).
  - In RAN3, contexts and signalling flows for RNC deregistration were updated.

  Several remaining open issues in RAN1, RAN2 and RAN3, level of completion 60%. Expected completion March 2004. The impact of the delay in Stage 2 in SA2 has to be evaluated.

Multimedia Broadcast/Multicast Service (2/2)

- **Support of MBMS in GERAN : 25%, completion expected by June 2004 (it was February 2004).**

- **Introduction of MBMS in RAN (R2):** Ad hoc organized 13-14 October between SA1, SA2, SA4, RAN1 to 4, GERAN1 and 2 to clarify the user and bearer requirements and to define a “minimal set” of MBMS services.
  - In RAN1, the simulation result for S-CCPCH performance in with rel5 L1 were discussed.
  - In RAN2, new agreements have been included in TS25.346 v2.4.0 (notification, capability, User Plane, mobility, measurements, System Information, Access).
  - In RAN3, contexts and signalling flows for RNC deregistration were updated.

  Several remaining open issues in RAN1, RAN2 and RAN3, level of completion 60%. Expected completion June 2004 (was March). The impact of the delay in Stage 2 in SA2 has to be evaluated.

MBMS User Services

Previously known as Teleservices using MBMS

- **Stage 1 to be presented for approval in TS 22.246 at SA#22**
- **Stage 2 technical work just started. To be completed by March 2004**
- **SA4 work: WID Updated again in SP-030674 (from SP-030442 approved at SA#21). Completion expected 6 months after Stage 2, i.e. after mid-2004**
- **Other involved WGs listed in the WID have received LS and are evaluating the work to be done: SA3, SA5, RAN2, RAN3, GERAN1, GERAN2, CN1, and T3.**
- **The involvement of CN1, mentioned in the WID, has to be checked.**

Speech Recognition and Speech Enabled Services

- **Stage 1:TR 22.977 and TS 22.243 on SES approved at SA #17.**
- **Stage 2: TR to be presented for information at SA#22 and for approval at SA#23 (March 2004).**
- **WID SA4 on Codec Work to Support Speech Recognition Framework for Automated Voice Services was approved at SA #18 (covering SES aspects)**
  - **Design Constraints, Test and Processing Plan were reviewed in SA4#29 , and the Time scale was updated**
  - **Recommendation criteria were approved at SA#21**

  The evaluation of SES codec candidates is still on-going; the codec selection is expected to take place in SA4 early 2004 and SES specs presented for approval to SA#23 in March 2004.

- **CN1 work never started, and the task is proposed to be deleted at CN#23 unless CN1 tasks are clearly identified.**

Generic User Profile

Work ongoing

- **Stage 1: 22.242 approved; CRs to SA 22 for fine tuning**
- **Stage 2: 23.240 approved**
- **WID identifying T2 related work approved at T#18. TS 23.241 (GUP, Stage 2, Data Description Framework) March 2004 (was December) and TS 24.241 (GUP, Stage 3, Access; Common Objects) June 2004 (was December).**
- **Stage 3: Outline of draft TS 29.240 approved at CN4#19**
  - **Further development awaits the maturity of the stage 2.**
  - **Estimated completion 30%. TS 29.240 will be presented for approval at CN#24 in June (was March) 2004.**
- **GUP Security: expected completion April 2004: 20% Complete.**

- **CN5 involved in order to have OSA support of GUP. SA1 and SA2 inputs needed for this.**

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Digital Rights Management

3GPP Work Completed

- **3GPP Stage 1 in TS 22.242, stable**
- **For Stages 2 and 3, it has been decided to refer to OMA work - LSs exchanged with SA4 on technical aspects (on DRM for PSS and MBMS streams)**
- **OMA defines its own Stage 1 - Input required from OMA; none currently available**
- **Note that the information on progress made by OMA and the consistency between 3GPP's and OMA's Stages 1 will be ensured by the companies attending both fora.**
- **Results from OMA already available**

WLAN/UMTS interworking (1/2)

- **Stage 1: Currently covered by CRs on existing specs (22.101, 22.115). However discussion on whether to make TR a TS. Work is stable (based on FS in TR 22.934). Fine tuning in progress. Request WLAN WID be extended to Release 7.**

- **Stage 2 in TS 23.234. One LS sent to SA containing the TS explaining the contentious issues. Planned to be completed by March 2004 (was December).**
- **SA5 work on WLAN charging (TS 32.252) awaiting for TS 23.234.**

WLAN/UMTS interworking (2/2)

- CN1 is 50% completed and brings TS 24.234 to CN#22 for information. Planned completion in June 2004 (was March 2004)
- Stage 3 Outline of draft TS approved at CN4#19:
  - 3PP TS 29.234 v1.0.0 presented information at CN#21
  - Estimated completion 70% March 2004 (was 12/03)
- CN3 involved for Wi interface, awaiting Stage 2 to be stable
- T3 might also be involved (wait for Stage 2 to be stable)
- Draft Security TS 33.234 to be presented to TSG SA#22 for information in order to allow other groups to work on the detailed protocols (60% complete). To be presented for approval in March 2004 (was December 2003).

Priority Service

- **FS completed: TR 22.950 approved at SA#16. CRs provided on existing specs.**
- **TR 22.952 on Priority service implementation guide for approval at SA#22**
- **No Stage 2 needed.**
- **SA1 has sent an LS to CN to be forwarded to CN1 and CN4 on starting the Stage 3 work**

- **Stage 3 technical work not started**

Network Sharing

Work on-going.

- **FS in TR 22.951 approved at SA #18.**
- **Stage 1: Complete, covered by CRs on existing specs (22.011, 22.101, 22.115 and 22.129). Dealing with feedback from other groups.**
- **Stage 2: TR 23.851 to be completed by March 2004 (was September then December). SA2 has still not decided whether a TS is needed or not.**
- **Stage 3 started. Planned completion is June 2004 (was March 2004). Still no WI on this issue.**
- **SA5 intends to include in 32.101 and 32.102 Network Sharing aspects relevant to OAM&P.**
- **Enhancement of the support of Network Sharing, R2. Due to the delay in stage 2 in SA WG2 the work in RAN groups couldn't progress. Completion date moved to June 2004**

QoS Improvements

This Feature consists in:

- FS on Dynamic Policy Control Enhancements for End-to-End QoS
  - Stage 2: WID revised at SA#17 to clarify that a FS is initially proposed, in TR 23.917. TR 23.917 is provided for information at SA#21 and intended completion date is now SA#23 (was SA#22).
  - Stage 3 (CN3): Draft TS 29.209 for “Policy control over Gq interface”. Studying different protocols (COPS, Diameter, XML). Estimated completion June 2004 (shifted to align to SA2 FCD).
- WID approved at SA#18 on Policy-based control of DiffServ.
  - After realising that there is no more supporting company, SA2 propose to delete this WI.

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Support for Subscriber Certificates

- **Stages 1 and 2 defined by SA3. Drafts to be presented for information at SA#22 (50% complete):**
  - **Draft TR 33.919 GAA; System Description**
  - **Draft TS 33.220 GAA; Generic Bootstrapping Architecture**
  - **Draft TS 33.221GAA; Support for Subscriber Certificates**
- **Not yet stable enough (30% complete):**
  - **Draft TS 33.141 GAA/HTTPS – work ongoing, expected March 2004 for information**
- **Stage 3 started and CN wide WID is provided for CN#22. Planned completion is June 2004.**
- **SA1 and SA2 work done, T3 work not started.**

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OSA Improvements

- **Release 6 OSA Stage 3 completion progresses to 70%.**
- **CN5 have NO dependencies BUT overlaps with OMA (see SP-030198).**
- **Parlay X Web Services (29.199) - for CN#22 Information.**
- **Rel-6 CRs to Support OSA in 3GPP2 networks - for CN#22 Approval.**
- **Stage 3 work on OSA Rel-6 Presence requirements finished; only the mapping TR is pending (dependent on CN1 TSs availability).**
- **CN5 work ongoing: OSA MMS Reqs. implementation & other messaging features.**
- **SA1 Rel-6 CR 22.127 to Introduce High Availability requirement for OSA (S1-031232) - for SA#22 Approval.**
- **GUP: 1) SA1 need to derive the OSA Rel-6 Reqs. from the GUP Reqs.;**
  2) SA2 need to perform architectural analysis of these Reqs.
  Pending SA1/2 completion of GUP Stages 1/2, CN5 proposes OSA Stage 3 completion in June 2004.

- **No contributions since two CN meetings. CN5 (via CN#21) suggests SA1 to remove requirements:**
  - **Management / User data security management**
  - **Access to IP Session information**
  - **Network functions for end-user/application interaction support**
  - **IP Session Control Function**
- **Already deleted (deleted at CN#21, SA1 deletion SA#22):**
  - **Retrieval of Visited Network capabilities**
  - **Enhanced user privacy in LCS**

Performance evaluation of multimedia codecs for PS conversational services

- **Status:**
  - **Budget defined for Phase 1 of testing (of 160 kEURO)**
  - **Budget defined for Phase 2 (of 34 kEURO, contingency left from 3GPP AMR-WB exercise, fully authorized)**
  - **Phase 1 Contracts for Host and 3 Testing Laboratories finalized by ETSI after SA#21**
  - **Phase 1 of testing completed and approval of the work done is requested to SA#22 (for ETSI to pay the Host and Testing Laboratories)**
  - **Phase 2 planned to include two more tests with more MM codecs and Global Analysis of all results**
  - **Completion of TR expected by March 2004**

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Privacy Capability

- **Work ongoing in SA1, no output**
- **Input from OMA Requirements being addressed**

OAM&P *(Operation, Administration, Maintenance and Provisioning)*

- **Subscriber and Equipment Trace Management**
  - **Insufficient progress on 32.422/3, 52.008 for SA#22 Information.**
  - **32.422 (Trace control and Configuration Management) - problems pertain to UTRAN, IMS and GERAN. Communication with CN4 still ongoing.**
  - **Support in UTRAN. In progress, completion expected by March 2004**
  - **32.422 UTRAN parts need RAN3 and IMS parts need CN1 responses.**
  - **32.422 GERAN parts are FFS. Rel-6 inclusion of GERAN parts unclear.**
- **Network Infrastructure Management - 03/2004 (difficult to achieve).**
- **TSG Approval target delayed from 03/2004 to 06/2004.**
- **7 New TSs for SA#22 Information**
- **4 New TSs for SA#22 Approval**
- **17 Rel-6 CRs (out of a total of 62 CRs to SA#22)**

Charging Management

- **Common Rel-6 online charging application adopted.**

- **Strong SA2 & IETF dependencies & set-back (more in SA5 report to SA#22)**
  - **IETF dropped Credit Control Application (CCA) draft in favour of a new concept ("DCC"). As a consequence, 3GPP Rel-5 IMS online charging in 32.225 is based on an incomplete & discontinued IETF Draft.**
  - **This change has substantial consequences on the common Rel-6 online charging.**
  - **Information from IETF on this change was only very recently received.**

WLAN Charging (Draft 32.252)
- **Progress depends on SA2's finalization of the overall WLAN architecture & handover of charging work to SA5 (more in SA5 report to SA#22).**

IP Flow Based Bearer Charging
- **Progress depends on SA2 finalisation of TR 23.825 & handover of charging work to SA5.**
- **Expected to impact GPRS & WLAN offline & online charging (32.251/2, 32.298/9).**
- **Current SA2 draft 23.825 does NOT consider the provisioning aspects of IP flow bearer charging.**

Online Charging System (OCS)
- **Request from SA#21 to pursue 1-of-2 options in TR 32.815 v.600 :**
  - **SA5 works on a resolution & plans to report a conclusion at SA#23 (03/2004)**
  - **Available Draft 32.296-030 "Online System: Applications and Interfaces".**

- **TSG Approval target remains: 03/2004 (dependent on SA2).**

- **2 New TSs for SA#22 Information**

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UICC/USIM enhancements and interworking for Rel-6

USIM toolkit enhancements

- **2G/3G Java Card™ API based applet interworking. WI approved at T#19. First draft of TR presented for information at T#20. Work Item delayed. Foreseen to be completed at T#23 (was T#21).**

Note:

Common UICC enhancement are specified by ETSI Project Smart Card Platform EP SCP (including 3rd form factor and UICC next generation). Decision on 3rd form factor at SCP#15.

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Packet Switched Streaming Rel-6 (1/2)

- Stage 1 completed
- New set of enhancements on PSS approved at SA #18.
- SA4 has restructured the whole set of main specifications for PSS Rel-6 (new TSs 26.244 and 26.246 are presented for information at SA#22, new TS 26.245 still in draft version)

Completion in SA4 expected by March 2004 (at present 40% completed)

PSS/MMS audio codec selection expected by March 2004 (see separate slide)

Packet Switched Streaming Rel-6 (2/2)

Audio Codec

- **WID SA4 on AMR-WB extension for Audio Quality updated at SA #19.**
- **Competition for Lower and Higher Bit Rate Audio Codec approved at SA #19**
- **Design Constraints and Performance Requirements COMPLETED**
- **Contracts signed by ETSI with Host, Testing and Analysis Laboratories after SA#21 (subjective tests are on-going)**
- **PSS/MMS Audio Codec and Extended AMR-WB Selection Rules presented for approval at SA#22**

  Completion expected by March 2004

AMR-WB extension for high audio quality (AMR-WB+)

- **Selection rules presented for approval at SA#22 (see previous slide)**
- **SA4 work on AMR-WB+ expected to be completed by March 2004 (was December 03)**
- **CN1 assumed not to be involved.**

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CAMEL

- **CRs for CAMEL technical enhancements in Rel-6 and Collective CRs for Rel-6 “Enhanced dialled services for CAMEL“ sent for approval**
- **TS 23.078 v6.0.0 and TS 29.078 v6.0.0 will be created after CN#22**
- **WID “CAMEL prepay interworking with SCUDIF” is sent to CN#22 for approval**

BARS

In full: Bandwidth and Resource savings and Speech Quality enhancements

- **Stage 2 TR 23.977 is completed by June (was March 2004).**
- **No information on Stage 3 nor on SA4 impacts at the moment**
- **No Stage 1 required**

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3GPP Enablers for services like Push to Talk over Cellular (PoC)

- **WID approved at SA#21. Impacts on 23.228 foreseen.**
- **Time schedule for SA1: December for information, March for approval**
- **Time schedule for SA2: March for information, June for approval**
- **No work ongoing on Stage 3 at the moment. Awaiting Stage 2 to be progressed. Not before September 2004.**
- **Work to be done in SA1.**

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FS on (U)SIM Security Reuse by Peripheral Device on Local Interface

- **Draft Feasibility Study to be provided for Information to SA#22:**
  - **Draft TR 33.817: Feasibility Study on (U)SIM Security Reuse by Peripheral Devices on Local Interfaces.**
  - **FS to be presented for approval in March 2004**

GERAN Rel-6 1/2

Features:

- **Addition of frequency bands to GSM : COMPLETED**
- **Multiple TBF in A/Gb mode : COMPLETED**
- **Seamless support of streaming services in A/Gb mode: COMPLETED**
- **Flexible Layer One for GERAN: BBs are 80% to 100% ready, completion expected by February 2004 (it was November 2003)**
- **Single Antenna Receiver Interference Cancellation (SAIC): 80% ready, completion expected by February 2004 (it was November 2003)**
- **Support of Conversational Services in A/Gb mode via the PS domain: TR ready, completion expected by August 2004**
- **Alignment between the test-regimes for GERAN capable MS : 80% ready, completion expected by April 2004**
- **Uplink TDOA location determination for GSM/GPRS: WI deleted and replaced at GERAN#17 (see next slide)**

GERAN Rel-6 2/2

Feasibility studies:

- **Enhanced A/Gb feasibility study COMPLETED**
- **Uplink TDOA feasibility study COMPLETED**
- **New WIs:**
  - **Uplink TDOA location determination for GSM, CS domain: 90% ready, completion expected by April 2004**
  - **Uplink TDOA location determination for GPRS, PS domain: 5% ready, completion expected by November 2004**
  - **Advanced Receiver Performance (ARP): < 5% ready, completion expected by June 2004**
  - **Reduction of PS service interruption in Dual Transfer Mode: <5% ready, completion expected by June 2004**

Reminder on deleted items

- **Preferred framing protocol for bearer independent CS architecture, part of "Evolutions of the transport in CN", deleted at CN#19**
- **Enhanced Tandem Free Operation (eTFO) never approved**
- **Identity Portability in IMS deleted at SA#19**
- **Enhanced home environment control of security deleted at SA#19**
- **Security signalling flows for the Ze interface deleted at TSG#18**
- **Radio optimisation impacts on PS domain architecture deleted at SA#21**
- **Improvements of RRM across RNS and RNS/BSS deleted at TSG #21 due to lack of progress**
- **SI on Enhancements of OTDOA positioning using Advanced Blanking Methods. Further work in the area to be done under UE positioning Enhancements (generic WI)**
- **Feature Interaction, deleted at SA#21**
- **Enhanced HE control of security**

Conclusion

Completion dates

- **Next slides summarize the status of each Feature, for each Stage (1, 2 and 3).**
- **An "X" means the work has been completed. If not completed, the Foreseen Completion Dates (FCD) is given, in terms of TSG#:**
  - **(TSG #) 22: December 2003**
  - **(TSG #) 23: March 2004**
  - **(TSG #) 24: June 2004**
  - **(TSG #) 25: September 2004**
- **If the box is blank, it means that the corresponding work has not been identified (generally because it is not needed).**
- **"Shifted" indicator:**
  - **"0": the FCD was not changed since TSG #20**
  - **"1": the FCD was changed between TSG #21 and TSG #22**
  - **"2" : the FCD was changed twice since TSG #20**
- **NR: Not Relevant**
- **"?": not able to provide any estimate/unsure estimate**
- **"/" means "or" (unable to predict more accurately)**
- **"+" means that the feature can be split in two independent features**

List of on-going Features (1/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
2	Evolutions of the transport in the UTRAN				NA
1216	Improvements of Radio Interface				21+22+23
2468	Multiple Input Multiple Output antennas (MIMO)	2			25
9	RAN improvements	1			23
32045	PS domain and IMS impacts for supporting IMS Emergency calls	2	X	24	25?
32023	Location Services enhancements 2		X	22+24	23+25?
1571	Security enhancements				23
32021	IMS Phase 2	1	X	22	24
11032	Interoperability and Commonality between IMS using different "IP-connectivity Networks"				NA
1365	Support of Push Services	2	X	23	24
42009	Multimedia Messaging (MMS) enhancements		X	X	23?+24
42005	Rel-6 MExE enhancements		X	X	X

List of on-going Features (2/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
2062	Subscription Management		23	23	24
2499	Support of Presence Capability	1	X	X	23
2544	Multimedia Broadcast and Multicast Service	1	X	23	23?
	MBMS User Agent		22	23	25
31006	Speech Recognition and Speech Enabled Services		X	23	24?
31008	Generic User Profile	1	X	X	23
31010	Digital Rights Management		X		NA
31012	WLAN-UMTS Interworking	1	X	23	24
31015	Priority Service		X		23?
31018	Network Sharing	2	X	23?	24
32016	QoS Improvements	1		23	24?
33002	Support for subscriber certificates		23	23	24

List of on-going Features (3/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
15010	Rel-6 OSA enhancements				24
34300	Performance characterisation of default codecs for PS conversational multimedia application				23
31030	Study on Privacy Capability				NA
35010	OAM&P				24
35016	Charging Management				23?
1800	Rel-6 UICC/USIM enhancements and interworking	1			23
34022	Packet Switched Streaming Services Rel-6		X		23
34023	AMR-WB extension for high audio quality	1			23
12006	Enhancement of dialled service for CAMEL				22
32060	Bandwidth and resource savings in CS networks	1		24	25?
	3GPP Enablers for services like Push to Talk over Cellular (PoC)		23	24	25?
33018	FS on (U)SIM Security Reuse by Peripheral Devices on Local Interfaces				NA

List of on-going Features (4/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
50063	**Flexible Layer One for GERAN**				**Feb-04**
50401	**Addition of frequency bands to GSM**				**X**
50130	**Seamless support of streaming services in A/Gb mode**				**X**
51101	**Single Antenna Receiver Interference Cancellation (SAIC)**				**Feb-04**
50500	**Support of Conversational Services in A/Gb mode via the PS domain**				**Feb-04**
50600	**Multiple TBF in A/Gb mode**				**X**
50096	**Alignment between the test-regimes for GERAN capable MS**				**Apr-04**
50541	**Uplink TDOA location determination for GSM/GPRS**				**Del**
50444	**Uplink TDOA location determination for GSM, CS domain**				**Apr-04**
50445	**Uplink TDOA location determination for GSM, PS domain**				**Nov-04**
50101	**Advanced Receiver Performance (ARP)**				**Jun-04**
50109	**Reduction of PS service interruption in Dual Transfer Mode**				**Jun-04**
50056	**Enhanced A/Gb feasibility study**				**X**

Sorted by Completion Dates

- **Using the same codes, the following slides sort the features by Foreseen Completion Dates of the Stage 3**

FCD of Features sorted by FCD (1/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
42005	Rel-6 MExE enhancements		X	X	X
50401	Addition of frequency bands to GSM				X
50130	Seamless support of streaming services in A/Gb mode				X
50600	Multiple TBF in A/Gb mode				X
50056	Enhanced A/Gb feasibility study				X
12006	Enhancement of dialled service for CAMEL				22
1216	Improvements of Radio Interface				21+22+23
50063	Flexible Layer One for GERAN				Feb-04
51101	Single Antenna Receiver Interference Cancellation (SAIC)				Feb-04
50500	Support of Conversational Services in A/Gb mode via the PS domain				Feb-04
9	RAN improvements	1			23
1571	Security enhancements				23

FCD of Features sorted by FCD (2/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
2499	Support of Presence Capability	1	X	X	23
31008	Generic User Profile	1	X	X	23
34300	Performance characterisation of default codecs for PS conversational multimedia application				23
1800	Rel-6 UICC/USIM enhancements and interworking	1			23
34022	Packet Switched Streaming Services Rel-6		X		23
34023	AMR-WB extension for high audio quality	1			23
2544	Multimedia Broadcast and Multicast Service	1	X	23	23?
31015	Priority Service		X		23?
35016	Charging Management				23?
42009	Multimedia Messaging (MMS) enhancements		X	X	23?+24
32023	Location Services enhancements 2		X	22+24	23+25?
50096	Alignment between the test-regimes for GERAN capable MS				Apr-04

FCD of Features sorted by FCD (3/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
50444	Uplink TDOA location determination for GSM, CS domain				Apr-04
50101	Advanced Receiver Performance (ARP)				Jun-04
50109	Reduction of PS service interruption in Dual Transfer Mode				Jun-04
50445	Uplink TDOA location determination for GSM, PS domain				Nov-04
32021	IMS Phase 2	1	X	22	24
1365	Support of Push Services	2	X	23	24
2062	Subscription Management		23	23	24
31012	WLAN-UMTS Interworking	1	X	23	24
31018	Network Sharing	2	X	23?	24
33002	Support for subscriber certificates		23	23	24
15010	Rel-6 OSA enhancements				24
35010	OAM&P				24

FCD of Features sorted by FCD (4/4)

DOES NOT INCLUDE CN#22 UPDATES

Unique ID	*Feature*	*Shifted*	*St. 1*	*St. 2*	*St. 3*
31006	Speech Recognition and Speech Enabled Services		X	23	24?
32016	QoS Improvements	1		23	24?
2468	Multiple Input Multiple Output antennas (MIMO)	2			25
	MBMS User Agent		22	23	25
32045	PS domain and IMS impacts for supporting IMS Emergency calls	2	X	24	25?
32060	Bandwidth and resource savings in CS networks	1		24	25?
	3GPP Enablers for services like Push to Talk over Cellular (PoC)		23	24	25?
50541	Uplink TDOA location determination for GSM/GPRS				Del
2	Evolutions of the transport in the UTRAN				NA
11032	Interoperability and Commonality between IMS using different "IP-connectivity Networks"				NA
31010	Digital Rights Management		X		NA
31030	Study on Privacy Capability				NA
33018	FS on (U)SIM Security Reuse by Peripheral Devices on Local Interfaces				NA

Proposed Conclusions

- **Most of the key forthcoming Features (e.g. IMS phase 2, MBMS, MMS enhancements, MIMO, etc) will hardly be completed or definitely not be completed by March 2004.**
- **The Stage 2 is still not complete for most of these features and almost all of their Foreseen Completion Dates have been postponed 3 to 6 months during the last 6 months.**
- **A freezing date prior to September 2004 would miss some of the major Features that are currently defined in 3GPP.**