3GPP TSG CT#28
Quebec, Canada, 1-9 June 2005

SP-050381

Review of the Work Plan at Plenaries #28

This version includes updates from SA#28

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Content

- Testing
- Feasibility Studies
- Release 6
  - Release 6 Features already completed at TSG#27 (as a reminder)
  - Release 6 Features completed between TSG#27 and TSG#28
  - Release 6 features “almost complete” and asked to be considered as complete at TSG#28
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- Release 7
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UE testing (1/2)

- Release 5 documentation (covers Releases 99, 4 and 5):
  - 34.123-3 upgraded to v5.0.0
  - **Core spec baseline: Dec. 04, Rel-5**
  - **TCs developed according to GCF WIs priority**
  - Release 99: Global target of at least 80% per package reached. Covers testing of:
    - FDD R99 (GCF WI-10): reached 93% (P1:97 %, P2:94 %, P3:90 %, P4:93%); For 95%, 4 new TC needed
    - FDD R99 enhancements (GCF WI-12): reached 78%; 30 TCs verified; For 95%, 11 new TC needed
    - A-GPS (GCF WI-15): 14 TCs delivered for verifications
  - Release 4 (TDD): LCRTDD work making good progress (200 TCs coded out of 400)
    - **Core spec baseline: March 03, Rel-4**
    - 60% of WI-10 TTCN TCs adapted from FDD into TDD
  - Release 5: covers testing of:
    - FDD Rel-4 and Rel-5 Enhancement (GCF WI-13): Ongoing
    - FDD HSDPA (GCF WI-14) reached 8%: 25 TCs delivered for verifications
- Release 6 (FDD)
  - New RAN5 WIs
    - Conformance Test Aspects – IMS Call Control (completion non TTCN issues 03/2006)
    - Conformance Test Aspects – FDD Enhanced Uplink (completion non TTCN issues 03/2006)
  - For TTCN GCF WIs expected
  - Introduction into Rel-5 spec as annexes before critical number of TCs reached for introduction of Rel-6 spec

UE testing (2/2)

Next Steps:

- Work to continue on new prioritised FDD GCF test cases
  - WI-10 + WI-12: 95% approval (June 05)
  - WI-10 + WI-12: 100% approval (Sept 05)
  - WI-15: 80% approval (Sept 05)
  - WI-13 + WI-14: 80% approval (Sept 05)
  - Introduce ciphering in test cases (June 05) (by 01/2006 all TCs must be validated with Ciphering on)
- Work to continue on TDD test cases
  - LCR TDD - 80 TCs will be developed till RAN5 #28 (to reach all in total 300)
  - 80% of WI-10 will be adapted by end of this year
  - Completion of TDIA LCR TDD TTCN conversion (Nov 05)
- New test cases (prose) to be developed for IMS Call Control and FDD Enhanced Uplink (first input 08/2005, completion 03/2006)

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GERAN Testing

- Work is progressing on:
  - Advanced Receiver Performance : 60%, Foreseen Completion Date (FCD) August 2005
  - Alignment between the different test regimes for GERAN capable MS : test cases to be added to TS 51.010 80% FCD by Sept. 2005 (shifted twice from June 2004)
  - Generic Access to the A/Gb Interface : 20%, FCD June 2005

- Work planned but not yet started on the following Rel-5 features:
  - Reduction of PS service interruption in Dual Transfer Mode (DTM) (both MS and BTS conformance testing needed)
  - Enhanced Power Control (both MS and BTS conformance testing needed)
  - 8-PSK Half Rate (MS conformance testing needed)
  - AMR Wide Band (MS conformance testing needed)

- Work planned but not yet started on following Rel-7 features:
  - Support of Conversational Services in A/Gb mode via the PS domain: FCD April 2006
  - Addition of new frequency band to GSM (T-GSM810): FCD August 2005
  - Handover of dedicated and shared resources while in DTM: FCD November 2006
  - LCS Enhancements Related to Location Based Services: FCD November 2006

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Completed Feasibility Studies (1/2)

FS completed in the Rel-6 time frame:

- MExE Enhancements Rel-6. It contains:
  - MExE Rel-6 Improvements and Investigations
  - MExE Run-Time Independent Framework Feasibility Study (TR 22.857)
- GERAN Feasibility Studies:
  - FS on Generic Access to A/Gb Interface
  - Uplink TDOA:
    - FS on Uplink TDOA location determination for GSM, CS domain (completed except potential LMU performance specs).
    - FS on Uplink TDOA location determination for GPRS, PS domain
  - Single Antenna Receiver Interference Cancellation (SAIC)
  - Downlink Advanced Receiver Performance (DARP) test scenarios
  - FS on Reduction of PS service interruption in Dual Transfer Mode

Completed Feasibility Studies (2/2)

FS completed in the Rel-6 time frame (continued):

- RAN Feasibility Studies:
  - Low Output powers for FDD BSs
  - Uplink Enhancements for Dedicated Transport Channels
  - Analysis of higher chip rates for UTRAN TDD evolution
  - Radio link performance enhancements
  - Uplink Enhancements for UTRA TDD (just completed)
  - Some other RAN FSs have been completed since Rel 5 was frozen
- Privacy Capability
- (U)SIM Security Reuse by Peripheral Device on Local Interface
- Security for Early IMS (“implementation guide” in TR 33.978)
- Bandwidth and Resource savings and Speech Quality enhancements (BARS). CRs providing Operator Guidelines to fix issues related to UMTS_AMR and AMR Harmonization approved at SA#26 (c/o SA4). These CRs use other WI acronyms, so BARS is still a FS.

Ongoing Feasibility Studies (Rel-7)

FS being actively progressed for Rel-7:

- **GERAN's Enhanced support of Video Telephony: 35% FCD August 2005**
- **Future GERAN Evolution: 5% FCD November 2005**
- **RAN Study on Evolved UTRA and UTRAN**
  - **Work on progress**
  - **WG1 has started to analyze new and evolved radio access technologies**
  - **Multiple Access Schemes for DL and UL, and simulation parameters for Multiple Access evaluation were discussed in RAN1#40bis and #41**
  - **System Assumptions and Evaluation for EUTRA was endorsed**
  - **WG2 & WG3 are looking at the requirements for the new network architecture, together with SA WG2**
  - **Intensive work on the reflector on the overall requirements. TR 25.913 approved**
  - **Several Ad Hocs taking place and more expected**

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Rel-6 Completed

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Completed Release 6 Features (1/8)

As a last reminder, the full list of Release 6 features completed before TSG#28 is provided here.

RAN Features (1/2):

- **Rel-6 improvements of Radio Interface**
  - **FDD Base Station Classification**
  - **Improved receiver performance requirements for FDD UE**
  - **Frequency bands: UMTS 850, UMTS 800, UMTS 1.7/2.1GHz.**
  - **Improvements of receiver performance of HSDPA UE : Performance Requirements of Receive Diversity for HSDPA**
- **UE Positioning**
  - **Open interface between the SMLC and the SNR within the UTRAN to support Rel-4 positioning methods**
  - **A-GPS minimum performance specification**

Completed Release 6 Features (2/8)

RAN Features (2/2):

- **Rel-6 RAN improvements**
  - **Beamforming Enhancements**
  - **RRM optimization for Iur and Iub; Improved access to UE measurement data for CRNC to support TDD RRM**
  - **Network Assisted Cell Change from UTRAN to GERAN – Network Side Aspects**
  - **Remote Control of electrical antenna tilting**
  - **HS-DPCCH ACK/NACK Enhancement**
  - **RAB support enhancement**
    - **Optimisation of downlink channelisation code utilisation for FDD: Introduction of Fractional DPCH**
    - **Optimisation of DL channelisation code utilisation for 3.84 Mcps TDD**
- **Rel-6 Improvements of Radio Interface**
  - **Improvements of receiver performance of HSDPA UE : Performance Requirements of Receive Diversity for HSDPA**

Rel-6 Completed

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Completed Release 6 Features (3/8)

- **GERAN Features:**
  - **Addition of frequency bands to GSM**
  - **Multiple TBF in A/Gb mode**
  - **Seamless support of streaming services in A/Gb mode**
  - **Flexible Layer One for GERAN**
  - **Downlink Advanced Receiver Performance**
  - **Uplink TDOA location determination (for GPRS, PS domain)**
  - **Uplink TDOA location determination (for GSM, CS domain)**
  - **Reduction of PS Service interruption in DTM**
  - **Generic Access to the A/Gb Interface**

Completed Release 6 Features (4/8)

- IMS Phase 2:
  - Interworking between IMS and CS networks
  - interworking with non-IMS IP networks
  - Lawful Interception
  - IMS Group Management (covered by Presence, IMS Messaging and IMS Conferencing)
  - IP v4-based IMS
  - Enhancements to Cx and Sh interfaces
  - IMS Conferencing
  - IMS Management
  - IMS Network Resource Model
  - IMS Charging

Rel-6 Completed

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Completed Release 6 Features (5/8)

- Interoperability and commonality between IMS using different IP connectivity networks
- Push Services
- Speech Recognition and Speech Enabled Services (OMA's dependency on Multimodal support to be completed by December 2005)
- Digital Rights Management (OMA's dependencies completed)
- WLAN/UMTS interworking Scenarios 1 to 3 – some not vital parts ongoing, see corresponding slide
- Priority Service Rel-6
- QoS Release 6 Improvements: Dynamic Policy Control Enhancements for End-to-End QoS
- Performance characterization of default codecs for PS conversational multimedia applications

Rel-6 Completed

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Completed Release 6 Features (6/8)

- UICC/USIM enhancements and interworking for Rel-6:
  - 2G/3G Java Card™ API based applet interworking
  - USIM enhancements for WLAN Interworking
  - USSD message transfer to USIM
- Security Enhancements Rel-6:
  - NDS/IP
  - NDS/AF (Application Framework)
  - Key Management of group keys for Voice Group Call Services
  - GERAN A/Gb mode security enhancements: Withdrawal of support of A5/2
  - G-MILENAGE Algorithm
  - Generic Authentication Architecture

Rel-6 Completed

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Completed Release 6 Features (7/8)

- Network Sharing
- Codec Enhancements for PS Conversational Multimedia Applications
- 3G-324M Improvements (CS)
- CAMEL Rel-6
- LCS enhancements 2 (OMA dependencies on Stage 3):
  - Improvement on Le interface
  - Enhanced support for anonymity and user privacy
  - Enhanced inter-GMLC interface
  - Location Services support for IMS public identities
  - "New area" event for location service triggering reports
  - U-TDOA positioning method in GERAN (still potential LMU performance specs for CS to be checked).
- 3GPP Enablers for services like Push to Talk over Cellular (OMA dependencies also completed) – some not vital parts ongoing, see corresponding slide

Completed Release 6 Features (8/8)

- Operation, Administration, Maintenance and Provisioning:
  - Principles, high level Requirements & Architecture
  - Network Infrastructure Management
  - Performance Management
  - Subscriber and Equipment Trace
    - Management Based Activation
    - Non-SIP Signalling Based Activation of Trace
- Subscription Management
- 3GPP Access Class Barring and Overload Protection

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Rel-6 just completed

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CS Video and Voice Service Improvements - Redial Solution

The Feature "CS Video and Voice Service Improvements" was split in two parts at SA#26:

- **The Redial Solution for Voice-Video Switching, for Release 6.**
  - **This solution is described in TR 23.903, approved at SA #26.**
  - **CN1 identified at CN#27 new tasks affecting TS 24.008 and 23.009 (Rel-6 submission form in NP-050087/SP-050153) which are now 100% completed:**
    - **addition of an indication to the core network that a call is a redial attempt for switching between voice and video**
    - **Addition of service-based handover as a possible reason for directed retry handover.**
- **Other solutions, for Release 7 (see corresponding Release 7 slide)**

IMS Phase 2 items incomplete at TSG#27

- **IMS Messaging**
  - Dependencies on TR 26.936. No other open point.
- **Additional SIP Capabilities support (CT1).**
  - Rel-6 Submission form in NP-050089 at TSG#27: now 100% completed.
  - This covers various minor enhancements to SIP. The main work involves taking new RFCs for SIP as they are approved by IETF, and stating how 3GPP supports those extensions.
  - There were some open issues identified at CN1-37 related to procedures related to IMS-ALG (IMS Application Level Gateway), but this is now 100% completed
- **CT4 issues which were open at CN#27 and are now solved:**
  - Profiling of the protocol to ensure interoperability in an open inter-vendor environment.
  - Impacts of the requirements from TISPAN: only the ones which have some backward Rel-7 compatibility problems, in particular the Mn interface, (the other ones are for Release 7)

Rel-6 just completed

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Generic User Profile

Stage 3 submitted at CN#27 for approval, completed now

- Stage 1 in TS 22.240, approved.
- General Stage 2 in TS 23.240, approved. (Note that Stage 2 in TS 24.241 on "GUP Access; Common Objects" was moved to Release 7)
- At CN#26, 23.241 changed into a TR 23.941, approved at CN#26.
- Stage 3:
  - TS 29.240 (CT4) approved at CN#27.
    - Contentious Issues at CN#27 now solved: Formalised approach to GUP XML Schema derivation using a defined UML approach with a standardised translation mechanism.
  - No open issues for Release 6
- Security aspects:
  - to be covered by CRs. Work on progress, in collaboration with Liberty Alliance, completed in March 2005. CR approved at CT#28, so no more open issue.

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WLAN/UMTS interworking (Scenarios 1 to 3)

- **The points which were still open at CN#27 are now complete in the June plenary 2005:**
  - ***No outstanding Stage 3 WLAN issues for Rel-6***

- **Charging in SA5's TS 32.252 (WLAN charging). Target SA Approval delayed from June to Sept 2005. Not complete : Alignment of WLAN charging and PS domain charging:**
  - **The 3GPP WLAN Charging collects charging data which are managed by a non 3GPP AN entity with different protocol approaches for the Direct IP access.**
  - **TS progress depends on SA2's WLAN Network architecture TS 23.324. This framework is currently conforming the mandatory requirement on immediate purging of a user from a I-WLAN.**

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

"Core" Work completed

- Speech Codec aspects:
  - SA4 found that AMR and AMR-WB are applicable. PoC codec definition included in IMS codec TSs 26.235 and 26.236
  - All open issues on interworking with 3GPP2 codecs are now completed.
- PoC charging: SA5's TS 32.272 submitted for SA#28 approval, in cooperation with OMA.

RAN items

- **RAN improvements**
  - **RAB support enhancement (Optimisation of the RABs for IMS voice over IP)**
    - Done in June 2005 (RAN-28).
- **Improvements of Radio Interface**
  - Improvements of receiver performance of HSDPA UE
    - Improved performance requirements for HSDPA categories 7 and 8
    - 90% completed, open issue: Requirements for Closed Loop diversity mode I
    - The WI is closed

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Charging Management

TSG Approval target remains Jun 2005 (was Sep 2004 then Dec 2004)

Already SA Approved 11 TS/TR :

- 32.240 Charging architecture and principles
- 32.250 Circuit Switched (CS) domain charging
- 32.251 Packet Switched (PS) domain charging
- 32.260 IP Multimedia Subsystem (IMS) charging – see also IMS slide
- 32.270 Multimedia Messaging Service (MMS) charging – see also MMS slide
- 32.271 Location Services (LCS) charging – see also LCS slide
- 32.295 Charging Data Record (CDR) transfer
- 32.815 Online Charging System (OCS) architecture study
- 32.296 Online Charging System (OCS): Applications and interfaces
- 32.297 Charging Data Record (CDR) file format and transfer
- 32.299 Diameter charging applications– see also IMS slide

SA#27 3 TSs for Information & 1 Rel-6 WID approved at TSG 27:

- 32.252 Wireless Local Area Network (WLAN) charging– see also WLAN slide
- 32.273 MBMS charging – see also MBMS slide
- 32.272 PoC charging - coordinate with OMA – see also PoC slide
- WID Rel-6 on 32.272 PoC charging

Completion date delayed from June to Sept 2005 for

- 32.252 Wireless Local Area Network (WLAN) charging – see also WLAN slide

Reason and open issues are listed in S5-054469/SP-050282 "Form for exception on WLAN Charging Rel-6".

Features with dependency on codec (1/3)

The verification of the audio codecs is not yet fully completed (volunteers are needed): the Phase 1 characterization tests are completed by SA#28, but the Phase 2 characterization tests and the Performance Characterization TR 26.936 is planned to be completed by December 2005. Consequently, the Audio Codec is said to be "98% completed" (was 97% in March).

The individual status of features with a dependency on the audio codec are presented further on. These are:

- AMR-WB+
- Multimedia Messaging System Rel-6 Enhancements
- Packet Switched Streaming Rel-6 Enhancements
- IMS Messaging
- Presence
- MBMS user services

Features with dependency on codec (2/3)

Additional information on the codecs:

- **Video Codec for PSS, MMS, PS Conversational and CS Multimedia (3G-324M): completed**
  - **H.264/AVC approved at SA#25 as "recommended" decoder**
  - **SA4 was tasked to possibly define the encoder: reply provided at SA # 26 together with a new WID on Video Codec Performance Requirement for Release 7 (now 15 % complete)**

- **Audio Codec for PSS and MMS: "98%" completed**
  - **Set of Specs on both Extended AMR-WB (AMR-WB+) and Enhanced aacPlus recommended audio codecs completed including fixed-point version. Fixed-point codec TS 26.273 and TS 26.411 approved at TSG SA#27**
  - **Aspects completed by June 2005:**
    - **Conformance TSs 26.274 and TS 26.406, and TS 26.412 Source code for 3GP file format presented for approval at TSG SA#28**
    - **Correction CRs to C-code provided for approval at TSG SA#28**
    - **Approval of the characterisation tests Phase 1 (for ETSI to pay Testing and Global Analysis Laboratories)**
    - **Approval of the characterisation tests Phase 2 test plan (for ETSI to contract Testing and Global Analysis Laboratories)**
  - **Aspects to be completed by September/December 2005:**
    - **TR 26.936 on performance related to content/bit rate in clean/error conditions (not critical)**

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Features with dependency on codec (3/3)

Status of these features with codec dependencies:

- **AMR-WB+**
  - for approval at SA#28: TS 26.274 on Conformance testing and CRs to C-code
  - No other open point: asked to be considered as completed
- **Multimedia Messaging System Rel-6 Enhancements**
  - No other open point: asked to be considered as completed
- **Packet Switched Streaming Rel-6 Enhancements**
  - No other open point: asked to be considered as completed
- **IMS Messaging**
  - Dependency on IETF's SIP/SIMPLE Instant messaging.
  - This is an external dependency, so asked to be considered as 3GPP completed
- **Presence**
  - Completed items: CT1 work in TS 24.141, CT3's work on Profile for Pp interface included in TS 29.161, OSA aspects (officially part of the "OSA Improvements" Feature)
    - Codec and Formats aspects: TS 26.141 (Media formats and codecs for IMS Messaging and Presence) approved at SA#26. Conformance TSs 26.274 and TS 26.406, and TS 26.412 Source code for 3GP file format presented for approval at TSG SA#28.
  - Other items completed between CN#27 and CT#28: Pr and Pp interfaces.
  - No other open point: asked to be considered as completed
- **MBMS user services**
  - video codec(s) defined at SA#27: H.264 recommended, H.263 may be used, TR still to be produced in SA4 for "H.263 use for MBMS"
  - Remaining work on Audio codecs (in addition of TR 26.936): TR 26.946 MBMS User Service Guidelines, to be completed
  - See slide on MBMS

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Other Almost Completed Release 6 Features

- **OSA Improvements Rel-6:**
  - **open point: WDSL code to be incorporated in Rel-6 (Extension sheet provided in CP-050249)**
- **IP Flow Based Bearer Charging**
  - **Extension sheet provided on CP-050226 for "Gx Protocol for Flow Based Charging"**

Rel-6 almost completed

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Multimedia Broadcast/Multicast Service

- **Work completed before TSG#28:**
  - **Stage 1 in TS 22.146, Stage 2 in TS 23.246,**
  - **Stage 3: CT1, CT3 and CT4 work complete,**
  - **Support of MBMS in GERAN**
  - **Introduction of MBMS in RAN: Physical & upper layers, access network interfaces (RAN2, RAN1, RAN3). Corrections on-going.**
- **Work completed at TSG#28:**
  - **MBMS RoHC (as listed in CN#27's form in NP-050124),**
  - **CRs on Security aspects in TS 33.246,**
  - **SA5's TS 32.273 on MBMS charging and on TS 32.421/2/3 on MBMS Trace**
  - **Use of MBMS session ID validity timer clarified by SA4 to CT1 (it's an application issue)**
- **Open issues, planned to be completed by September 2005:**
  - **Security: stream bundling and User Service finalization (solution is assumed and CRs available, but SA4 confirmation is required). Review required on potential impact on USIM aspects**
  - **Introduction of MBMS in RAN: UE Performance Requirements for MBMS (RAN4): MTCH/MCCH performance and RRM requirements. Simulations ongoing, (Note that "UE Performance Requirements for MBMS in TDD mode" is planned for Rel-7)**
  - **MBMS User Service: dependencies on TR 26.936 and TR 26.946 ("MBMS User Service Guidelines") still to be completed**

Rel-6 FDD Uplink Enhancements (EDCH)

- **Physical Layer (R1) :**
  - 18 CRs were agreed on last two RAN1 meeting.
- **Stage 2/ Layer 2 and 3 Protocol Aspects(R2):**
  - Conclusions made on RRM
  - Interaction between compressed mode and E-TFC selection concluded.
  - Scheduling mechanism simplified (e.g. non-RG mode).
  - Buffer size requirements for UE categories agreed.
  - Open issues: Some scheduler details and testing aspects (testing methodology and radio bearers).
- **Iur Iub Aspects (R3):**
  - significant progress made on IublIur congestion control
  - TR 25.902 IublIur Congestion control will be presented to TSG-RAN#28 for information
  - 18 Change Requests agreed
- **RF and Performance (R4):**
  - Work on progress, but more simulations than expected are needed
  - CR on power reduction agreed
  - Open issue: active set size
  - 60 % completed, completion date delayed to September
- **Considered completed at RAN#27 in March 2005 except for the performance requirements to be completed in September 2005**

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GERAN Features

Support of Conversational Services in A/Gb mode via the PS domain was split into two new Work Items, i.e. :

- **Support of "PS Handover" for GERAN A/Gb mode : 90% ready (Release 6), WID GP-051160, CT1 related CRs presented to this plenary for approval (direct companies contributions) – extension form at TSG-27 and re-presented at CT#28 on PS handover in A/Gb mode (CP-050234)**
- **The "Support of Conversational Services in A/Gb mode via the PS domain" has been moved to Release 7 (see corresponding slide),**

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Reminder on Rel-6 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
- Policy-based control of DiffServ
- GERAN: GPRS Extended Measurement Reporting, GPRS Idle Interference Measurements, Unsynchronized (blind) Cell Change Order towards a GSM cell
- Improvement of inter-frequency and inter-system measurement (R1). Closed at RAN#25(09/04). No agreement on the gain of the proposed techniques
- Uplink TDOA location determination for GSM/GPRS: WI deleted and replaced at GERAN#17
- FS Multiple MMS Relay/Server Architecture (might be re-introduced in Rel-7)
- GERAN interface evolution deleted at GERAN#23 (was June 2004)
- GERAN *BTS Conformance tests for LCS (Closed without progress at GERAN#19)*

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7.68 Mcps TDD

- **Physical Layer (R1)**
  - **Two text proposals were agreed.**
  - **Current TR TR25.809 v0.2.0, Current TS (Stage 2) TS25.202 v0.1.0**
- **Layer 2 and layer 3 protocol aspects (R2)**
  - TR 25.819 V 0.1.0 endorsed, identifying the RAN2 specifications impacted and changes required.
- **UTRAN Iub/Iur Protocol Aspects (R3)**
  - text proposals for RAN3 internal TR agreed
  - Impact on RAN3 specifications regarding "timing advance, rx timing deviation and node synchronisation" addressed.
  - **Level of completion: 15%**
- **RF and Performance Requirements (R4)**
  - UE TX and RX characteristics were approved,
  - Level of completion: 35%
- **Completion date : December 2005 for WG1, 2 and 3, June 2006 for WG4**

3.84 Mcps TDD Enhanced Uplink

- **Physical Layer (R1)**
  - **Work started. Three text proposals was agreed on RAN1#41**
  - **Completion Level : 10%**
- **Layer 2 and layer 3 protocol aspects (R2)**
  - Proposed Stage 2 TS presented, to be decided if the Stage 2 TS will be common between FDD and 3.84 Mcps or not.
  - All decisions to be captured in a TR.
  - Discussions on the transport channel structure for uplink and the difference to FDD.
  - Agreements on high-level protocol architecture.
- **UTRAN Iub/Iur Protocol Aspects (R3)**
  - **Skeleton of RAN 3 internal report R3-017 approved.**
  - **Input describing protocol architecture and frame protocol impacts were discussed and agreed**
  - **Level of completion: 5 %**
- **RF and Performance Requirements (R4)**
  - Work has not started
- **Completion date : March 2006 for WG1, 2 and 3, June 2006 for WG4**

RAN Release 7 other features

- **Multiple Input Multiple Output antennas (MIMO)**
  - Work re-started, study phase until December 2005.
- **RAN improvements**
  - **RAB support enhancement (R2)**
    - **Optimisation of DL channelisation code utilisation for 1.28 Mcps TDD (R1)**
      - One document was in principle agreed on RAN1 #41,
      - Completion level : 70%, RAN-29 for completion
  - **Delay optimisation for procedures applicable to CS and PS Connections**
    - **Previously known as CS and PS Call Setup Delay Improvement (R2)**
    - Email discussion on scenarios triggered in RAN2.
    - Skeleton TR produced.
    - Completion date: March 2006
- Study item on Study on the performance evaluation of the UE behaviour in high speed trains with speeds up to 350 kmph (R4)
  - Start of discussion on propagation channels and scenarios
  - 5 % completed, completion date moved to March 2006

Rel-7

Improvements of the Radio Interface

- **UMTS2600 (R4)**
  - Completed, CRs ready for approval.
- **UMTS900 (R4)**
  - In progress, simulations are being performed for the extended set of scenarios
  - Level of completion: 30% Completion expected December 2005
- **UMTS2600 TDD Option (R4)**
  - In progress, some BS & UE RF parameters agreed
  - Level of completion: 35 % Completion December 2005
- **UE Antenna Performance Evaluation Method and Requirements (R4)**
  - Improvements to the measurement method discussed
  - First proposal for requirements presented
  - Level of completion: 30% Completion moved to March 2006
- **Improved support of IMS realtime services using HSDPA/EDCH**
  - CRs on 25.331 and 25.322 agreed for seamless serving cell changes.
  - *Completion date:* December 2005 (RAN30).

Rel-7 IMS aspects

SA2 proposes not to create "IMS Phase 3" yet, therefore all IMS phase 2 functionalities not completed on time or new IMS functionalities are so far reported as stand-alone features in Release 7.

- IMS Stage-3 IETF Protocol Alignment:
  - WID approved at CN-26. No corresponding feature is necessary in SA2 for the time being.
- Mp (MRFC - MRFP) interface protocol definitions
  - No progress.
- IMS Local services:
  - Officially deleted at SA#28

CS Video and Voice Service Improvements - other than Redial

The Feature "CS Video and Voice Service Improvements" was split in two parts at SA#26:

- The Release 6 Redial Solution for Voice-Video Switching (complete, see corresponding slide)
- For Release 7:
  - Other solutions being investigated. Stage 2 work ongoing in TR 23.801. The TR is anticipated to be "abandoned" once agreements have been reached.
  - Stage 3: Potential impact on CT3 (to be confirmed once Rel-7 Stage 2 is more stable).

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. Work completed. The requirement still have to be removed from Rel-6.
- SA2 has progressed TR 23.867, for presentation for information at SA#28.
- Stage 3: WID on Emergency Call Enhancements for IP& PS Based Calls – stage 3 approved at CN-26. Completion date Sept 2005.
- Dependencies from IETF, CT6. RAN3 might be involved on priority. No action identified so far for GERAN.

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System enhancements for Fixed Broadband access to IMS (FBI)

- WID on Protocol impact from providing IMS services via fixed broadband for Rel-7 (CT1) updated in NP-040618 (CN-26).
- TS 23.228 is affected: CRS presented to SA#28.
- TS 24.229 will also be affected. The work started in CT1.
- TR 24.819 on protocol impact being created, with the aim of collecting material that can be easily converted into CRs on the TSs. TR 24.819 contains a CT1 area, where detailed changes against the TSs under CT1 control will be described, and a CT3 area (clause 8 for interworking towards CS networks).
- Joint meeting between SA2, CT1 and TISPAN to take place on 12th-13th July.

Enhancement of E2E QoS

- TR 23.802 describes interworking of QoS policies and control between different IP network domains as to ensure end-to-end QoS. It is presented for information at SA#28. Next steps to be clarified once the TR is stable.

Support of SMS and MMS over IP networks

- TR 23.804 presented for approval at SA#28.
- Next steps to be clarified at SA2

LCS enhancements 3

Contains:

- LCS for 3GPP Interworking WLAN (SA1): Stage 1 TR 22.935 presented for information at SA#27.
- Velocity:
  - Work completed by SA1 at SA #26.
  - WID approved in SA2 – presented to SA#27, leading to some CRs to 23.271
  - Work expected in GERAN / RAN and CT
  - LS sent to these groups

- Work started in GERAN (WID approved at GERAN#23 GP-050265): 10% FCD Nov. '05
  - LCS/LBS Enhancements

U-TDOA positioning method in RAN

- CR to 25.305 agreed in RAN2 (and reviewed also by RAN3).
- CR to 25.453 to be presented in RAN3-48 (London).
- LMU performance specification under discussion in WG4. Agreed to produce a new TS for this.
- Completion date: June 2006 (RAN-32).

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- Officially deleted at SA#28.

Selective Disabling of UE Capabilities

- Work commenced on Stages 1 and 2
  - Stage 1: CRs to 22.011 approved, work completed.
  - Stage 2: TR on different possible architectures being worked on, FCD December 2005

- potential OMA dependency

All-IP Network

- Stage 1:
  - TR 22.978 approved at SA #27. CRs presented to SA#28 to clean it up
  - TS in 22.258 to be presented for information at SA #30.
  - WID revised at SA#28
- Non-IMS requirements from the All-IP network FS is taken into account into “system architecture evolution”.
- For the IMS-related requirements, no WID has been proposed yet for Stage 2.

System Architecture Evolution (FS)

- Encompasses:
  - RAN's Long Term Evolution
  - Non-IMS requirements provided by the "All-IP network FS" (SA1)
  - Mobility between heterogeneous Access Networks
- SA2 WID has to be corrected accordingly

- Joint session SA1/SA2 took place in April. Several different approaches being proposed. Work ongoing to select the appropriate approach in TR 23.882.
- The functional division between RAN and CN is targeted to be finalised by September.

Enhancements of VGCS in public network

Full name: Enhancements of Voice Group Call Services (VGCS)

- Situation being clarified between these different items:
  - Enhancements of VGCS in public network (SA1)
  - Improvements of VGCS in public networks for parallel use of services (CT)
  - Enhancements of VGCS in public networks for communication of public authority officials (GERAN)

- Stage 1: work progressing with CRs on TS 42.068 in SA1 (GSM only);
- Stage 2: CRs approved at CT#28 against TS 43.068 (handled by CT1)
- Stage 3: Updated CT WID brought to CT-28 by CT1 for approval in CP-050053. Additionally the WID for "Improvements of VGCS in public networks for parallel use of services" was approved in CN-27.
- GERAN aspects: Enhancements of VGCS in public networks for communication of public authority officials approved in GERAN (GP-041837): 5 % FCD August 2005.
- Security: End-to-end (E2E) encryption mechanism for subscribers within an active VGCS Group : this is to be defined by the security organisations and is outside the scope of 3GPP.
- Codec: Advice on AMR codec bit rates was given by SA4 on two possible solutions: "data bearer solution" and "speech bearer solution". The first solution is preferred as TFO update is problematic, but SA4 also recommend that impact of delay and quality aspects are carefully checked before such "data bearer solution" is adopted.

Multi system mobile stations

- Feature name changed, previously known as "Behaviour of multi system terminals"
- Work ongoing in SA1
  - TR to be provided in 22.936 not before TSG SA#29, however no input at last meeting.

Voice call continuity between CS and IMS

- Stage 1: a CR was proposed against TS 22.101 at SA#28
- FS on Stage 2: TR 23.806 sent for information at SA#28.
- Actual Stage 2: a TS will be started once the TR is stable enough.
- Work not yet started on Stage 3.

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FS on IMS with real time services deployments

This is the FS which lead to the feature "Combination services" presented on next slide.

Created during SA#24 to include the two following BBs:

- FS on adding media to CS calls and IMS sessions (CSICS: CS calls and IMS combinational service, "XIX")
  - TR 22.979 approved at SA#27
  - As SA1 approved the Feature level WI, CT1 approved WID for Stage 3 Specification of Combining CS and IMS services & Capability Detection and Exchange mechanism (approved at CN-27)
- FS on IMS services using CS bearers
  - Original version presented by SA2. New WIDs to specify the phase 1 is available from both SA1 and SA2.
  - TR 23.899 is to be kept as "dormant". SA2 will give more some information at SA#29.

Combinational Services

- Created during SA#26
- Based on work on FS on adding media to CS calls and IMS sessions in TR 22.979 (approved at SA# 27)
- Stage 1 in TS 22.279 presented for information at SA #28 and for approval at SA#29.
- Stage 2 TS 23.279 90% complete. For approval at SA#29. Stage 2 work considered as sufficiently stable for stage 3 to continue.
- SA4 impacts just started.
- Stage 3 work not yet evaluated accurately, so no FCD yet. CT1 updated WID approved by CT-28 in CP-050055: "Stage 3 for Combining CS and IMS services and capability detection and exchange mechanism".
- Joint meeting to take place on July, 14th between CT1 and SA2

Priority Service Rel-7

- TR 22.953 on Multimedia Priority Service Feasibility Study progressing in SA1, to be completed by September 2005 (was June). The Multimedia Part is for Rel-7, the other aspects remain in Rel-6.

CAMEL Rel-7

Trunk Originated CAMEL Triggering

- 80% done. CT4 have agreed a first set of CRs for Release 7 for Trunk Originated Services on CAMEL. Corresponding CRs to 23.078, 23.018, 29.078, and 29.002 were agreed as part of CAMEL phase 4.

Rel-7 OSA Service Broker

Rel-7 work started

- SA1#27 approved a new OSA Rel-7 requirement, for OSA APIs to support Service Brokering capabilities (service selection, service provisioning, feature or service interaction and service chaining).
- CR on TS 22.127 to be presented at SA#28.
- Next steps (impact on Stages 2 and 3) still need to be identified

OAM&P Rel-7 (1/2)

In full: Operation, Administration, Maintenance and Provisioning

- SA5 Rel-7 BB WID update (add new functionality) to SA#28
- SA5 ongoing work on Signalling Based Activation (SBA) of Trace in IMS (CT1/IETF dependency on SIP)
- CT1 task on trace activation/deactivation over SIP between IMS entities (TS 24.229)
- CT4 task on trace activation/deactivation over Cx interface (TS 29.228).
- CT1, CT4 FCD is June 2005.

OAM&P Rel-7 (2/2)

SA5 Rel-7 WTs (18) WIDs for SA Approval (Jun 2005)

- **Some topics:**
  - Enhance NRM to accommodate NGN (IMS as basis of the Next Generation Network)
  - Co-operative Element Management interface (TMF CO-OP project)
  - Subscription Management (SuM) IRP Solution Sets
  - Integration Reference Point (IRP) Security Management
  - Advanced Alarming on Itf-N
  - Management of Legacy Equipment
  - Rules for Vendor Specific Extensions
  - Add TDD specific counters in Performance measurement
  - ATM bearer network Performance measurements
  - IP bearer network Performance measurement definitions

GERAN Rel-7

- Support of Conversational Services in A/Gb mode via the PS domain (WID GP-051164) : 10% ready FCD April 2006
  - WID GP-051164 replaced WID GP-030443, after the split decided at GERAN#24, which left the Support of PS Handover for GERAN A/Gb mode in Rel-6
- MS Antenna Performance Evaluation Method and Requirements (WID in GP-050284): 0% FCD November 2005
- LCS/LBS Enhancements (LCS3) (WID in GP-050265): 5% FCD November 2005
- Lower 700 MHz Inclusion in the GERAN Specifications (WID in GP-050543): 70% FCD June 2005
- Addition of new frequency band to GSM (T-GSM810), (WID in GP-050945) FCD August 2005
- Handover of dedicated and shared resources while in dual transfer mode (WID in GP-050979): FCD August 2005

Rel-7 Codec aspects

- Performance Characterization of VoIMS over HSDPA/EUL channels : 5% FCD March 2006
- Dynamic and interactive multimedia scenes : 5% FCD December 2005
- Video Codec performance requirements : 15% FCD March 2006

WIs for approval at TSG#28 (Release 7 or later)

- Note: not updated during SA#28 for WIDs owned by SA WGs.

- SA1:
  - Update of NSP WID
  - Update of WI for Combined CS Calls and IMS Sessions
  - Multimedia Telephony Capabilities for IMS
  - WI for Personal Network (PN) and Personal Area Network (PAN)
  - WID on MBMS Enhancements
  - WI on Transferring of emergency Call data
- SA2:
  - WID on IMS Communication Service Identifier
  - WID on Feasibility study of enhancement of radio performance for VoIMS
  - Revision of WID on Voice call continuity between CS and IMS (incl. I-WLAN)
- SA3:
  - WI on Lawful Interception in the 3GPP Rel-7 architecture
  - WID on IMS security extensions
- SA4:
  - 3G-324.M Video telephony call setup times improvements

WIs approved at TSG#28 (Release 7 or later)

- CT1:
  - Enhancements of VGCS in public networks for communication of public authority officials (CP-050053)
  - Revision of WID for Stage 3 Specification of Combining CS and IMS services & Capability Detection and Exchange mechanism (CP-050055)
- CT4:
  - LCS Enhancements Related to Location-Based Services (CP-050240)
- CT6:
  - ISIM API for Java Card™ (CP-050145)

New WIs approved at RAN#28

- **WI: LCS Enhancements Related to Location-Based Services**
  - Agreed at this meeting following approval at the previous TSG SA of a corresponding WI
  - Description Sheet RP-050300, WG2 leading, completion date by December 2005
- **WI 1700 MHz band in Japan**
  - Description Sheet RP-050385, WG4 leading, completion date by December 2005
- **SI UTRA FDD TMA**
  - Description Sheet: RP-050146, WG4 leading, completion by December 2005
- **SI Continuous connectivity for packet data users**
  - Description sheet RP-050391, WG1 Leading, completion date by December 2005
- **WI Enhanced Performance Requirements based on Receive Diversity & LMMSE Equalizer Receiver for HSDPA UE**
  - Description sheet RP-050362, WG4 leading, completion by March 2006

- **WI IMS Call Control (Testing) covering Release 5**
  - Description sheet RP-050286, WG5 leading,completion for prose description March 2006.
- **Conformance Test Aspects – FDD Enhanced Uplink**
  - Description sheet in RP-050285, WG5 leading

Content

- Testing
- Feasibility Studies
- Release 6
  - Release 6 Features already completed at TSG#27 (as a reminder)
  - Release 6 Features completed between TSG#27 and TSG#28
  - Release 6 features “almost complete” and asked to be considered as complete at TSG#28
  - Release 6 Features still not completed at TSG#28
- Release 7

⇨ *Conclusion*

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Conclusions

- On Release 6:
- At TSG#27, it was decided to provide extra time to complete the "Release 6" features still open at that time.
- All these Features have been completed or "almost completed" (i.e. no vital part still open) between TSG #27 and TSG #28.

- On Release 7:
- work is progressing. Stage 1 for Release 7 features is anticipated to be overall completed by September 2005 (with exceptions):
  - SA1 will report at SA#29 what WIs were targeted to be completed at SA#29 but which will still not be completed at that time.
  - RAN and GERAN should do the same for stage 1 of features entirely supported within RAN and GERAN.