3GPP TSG S2 Report

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General aspects (1/4)

▼ **Events since last TSG-SA plenary**

❑ **SA2 has met twice:**

⇨ **SA2#11: 24th to 28th of January, hosted by ATT, BellSouth, Ericsson and Nokia at Puerto Vallarta, Mexico**

⇨ **SA2#12: 6th to 9th of March, hosted by NTT and NTT DoCoMo in Tokyo, Japan**

❑ **In addition, S2 has been involved in two joint meetings:**

⇨ **a workshop/tutorial between CN R00 ad-hoc, S2 and T2 on Release 2000, held in January in Puerto Vallarta, Mexico**

⇨ **a workshop between SMG2 and SMG12/S2 on GERAN architecture, held on 21st to 22nd of February in Uppsala, Sweden, hosted by Ericsson. The main output is that GERAN has to support the Iu_PS and the A interfaces.**

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General aspects (2/4)

❏ **Activities of the S2 ad-hocs**

⇨ **One meeting on VHE/OSA held on Stockholm, on 23rd to 24th of February, hosted by Ericsson**

❏ **Lot of work handled by e-mail (monitored by Mr. Hiramatsu, TSG-S2 Vice- Chairman)**

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General aspects (3/4)

▼ **Next S2 meeting dates**

- ❑ **TSG-S2#13   May 22-26, 2000 - Siemens, Berlin**

- ❑ **TSG-S2#14   September 4-8, 2000 - consortium of UK companies, Bristol**

- ❑ **TSG-S2#15   November 13-17, 2000 - host needed**

▼ **Three R00 drafting sessions planned before S2#13:**

- ❑ **10 to 14 of April in Helsinki (Nokia) on Call Control issues**

- ❑ **25 to 27 of April in UK (Nortel) on Roaming and Addressing**

- ❑ **9 to 11 of May in Sweden (Ericsson) on QoS**

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General aspects (4/4): SA2 statistics

▼ **The number of participants at each meeting is close to 100.**

▼ **In addition, 669 people are registered on the SA2 e-mail list (on March 2000, 13th).**

▼ **Since SA plenary #6:**

    ❑ **SA2 has handled some 600 temporary documents in two meetings**

    ❑ **Liaison Statements:**

        ⇨ **SA2 has received 103 LSs**

        ⇨ **SA2 has sent 54 LSs**

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Main technical discussions and decisions for R99 (1/4)

▼ **Stabilisation of the R99 TSs:**

A lot of work has been performed to solve the remaining issues on R99 TSs:

- ❑ **On 23.060:**

  ⇨ **Removal of Anonymous Access support**

  ⇨ **Improvement of volume based charging aspects**

  ⇨ **Adaptation of terminology with N1**

  ⇨ **Improvements of Identities handling**

  ⇨ **Refinements on number of procedures (SRNS relocation, etc)**

Revised Cover Sheet in SP-000099 and complete CR list in SP-000086

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Main technical discussions and decisions for R99 (2/4)

▼ **Stabilisation of the R99 TSs (continuing)**

  ❏ **23.002:**

  ⇨ **New structure to ease introduction of entities devoted to the provisioning of specific services**

  ⇨ **Introduction of CAMEL and CBS aspects**

  ⇨ **Resolution of overlaps with 29.002**

  ⇨ **Proposal of introduction of LCS aspects for UMTS R99**

  Revised Cover Sheet in SP-000098 and complete CR list in SP-000084

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Main technical discussions and decisions for R99 (3/4)

▼ **Stabilisation of the R99 TSs (continuing)**

  ❑ **23.107:**

    ⇨ **corrections / extensions of QoS parameters and values**

  Revised Cover Sheet in SP-000100 and complete CR list in SP-000087

  ❑ **23.121:**

    ⇨ **Removal of sections now covered by other TSs**

    ⇨ **Alignment of content with the other TSs**

  Rivised Cover Sheet in SP-000101 and complete CR list in SP-000088

▼ **As a result, all the open issues identified at SA plenary #6 have been solved**

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Main technical discussions and decisions for R99 (4/4)

▼ **Progress on VHE/OSA aspects**

- ❑ **23.127 is now proposed for approval (see SP-000089)**

  Some aspects are proposed to be moved to Release 2000 (see LS in SP-000095)

▼ **Progress on LCS aspects**

- ❑ **23.171 is now proposed for approval (see SP-000090)**

  LCS Support in CS domain (Cell ID based) is proposed to R99. Hooks for LCS in PS domain are included (see coversheet in SP-000090)

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Work co-ordination of 3GPP for R99

▼ **The following slides contain a short report of the six Inter-Group Co-ordination ad-hoc (IGCs) co-ordinating the overall work at 3GPP for R99 on dedicated tasks:**

- ❏ **Bearer Services and QoS (Oscar Lopez-Torres, T-Mobil)**

- ❏ **GSM/UMTS Interoperation and Mobility Management (Francois Courau, Alcatel)**

- ❏ **Location based services and Cell Broadcast Services (Jan Kåll, Nokia and Martin Guntermann, D2 Mannesman)**

- ❏ **Packet and Circuit Architecture (Ulrich Dropmann, Siemens)**

- ❏ **Security (Chris Pudney, Vodafone)**

- ❏ **Services and Service platforms (Christophe Gourraud, Ericsson)**

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▼ QoS

❏ No open issues identified for R99

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▼ **GSM/UMTS Interoperation and Mobility Management**

❑ GSM/UMTS Inter-working and Mobility Inter-group co-ordination

⇨ Inter-system handover almost completed from UMTS perspective additions might come when GSM part will be completed (expected for April 00)

⇨ Mobility work already completed

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▼ Location Services

- ❑ <u>UMTS support of location services in release 99</u>

    ⇨ cell coverage based in the circuit switched domain

- ❑ <u>LCS specifications in R99</u>

    ⇨ UMTS LCS System Stage 2, TS 23.171, based on GSM 03.71

    ⇨ The UMTS core network specification 23.007, 23.008, 23.016 are already transferred to R99. Minor CRs are needed to point out what paragraphs are GSM only.

    ⇨ GSM 04.30 must be transferred to R99 as 24.030 for GSM and is applicable for UMTS

    ⇨ UTRAN specifications support cell coverage based location services

- ❑ <u>LCS "hooks" in R99 (Stage 2 descriptions, but no corresponding stage 3 yet)</u>

    ⇨ Hooks in UTRAN support for OTDOA-IPDL (time measurements in UE) and assisted GPS and for the PS Domain in CN

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▼ Cell Broadcast Services (CBS)

▼ 3GPP was able to specify in a short time frame the GSM service for UMTS and has improved the architecture while specifying the protocol between the Cell Broadcast Centre and the Radio Network Controller.

▼ Already in 1999:

❑ The service and the architecture requirements were finalised by S1,S2 and T2, RAN2 has also completed the specification work on the radio interface.

▼ Further in 2000:

❑ S2 has approved the specification of the network architecture in TS 23.002

❑ RAN3 has approved the specification of the CBC/RNC protocol in TS 25.419

❑ T2 has adapted the stage 2 description in arrangement with the RAN3 protocol specification

❑ S5 hasn't considered requirements for a fault management integration.

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▼ Packet and Sircuit Switched Architecture

❑ Multicall

⇨ Completed

❑ Packet Issues (Incl. GPRS)

⇨ Completed

❑ Transcoder-Free (out-of-band signaling)

⇨ Proposed to be part of R00 (LS in SP-000094)

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▼ Security

▼ Integration of R99 security features progressing in WGs

▼ Complete in March 2000 with corrections envisaged over next few months:

    ❏ authentication and key agreement

    ❏ access link integrity protection

    ❏ access link confidentiality

    ❏ secure GSM-3G interoperation

▼ Not complete in March 2000 but N2/S3/S5 CRs on schedule for CN#8:

    ❏ MAP/GTP security

▼ Not complete in March 2000:

    ❏ enhanced user identity confidentiality

▼ Integrity protection

    ❏ N1: emergency call handling

    ❏ R2: protection overhead for AMR information and other small messages

▼ Authentication

    ❏ N1: Mobile behaviour on network authentication failure

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▼ Services and Service Platforms

- ❑ two requirements from S1 are only partly supported in 23.127 v2.0.0:

  ⇨ For charging there is no support of GPRS and SMS charging at the OSA API

  ⇨ user profile management via the OSA API is currently restricted to the retrieval of terminal capabilities.

- ❑ SA 2 would like to propose that these features be postponed to R00.

- ❑ the focus has been on the open API from the network to applications for release 99

  ⇨ the interface between OSA servers will be studied in the future releases

- ❑ 23.127 v2.0.0 is supposed to be aligned with the current scope of OSA stage 3 work in TSG CN. It is proposed that the stage 1 specification 22.121 be aligned in its scope (LS in SP-000095)

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▼ Services and Service Platforms

❑ CAMEL Phase 3

⇒ TS 22.078 v.3.1.0, TS 23.078 v.3.3.0, TS 29.078 v.3.2.0

⇒ Open issue on User Interaction Monitoring to be addressed at CN#7 (proposed to be deferred to R00)

❑ USAT

⇒ TS 31.111 stable, raised at v.2.0.0 at T3#13 and proposed for approval at T#7

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Main technical discussions and decisions for R00

▼ **Stabilisation of the R00 assumptions in 23.821**

❑ **The Reference Architectures shown in TSG-SA#6 are consolidated into one.**

❑ **The R00 Core Network Entities have been classified into three main domains:**

⇨ **the Circuit Switched domain and the Packet Switched domain (as for R99) and**

⇨ **a new IP Multimedia domain, handling multimedia services on the PS domain**

❑ **User Equipment Domain**

❑ **Radio Access Network Domain**

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▼ **Next targets**

- ❑ **Create CRs on TSs (23.002, 23.060, etc) to take into account these results**

- ❑ **Work proceeds according the identified and prioritised Key issue list**

▼ Schedule for R00

- ❑ **S2 Project Plan work for R00 (target date April 20th)**

  ⇨ **Comments and Input needed ASAP from other TSGs/WGs about the draft**

- ❑ **S2 R00 work 80 % or more mature for SA #8 (v.3.0.0)**

- ❑ **S2 R00 work finalised by SA #9**

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▼ Highest priority Key Issues Identified for SA2 R00 work

❒ **Domain definitions**

❒ **Call Control and Roaming**

⇨ What is the functionality split between the visiting and home networks

❒ **Addressing Identifiers and Routing**

⇨ What are the identities of the subscriber and the aliases of the terminal (Addressing Principles

⇨ Where is the IP address allocated? What is the scope of the IP address, which parts of the network is it relevant within?

❒ **QoS Aspects**

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Work co-ordination of 3GPP for R00 (1/4)

Basic Principles:

▼ **IGCs extended from 6 in R99 to 12 in R00 to cover all the issues**

▼ **Each IGC monitor a set of Features and creates the project plan per each feature**

▼ **Each Feature is composed of a set of Building Blocks**

▼ **Each Building Block is composed of a set of Work Tasks**

▼ **Work Task is per one WG**

▼ **A Work Item is a generic term applicable to Feature, Building Block or Work Task**

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Work co-ordination of 3GPP for R00 (2/4)

▼ **12 IGC groups are proposed for R00, to cover all the issues:**

⇨ **Bearer and Access Stratum (François Courau, Alcatel)**

⇨ **QoS (Oscar Lopez-Torres, T-Mobil)**

⇨ **CC and roaming (Ulrich Dropmann, Siemens)**

⇨ **Codecs (Ian Doig, Motorola)**

⇨ **Messaging (Martin Guntermann, Mannesmann Mobilfunk)**

⇨ **Terminal local features (Paul Voskar Nokia)**

⇨ **(continuing on next page)**

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Work co-ordination of 3GPP for R00 (3/4)

▼ **R00 IGCs (continuing):**

⇨ **Service platforms (Christophe Gourraud, Ericsson)**

⇨ **Security (Chris Pudney, Vodafone-Airtouch)**

⇨ **Billing, charging and management (Yukio Hiramatsu, NTT)**

⇨ **Testing (N.N. Motorola)**

⇨ **Location related issues (Jan Kall, Nokia)**

⇨ **Overall Co-ordination and general issues (Alain Sultan, MCC)**

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Work co-ordination of 3GPP for R00 (4/4)

▼ **Features, Building Blocks and Work Tasks**

A detailed proposal on Features, Building Blocks and Work Tasks for R00 is made in SP-000108. The definition of these terms are proposed in SP-000109.

▼ **Concepts are explained in SP-000120 (separate presentation under agenda point 7)**

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Actions expected from SA#7 by SA2 (1/3)

Approval of two TSs:

▼ **TS 23.127 v.2.0.0 on Virtual Home Environment (VHE) / Open Service Architecture (OSA) - Stage 2 in SP-000089**

see related LS in SP-000095 on issues postponed to R00

▼ **TS 23.171 v.2.0.0 on on Location Services (LCS) in UMTS - Stage 2 in SP-000090**

see coversheet in SP-000090 on issues postponed to R00

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Actions expected from SA#7 by SA2 (2/3)

▼ **Approval of two Work Items:**

❏ **The first one is a Feature:** *Enable bearer independent circuit-switched network architecture* **in SP-000106 (tdoc S2-000593)**

❏ **The second one is a Building block:** *An architecture for Call control and roaming to support IP-based multimedia services in UMTS* **in SP-000107 (tdoc S2-000592). It will be under the feature** *Provisioning of IP-based multimedia services in UMTS***, to be introduced soon.**

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Actions expected from SA#7 by SA2 (3/3)

▼ **Approval of the following CRs:**

- ❏ **on 23.002 v.3.2.0 (Network Architecture), in SP-000084**

- ❏ **on 23.032 v.3.0.0 (Universal Geographical Area Description (GAD)), in SP-000085**

- ❏ **on 03.60 R 97 v.6.6.0 and R98 v.7.3.0, and on 23.060 v.3.2.0 (General Packet Radio Service (GPRS); Service description; Stage 2), in SP-000086**

- ❏ **on 23.107 v.3.1.0 (QoS Concept and Architecture), in SP-000087**

- ❏ **on 23.110 v.3.3.0 (Access Stratum (AS): Services and Functions), in SP-000105**

- ❏ **on 23.121 v.3.2.0 (Architectural Requirements for Release 1999), in SP-000088**

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Information presented to SA#7 by SA2 (1/2)

▼ **Review of Open Issues**

   ❑ **Review of SA2 general Open issues in SP-000097**

   ❑ **Review of open issues per TS**

   ⇨ **on 23.002 in SP-000098: none remaining**

   ⇨ **on 23.060 in SP-000099: none remaining**

   ⇨ **on 23.107 in SP-000100: none remaining**

   ⇨ **on 23.121 in SP-000101: none remaining**

▼ **List of LSs handled by S2 between SA#6 and SA#7 in SP-000091**

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Information presented to SA#7 by SA2 (2/2)

▼ **LSs from S2 to SA plenary:**

- ❏ **SP-000110: LS response to Tiphon WG5 (Cc S1, S3, S4, SA, TC SMG) on TIPHON Quality of Service**

- ❏ **SP-000092: LS to SA (Cc CN, T, RAN) on Enhanced User Identity Confidentiality**

- ❏ **SP-000093: LS to N1, S1 (Cc SA) on adaptation of 23.060 terminology with the N1 terminology agreement**

- ❏ **SP-000094: LS to SA, CN, T (Cc N WG2, TSG RAN WG3, TSG SA WG4) on Transcoder Free Operation (TrFO) and Out of Band transcoder Control (OoBTc) for R99**

- ❏ **SP-000095: LS to SA (Cc S1) on Information on VHE/OSA work**

- ❏ **SP-000096: LS to S1, S1 R00 ad-hoc (Cc CN, CN1, SA) on Definitions for R00**

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