Technical Specification Group Services and System Aspects   *TSGS#4(99)329*
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Title: Technical project co-ordination within S2 and 3GPP

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Note to SA plenary: This TDoc reproduces the proposal made at SA2 by SA2 chairman on the establishment of technical project co-ordination ad-hoc groups within S2 and 3GPP. The revision marks reflect the changes performed on the initial proposal made at SA2.

3GPP TSG S2#5 (System Architecture)   TSGS2#5(99)395r1
Sophia Antipolis, France, May 25-28, 1999

Source: TSG S2 Chairman
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1. INTRODUCTION

The purpose of this contribution is to clarify the S2 role in the 3GPP technical project co-ordination and form required Ad Hoc groups for the S2 project co-ordination task described below.

2. TECHNICAL PROJECT CO-ORDINATION WITHIN 3GPP

TSG SA is through S1 responsible for defining the features and services required in the 3GPP specifications. S1 is responsible of producing the stage 1 descriptions (requirement) for the relevant features and pass them to S2. S1 can also forward their considerations on possible architecture and implementation to S2, but is not responsible for this part of the work.

S2 should then define the architecture for the features and the system, and then divide the features into building blocks based on the architectural decisions made in S2. S2 will then forward the building blocks to the relevant TSGs for the detailed work. These proposals will be reviewed and discussed in an interactive way together with TSGs/WGs, until a common understanding of the required work is reached. During the detailed work of the TSGs and their working groups, S2 is kept informed about the progress.

The TSGs and their WGs treat the building blocks as one or several dedicated Work Tasks (WT). Typical output of a given WT would be new specification(s), updated specification(s), technical report(s) or the conclusion that the necessary support for the feature already is provided in the existing specification(s).

S2's role is to identify, if synergy can be obtained by using some of the building blocks or extended building blocks for more than one feature. Part of S2's task is to verify, that all required work for a full system specification of the features relevant will take place within 3GPP without overlap between groups. In order for S2 to be successful, this has to be done in co-operation with other TSGs/WGs.

About the project scheduling, it is agreed the following: S1 sets a target, S2 performs a first technical review and comment on the target. S2 indicates some target for time schedule together with allocation of the defined building blocks. The TSGs and their WGs comment back on these targets. S2 tries if necessary to align the new target between the involved parties. S1 and SA are kept informed on the overall schedule.

It is the task of TSG SA, S1 and S2 to ensure early involvement of S3 to ensure that the potential security requirements, service requirements and the architectural requirements are aligned and communicated to the TSGs and their WGs.

In order for TSG T and its subgroups to plan and perform its horizontal tasks on conformance testing and mobile station capabilities, S2 should invite TSG T to evaluate the potential impact of a new feature. If work on the horizontal task is required this should be included into the overall work plan.

3. TECHNICAL CO-ORDINATION AREAS

The following technical areas are considered to require cross TSG technical project co-ordination and involvement of S2 within its role described above. The involvement of other 3GPP WGs is clarified in the each technical area.

3.1 UMTS/GSM interoperation (Alcatel)

Topics: consistent UMTS/GSM interoperation

Involved groups: R1, R2, R3, S1, S2, S3, S4, T2, T3, N1, N2, N-SS (N3 ?) (R4 ?)

Involvement:

R1: GSM/UMTS interoperation implications to the Layer 1

R2: GSM/UMTS interoperation implications to the Layer 2 and RRC

R3: GSM/UMTS interoperation implications to UTRAN architecture and Iu, Iur, Iub

S1: GSM/UMTS interoperation implications for the services

S2: GSM/UMTS interoperation system architecture

N1: GSM/UMTS interoperation implications to the CC/MM/SM

N2: GSM/UMTS interoperation implications to the GTP/MAP

N3: GSM/UMTS interoperation implications to UMTS-ext. network interworking

N-SS: GSM/UMTS interoperation implications to Supplementary Services

T1: GSM/UMTS interoperation implications to the conformance testing

T2: GSM/UMTS interoperation implications to the terminal services

T3: GSM/UMTS interoperation implications to the USIM

3.2 Security **(Richard Crouch, Vodafone)**

Topics: Consistent security architecture

Involved groups: S3 (main group), T3, R2, S2, N1, N2, N-SS, R3

Involvement:

S3: definition of the security requirements, mechanisms and algorithms

T3: SIM card/terminal security implications

R2: Security mechanisms in Radio interface L2 and RRC

S2: Implications of the security to the system architecture

N1: Security feature implications to the CC/MM/SM protocols

N2: Security feature implications to the GTP/MAP protocols

N3: Security feature implications to the UMTS interworking (accesses to private/corporate networks)

N-SS: Supplementary Services security features

3.3 Bearer Services

Topics: Consistent definition of the services and bearer services mapping throughout the system, UMTS bearers, bearer management, handovers etc (user plane)

Involved groups: S1 (main group), R2, R3, S2, N3, N2, N1, T2

Involvement:

S1: Service requirements and definitions

R2: UMTS Radio access bearers (RAB), bearer management, handovers in L2 and RRC protocols

R3: UMTS Radio access bearers (RAB), bearer management, handovers in Iu and Iub interfaces

S2: Implications of the bearer services to the system architecture

N1: Bearer services implications to the CC/MM/SM protocols

N2: Bearer services implications to the GTP/MAP protocols

N3: Bearer services implications to the UMTS-ext. network interworking

T2: Bearer services implications to the terminals

3.4 Packet architecture (Ulrich Droppman, Siemens)

Topics: The IP/packet domain architecture and protocols

Involved groups: R2, R3, S2, N3, T2 (?)

Involvement:

S2 (main group): general system architecture

R2: L2 and RRC protocols implications to the UMTS packet domain architecture

R3: UTRAN architecture and Iu, Iur, Iub implications to the UMTS packet domain architecture

N3: UMTS-ext. network interworking implications to the packet network architecture

T2: Terminal services implications to the packet network architecture

3.5 Circuit architecture

Topics: the PSTN/ISDN domain architecture and protocols

Involved groups: R2, R3, S2, N3, T2 (?), S4

Involvement:

S2 (main group): general system architecture

S4: Transcoding implications to the system architecture

R2: L2 and RRC protocols implications to the UMTS circuit domain architecture

R3: UTRAN architecture and Iu, Iur, Iub implications to the UMTS circuit domain network architecture

N3: UMTS-ext. network interworking implications to the circuit domain network architecture

T2: Terminal services implications to the circuit domain network architecture

3.6 Services and Service platforms (Rob Schmelser, Ericsson)

Topics: WAP, VHE, Camel, OSA, Mexe, the consistent service and service generation platform concept

Involved groups: S1, N2, T2, N-SS

Involvement:

S1 (main group): general service and service platform requirements

N2: VHE/CAMEL solutions for the services and service platforms

N-SS: VHE implementation for SS

T2: Mexe, WAP, terminal solutions for the services and service platforms

3.7 QoS (Oscar Lopez-Torres, T-Mobil)

Topics: The Quality of service definition and management throughout the system

Involved groups: N1, N2, N3, T2, S1, S2, R1, R2, R3

Involvement:

S1: general QoS requirements for the services

S2: general QoS system architecture

R1: QoS requirements implications to the Layer 1

R2: QoS requirements implications to the Layer 2 and RRC

R3: QoS requirements implications to UTRAN architecture and Iu, Iur, Iub

N1: QoS requirements implications to the CC/MM/SM

N2: QoS requirements implications to the GTP/MAP

N3: QoS requirements implications to UMTS-ext. network interworking

T2: QoS requirements implications to the terminal

3.8 Transport concept

Topics: consistent end-to-end transport concept for UMTS (ATM, IP layers)

Involved groups: R3, N2, N3, S5, S2

Involvement:

S2: general end-to-end transport architecture

R3: UTRAN transport architecture concept (Iu, Iub, Iur)

N2: GTP/MAP transport concept (Gn, MAP interfaces)

N3: UMTS-ext. network interworking transport concept

S5: Network management implications to the transport architecture

3.9 Mobility

Topics: Mobility handling within the system, RRC and MM interaction, MAP, consistent mobility management

Involved groups: N1, R2, N2, S2

Involvement:

S2: general mobility architecture

R2: RRC implications to the mobility handling

N1: MM implications to the mobility handling

N2: GTP/MAP implications to the mobility handling

3.10 Location based services (LCS) (Jan Kåll, Nokia)

Topics: Locationing and the location based services solution

Involved groups: S1, S2, S3, R1, R2, R3, T2, N2

Involvement:

S1: Stage 1 description of the locationing and location based services (requirements)

S2: Stage 2 description of the locationing

S3: security and privacy aspects of location services

S5: network management and operator aspects of location services

R1: Locationing implications to the Radio Layer 1

R2: Locationing implications to the Radio Layer 2/RRC

R3: Locationing implications to the RAN architecture

T2: Terminal Services and Capabilities for LCS

N2: signalling support for location services

4. PROPOSAL

It is proposed that the described grouping for technical areas as listed in this contribution is used as the basis when planning the S2 system wide technical co-ordination role within 3GPP.

It is also proposed, that Ad Hoc groups would be established to reflect the proposed grouping of technical areas. Ad hoc groups should work cross TSGs, but would be led by a person elected from S2. Ad Hoc groups participation would consist of the S2 Ad Hoc leader and raporteurs from the relevant TSGs/WGs. These Ad Hoc groups would propose S2 a division of a given feature to building blocks including time schedule. S2 would then review the outcome of the Ad Hocs and propose it to TSG SA and relevant TSGs. Ad Hocs should also be responsible to track the progress of the work related to the feature and report it to S2.