3GPP - TSG SA #5   **Tdoc SP-99394**
11-13 October, 1999
Kyongju, Korea

Title: 3G TR 30.808 V 1.0.0:

            Project plan on Packet Architecture and Circuit Architecture

Date: 1999-10-06

Source: S2

Purpose: For information

Agenda Point: 5.2.3

The attached document contains version 1.0.0 of the Project plan on Packet Architecture and Circuit Architecture.

3G PD 30.808 1.0.0 (1999-10)

Permanent
Document

3rd Generation Partnership Project
3GPP work program
Project co-ordination aspects
Project Plan for packet and circuit architecture
(3G PD 30.808 version 1.0.0)

Reference
DTR/TSGS-0230808U

Keywords
Digital cellular telecommunications system, Universal Mobile Telecommunication System (UMTS),

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Contents

Foreword

[Ed note: to be added by ETSI MCC]

1 Scope

This Permanent document describes the work program for the overall architecture for the packet and circuit domain in UMTS.

2 References

References may be made to:

a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or

b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or

c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or

d) publications without mention of a specific version, in which case the latest version applies.

A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

3 Release 99

3.1 Work identified to fulfil the requirements for R99

3.1.1 Work to be carried out by TSG SA

3.1.1.1 Work to be carried out by WG S1

Implication of new service requirements on the architecture of the packet or circuit domain (e.g. multicall).

3.1.1.2 Work to be carried out by WG S2

Determination of the system architecture for the packet and circuit switched domain considering the requirements from S1 (eventually also S3, S4 and S5). Identification of new entities and interfaces of the overall system architecture as well as the determination of the principle protocol stacks of the user and control plan.

3.1.1.3 Work to be carried out by WG S3

Implication of security requirements on the architecture of the packet or circuit domain.

3.1.1.4 Work to be carried out by WG S4

Implications of the System Architecture on Transcoding functions and Tandem Free Operation.

No work and documents identified for R99.

3.1.1.5 Work to be carried out by WG S5

Implication of network management concepts to the system architecture

3.1.2 Work to be carried out by TSG RAN

3.1.2.1 Work to be carried out by WG R1

None identified

3.1.2.2 Work to be carried out by WG R2

No work and documents identified for R99.

From R2 viewpoint, one issue that currently needs to be addressed and has responsability to among different groups:

- ClassMark handling with GSM-UMTS operation

3.1.2.3 Work to be carried out by WG R3

The CS and PS Architecture mainly impacts the UTRAN Architecture and the Iu protocols for both U-Plane and C-Plane. The other interfaces Iur and Iub are more related to the interactions between the RLC/MAC layers with the Layer one. Thus impacts if there exist are driven by the WG R2 impacts.

The Architectural aspects of UTRAN are fairly stable, the main impact of the CS and PS domain architecture on UTRAN having been:

1. Removal of the transcoding function from the UTRAN

2. The separation between the CS domain and the PS domain for Iu

Remaining work concerning the CS and PS Architecture is currently identified as limited to the CS Data aspects.

3.1.2.4 Work to be carried out by WG R4

None identified

3.1.3 Work to be carried out by TSG CN

3.1.3.1 Work to be carried out by WG N1

Architecture implications on Call Control/Session Management.

Specification of call control/session management protocols resulting from new service requirements (e.g. multicall) and protocol implications due to new interfaces (e.g. Iu-ps with no LLC layer).

Implementation of changes due to CC Bearer Capability changes

Changes due to the introduction of the Stream Identifier SI

Adding of SI to Bearer Capability IE to indicate whether parallel or shared bearer is to be used.

SI concept should be applicable to PS domain as well.

Changes due to the removal of LLC from UMTS architecture

LLC will still be part of R99 for GSM packet data but not for UMTS. This has got a major impact on N1 specifications. Please see document "3GPP Work Program inter group co-ordination aspects Project Plan for GSM/UMTS interworking and MM in UMTS".

3.1.3.2 Work to be carried out by WG N2

Architecture implications on the protocols for the support of packet and multi-media services.

Ed note: the following information may potentially moved to Project Plan on Service and Service Architecture

Concerning CAMEL Phase 3, the following assessment according to N2-99D29 (13.9.1999)

The following items were agreed to be included in CAMEL Phase 3:

> *1. MO/MF calls: CSI criterion applicable on detection of unsuccessful call establishment (02.78 section 5.2.1.3).*

> *2. MO/MF calls: Procedure for unsuccessful call establishment (02.78 section 5.5)*

> *3. MO calls: Mid call procedure (02.78 section 5.7).*

> *4. MT calls: CSI criterion applicable on detection of unsuccessful call establishment in the GMSC (02.78 section 6.2.2).*

> *5. MT calls: Procedure for unsuccessful call establishment (02.78 section 6.5)*

> *6. Procedures for SMS (02.78 section 9).*

> *7. Procedures for GPRS data transmission (02.78 section 10).*

> *8. Mobility management (02.78 section 12.1).*

> *9. Support of SoLSA (02.78 section 1).*

The following items are currently planned to be delivered in R99, but the technical complexities inherent in those features may result in that they will be delivered in R2000:

> *1. MT calls: Mid Call procedure for T-BCSM in the VMSC and terminating AoC (02.78 section 6.7, 15.1).*

> *2. Notification to CSE of change of subscriber data (02.78 section 12.2).*

> *3. Enhancements to Any Time Interrogation (02.78 section 13.1)*

> *4. Any Time Modification (02.78 section 13.2).*

> *5. Enhancements to CSE control of call duration – playing of tones (02.78 section 15.4).*

> *6. Location Services.*

> *7. MO/MF calls: CSI criterion applicable at call setup for subscribed dialled services (02.78 section 5.2.1.2).*

> *8. MO/MF calls: Procedure for subscribed dialled services (02.78 section 5.3.2).*

> *9. Procedures for serving network dialled services (02.78 section 7).*

The following items will be delivered in R2000:

> *1. MO/MF calls: Creation of call parties - Call Party Handling (02.78 section 5.10).*

> *2. CSE Initiated call setup (02.78 section 8).*

> *3. Procedures for USSD (02.78 section 11).*

> *4. User Interaction scripts (section 14.4).*

> *5. Enhancements to Call Forwarding interactions (02.78 sections 18.3.1, 18.3.2).*

> *6. Interactions with Optimal Routeing (02.78 section 20)*

3.1.3.3 Work to be carried out by WG N3

UMTS-ext. network interworking implications to the system architecture

Specification of interworking scenarios based on change in architecture (e.g. multimedia architecture and interworking scenarios)

3.1.4 Work to be carried out by TSG T

3.1.4.1 Work to be carried out by WG T1

None identified

3.1.4.2 Work to be carried out by WG T2

Terminal services implications to the system architecture

Ed note: T2 has 5 sub working groups. Subworking group 3 dealing with multimedia messaging and SMS, issues which are relevant to CS&PS architecture. Document will be reviewed in meeting 18.-22.10..

3.1.4.3 Work to be carried out by WG T3

None identified

3.2 List of all the deliverables applicable to the subject

List of deliberables						
Del #	**Date Version**	**Title**	**WG**	**Editor**	**Completion date**	**Comments/Changes**
TS23.121	3.0.0 7/99	Architectural Requirements for Release 1999	S2	Elizabeth Daniel [lizdaniel@LUCENT.COM]	10/99	
TS23.060	(prel. 3.0.0)	GPRS Stage 2 (to be updated)	S2	Hans-Petter Naper [Hans-Petter_Naper@europe34.mot.com]	12/99	just started to received CR.
TS23.101	3.0.1	General UMTS Architecture	S2	Magnus Olsson, Ericsson	06/99	completed
TS23.110	3.1.0	UMTS Access Stratum ; Services and Functions	S2	Oscar Lopez-Torres [Oscar.Lopez@t-mobil.de]	6/99	completed
TR23.920	3.0.0 07/99	Evolution of the GSM platform towards UMTS	S2	Elizabeth Daniel [lizdaniel@LUCENT.COM]	10/99	

TR23.930	3.0.0	Iu principles	S2	Bo Axerud [bo.axerud@NOKIA.COM]	6/99	completed
Tx23.002		Network architecture	S2	Alain Sultan	12/99	Document just created. The architecture itself is stable.
TS25.401	1.3.0	UTRAN Overall Description	R3	Jean-Marie Calmel [calmel@nortelnetworks.com]	09/99	
TS25.413	1.2.0	UTRAN Iu Interface RANAP Signalling	R3	Jyrki Jussila [jyrki.jussila@nokia.com]	12/99	However the architectural related part should be 09/99
TS25.415	1.0.0	Iu Interface CN-UTRAN User Plane Protocol	R3	Alain Maupin [alain.maupin@era.ericsson.se]	09/99	
TS27.060	3.0.0	Mobile Station (MS) supporting GPRS	N3	Graham Heaton	?	Start of work relies on farely stable 23.060, due 10/99
TS29.061	3.0.0	Interworking between the PLMN supporting GPRS and Packet Data Networks (PDN)	N3	Graham Heaton	?	Start of work relies on farely stable 23.060, due 10/99
TS 23.108	3.0.0. 99-07 Ed note: Last version on server	Mobile radio interface layer 3 specification, Core Network Protocols - Stage 2	N1		Multicall, ICM, etc diagrams should be added, but this is a lower priority spec and may be delayed past – 99 if time runs out.	23.060 gives the PS stage 2. 23.108 could be used to store stage 2 level data such as the signalling procedure diagrams for CS multicall.
TS 24.008	3.0.0. 99-07 Ed note: Last version on server	Mobile radio interface layer 3 specification, Core Network Protocols - Stage 3	N1		12/99	**Removal of LLC from UMTS architecture** LLC will still be part of R99 for GSM packet data but not for UMTS. This has got a major impact on N1 specifications. Please see document "3GPP Work Program inter group co-ordination aspects Project Plan for GSM/UMTS interworking and MM in UMTS".
					12/99	**CC Bearer Capability changes** Stream Identifier SI to be added to Bearer Capability IE to indicate whether parallel or shared bearer is to be used.
					12/99	**Introduction of SI to PS** SI concept should be applicable to PS domain as well.

Time plan

The time plane is contained in separated Excel Sheet of the identical name (.xls) and version as this permanent document. The time plan contains the meeting schedule of the concerned working groups and target dates for the completion/stabalization of the technical specifications and technical reports.

4 Release 00

same structure as for R99

5   Change history

<table>
<tr><td colspan="6" align="center">Change history</td></tr>
<tr>
<th>SA2 No./Date</th>
<th>TDoc. No.</th>
<th>CR. No.</th>
<th>Section affected</th>
<th>New version</th>
<th>Subject/Comments</th>
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<tr>
<td>#6</td>
<td>S2-99645</td>
<td></td>
<td></td>
<td>0.0.0</td>
<td>Creation of the permanent document (identical S2-99645)</td>
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<tr>
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<td>S2-99652</td>
<td></td>
<td></td>
<td>0.0.1</td>
<td>Incorporation of small editorial changes as agreed during the meeting (identical S2-99652)</td>
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<tr>
<td>#7</td>
<td>S2-99733</td>
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<td>0.1.0</td>
<td>Version incorporating changes agreed during SA2#6
First version that is send out to other groups for review.</td>
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<tr>
<td>#8</td>
<td>S2-99870</td>
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<td>0.2.1</td>
<td>Incorporation of Input from S4, R2, R3</td>
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<td>0.2.2</td>
<td>Incorporation of input from N3 Packet, N2 CAMEL and time plane for feedback by T2 and N1.</td>
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<td>n/a</td>
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<td>0.2.3</td>
<td>Incorporation of first feedback from N1</td>
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<td>07.10.1999</td>
<td>n/a</td>
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<td></td>
<td>1.0.0</td>
<td>Document version for presentation at SA#5
Adding of N1 feedback on time to completion to the document</td>
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6 Annex A: Scope of the packet and circuit architecture project co-ordination ad-hoc group

The technical scope of the "packet and circuit architecture project co-ordination ad-hoc group" is work on the architecture of the packet and circuit domain and protocols.

It contains the following main areas:

1. The identification of new entities and interfaces of the overall system architecture

2. The determination of the principle protocol stacks of the user and control plane

3. Call control/session management related control plane issues

Examples of issues are of the area of "packet and circuit architecture" are (without indication of whether R99 and R00 issue):

- Multimedia architectural issues

- Multicall issues

- Location of the transcoder in the core network

- Identification of new interworking scenarios

- Evolving interworking functions to other networks

- Control plane architecture of the UTRAN

Not part of the "packet and circuit architecture" area are

architectural questions clearly associated with one of the other technical areas (Location Based Services, Services and Service platforms, Mobility Management&GSM/UMTS interoperation, Security, Bearer&QoS).

7 Annex B: Contact person

An open-access email list on this issue is available: 3GPP_TSG_SA_IGC_PS&CS@LIST.ETSI.FR

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	Colban Erik (circuit architecture)	erik.a.colban@ericsson.no
T2	Peter Neumann	Peter.Neumann@icp.siemens.de

*Where no contact person is nominated the chair man of the group is contact person

Project plan for packet and circuit architecture R99 | Project plan for packet and circ

30csps1.0.0 05.10.1999

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	August			**September**				**October**				**November**					**Decem**	
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TSG SA									xxx00									00xxx
WG1															xxxxx			
WG2		xxxxx			xxxxx						xxxxx					xxxxx		
TS23.002															completed			
TS23.060								drafting meeting should complete and stablize spec.							stable			
TS23.121					stable													
TS23.101	stable since 6/99																	
TS23.110	stable since 6/99																	
TR23.920					stable													
TR23.930	stable since 6/99																	
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WG4					xxxxx				xxxxx							00xxx	xxxxx	
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WG3		xxxxx			xxxxx						xxxxx						xxxxx	
TS25.401					stable													
TS25.413					stable except IE coding											stable		
TS25.415					stable													
WG4 (not concerned)																		
ITU-AH (not concerned)																		
TSG CN			00xxx								0xxx0							xxx00
WG1	xxxxx				0xxx0						xxxxx					0xxxx		
TS23.108																target, eventually new feat		
TS24.008 LLC Removal																target for finalization		
TS24.008 CC Bearer Capability changes																target for finalization		
TS24.008 Introduction of SI to PS																target for finalization		
WG2					xxxxx									xxxxx				
WG3					xxxxx					xxxxx						xxxxx		
TS27.060								start of work requires that 23.060 becomes stable										
TS29.061								start of work requires that 23.060 becomes stable										
Interworking for circuit switched services still needs to be reviewed.																		
TSG T								xxxxx										xxx00
WG1 (not concerned)																		
WG2																		
Project plan from T2 SWG3 will be reviewed during meeting 18.-22.10.																		
WG3 (not concerned)																		

Project plan for packet and circuit architecture R99

			2000												2000							
nber			January			February				March			April			April						
20--24	27--31	3--7	10--14	17--21	24--28	31--4	7--11	14--18	21--25	28--3	6--10	13--17	20--24	27--31	3--7	10--14	17--21	24--28	1--5	8--12	15--19
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