

3GPP TSG RAN#8
Dusseldorf, Germany, 19 -21 June, 2000

RP (00)0321

Source: SA WG2
Title: Project Plan, version 1.2
Document for: Information
Agenda Item:

e-mail from Alain Sultan, MCC follows:

Dear All,

Please find enclosed the project plan in its -now official- version 1.2.
It contains the latest comments of the WGs.
The next steps are:

- To (go on) approving the WI coversheets corresponding to the WIs listed here. The conclusions of last week meetings were that one WI coversheet can cover several WIs: a classical configuration is to have one WI coversheet covering a BB and all its related WTs. This is mainly due to the very important number of WTs (otherwise, 3GPP will spend all his time just approving WI coversheets...). However, this needs to have clearly one responsible WG/TSG per BB, at least to provide the WI coversheet. This is not always the case and will be corrected in the next version.
- To start keeping track of the progress. MS Project enables to do that, so this is one main reason to adopt this tool. But again, don't worry: an MS Word version can be produced at any time, so apart from MCC and IGC convenors, no one needs to have MS Project.

Best Regards,
Alain Sultan

3GPP Project Plan for R00 v.1.2

Introduction

This document proposes the 3GPP **Work Plan for Release 2000**. It describes the complete set of *R00 work items* and classify them as *feature*, *building block* and *work task*: a *feature* is subdivided into *building blocks* and a *building block* is subdivided into *work tasks* (definitions are given bellow).

This tree structure is established to ease the monitoring of the 3GPP work progress for R00, and to make explicit the purpose of the work assigned to one WG in the global system.

The aim of this Work Plan is to lead in a consistent way the activities of the full 3GPP community for the Release 2000.

Background

Short explanations of the concepts used in this document are provided bellow (extracted from SP-000109).

Feature: New, or substantially enhanced functionality which represents added value to the existing system. A feature should normally embody an improved service to the customer and / or increased revenue generation potential to the supplier.

Building block: A sub-division of a feature, representing a set of technical functionality which would generally be expected to reside in a single system element, i.e. a single physical or logical entity or a single protocol. Building blocks may be "re-usable" - that is, a single building block may be common to two or more features.

Work task: A sub-division of a building block, representing a self-contained, well-scoped and well-scheduled item of work. A work task will almost certainly be the responsibility of a single Working Group. The output of a work task is the creation of one or more new Technical Specifications (or Reports) and / or Change Requests to existing TSs / TRs.

Work item: A generic term to refer to a given *feature*, *building block* or *work task*, i.e. all the individual elements of the table bellow should soon become work items (some work tasks may however be grouped within a single WI). A full description of the term *work item* can be found in the 3GPP Working Procedures, as detailed in the annex (the complete 3GPP Working Procedures can be found at http://www.3gpp.org/About_3GPP/3gpp_wp.zip).

Status of review by the 3GPP Groups

This version encompasses the comments made by the Working Groups and the TSGs. All the 3GPP WGs have now reviewed the proposal.

The Project Plan is however a living document, so comments can be raised during all its life time. Comments should be made according to the rules specified in the section "contacts for comments". **Any comment that does not follow this procedure will not be incorporated.**

Next steps

Approval of Work Items:

All the Work Items identified in this document have to be officially approved. Several Work Items can nevertheless be approved using a single work item coversheet (in particular, several work tasks can be approved together).

Transfer from MS Word to MS Project:

This MS Word version has limited capabilities in term of readability. For this reason, the content of this document will be soon transferred to MS Project 98. This software provides some useful tools, like filtering the information to present only the work items to be fulfilled by a given (set of) WGs.

A visualisation of the filtered information will always be provided in MS Word format.

Warning

This Project Plan is a tool elaborated for the purpose of helping the coordination between the 3GPP WGs and TSGs. It does not contain any "mandating element". The involvement and the agreement of the WGs and TSGs to this plan is reflected by their approval of WIs coversheets corresponding to the WIs shown here.

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Contacts for comments

For sake of sharing the workload, S2 has established 12 Inter-Group Co-ordination (**IGCs**). Each IGC has the responsibility to monitor the work progress on a number of work items, and each work item is monitored by a single IGC. In case of inconsistencies, comments should be made to the responsible IGC's convenor. The e-mail addresses of all the IGC convenors are provided bellow.

IGC	<i>Convenor</i>	convenor's e-mail address
1. Bearer and Access Stratum	<i>François Courau,</i> Alcatel	francois.courau@alcatel.fr
2. QoS	<i>Oscar Lopez-Torres,</i> T-Mobil	Oscar.Lopez@t-mobil.de
3. CC and roaming	<i>Alexander Milinski,</i> Siemens	Alexander.Milinski@icn.siemens.de
4. Codecs	<i>Ian Doig,</i> Motorola	IANDOIG1@email.mot.com
5. Messaging	<i>Martin Guntermann,</i> Mannesmann Mobilfunk	Martin.guntermann@d2mannesmann.de
6. Terminal local features	<i>Paul Voskar,</i> Nokia	Paul.voskar@nokia.com
7. Service platforms	<i>Christophe Gourraud,</i> Ericsson	christophe.gourraud@lmc.ericsson.se
8. Security	<i>Chris Pudney,</i> Vodafone-Airtouch	chris.pudney@vf.vodafone.co.uk
9. Billing, charging and management	<i>Yukio Hiramatsu,</i> NTT	hiramatu@MAGNET.NETLAB.NTT.CO.JP
10. Testing	<i>by interim: Ian Doig,</i> Motorola	IANDOIG1@email.mot.com
11. Location related issues	<i>Jan Kall,</i> Nokia	jan.kall@nokia.com
12. Overall Co-ordination and general issues	<i>Alain Sultan,</i> ETSI/MCC	alain.sultan@etsi.fr

Features, Building Blocks and Work Tasks of R00

<i>Inter Group Co-ordination</i>	<i>Feature</i>	<i>Building block</i>	<i>WG: work task expected completion date</i>
Bearer and Access Stratum	Evolution of transport	Evolution of the Transport in the UTRAN¹	R3: Introduction of an option allowing an IP transport in the UTRAN R3: new RAB support (this belongs also to the RAN Improvements) R3: QoS optimisation for AAL2 connections
		Evolution of the Transport in the CN² * WI formulation assigned to N4	?: User/signalling data transport on TCP/RTP/UDP/IP based bearers (Nb/Nc)
			?:User/signalling data transport on ATM/AAL2 bearers (Nb/Nc)
			N4: Separation of call and bearer control
		Evolution of Bearers in the CN³ * (Combine with above for WI)	N4: IP Transport of CN protocols (e.g., CAP, MAP)
			N4: Evolution of the bearers inside the PLMN N3: Evolution of the bearers at the inter-working point with other types of networks
	Radio Interface Improvement	Hybrid ARQ (Feasibility study)	R2; R3
		Improved usage of CCTrCH (Feasibility study)	R2; R3
		High Speed DL packet Access 5feasibility study)	R2; R3
		Terminal Power Saving (Feasibility study)	R2; R3
		USTS (Feasibility Study)	R2; R3
	Low Chip Rate TDD⁴	To be further investigated	R1; R2; R3; R4
	RAN improvement⁵	RRM Support over Iub and Iur	R3: RRM optimisation (5 issues)
		Node B synchronisation for TDD⁶	R3: Node B synchronisation for TDD

¹ These building blocks are considered as independent.

² These building blocks are considered as independent.

³ Transport and bearers are distinguished in this proposal because it is assumed that Bearer can be provided using different transport techniques as they shall fit the requirement in terms of QoS.

⁴ BB and WT associated to this feature are still under discussion

⁵ These building blocks shall be considered as independent from any features and followed as such.

⁶ This Building block belongs also to the Radio Interface Improvements for R2 activities

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		Improvement of Inter-Frequency and Intersystem measurement (Feasibility study)	R2; R3
		BTS classification	R2; R4: At least, two aspects have to be covered: FDD BTS and TTD BTS
QoS	Real Time QoS for packet services including VoIP	HOs: maintenance of real-time QoS while moving between cells in the PLMN including inter-SGSN change and SRNS relocation or possibly other mechanisms (S2 writes WI Desc)	S2: End-to-End multimedia QoS negotiation, <i>Sept</i>
			N1: End-to-End multimedia QoS negotiation <i>Nov</i>
			New or enhanced packet handling procedures to maintain real-time and non real-time services throughout packet session: S2: on QoS architecture and GPRS improvements, <i>July</i> RAN3 handover for real time services in PS domain, <i>August</i> N1: on GPRS GMM and SM aspects, <i>July</i> N4: on GTP aspects, <i>July</i> N1: changes to QoS re-negotiation procedure, <i>August</i>
		End-to-end/UMTS reservation and (re-) negotiation of QoS parameters Policy Framework implications (S2 writes WI Desc)	S2, N3: Study external QoS negotiation mechanisms, and as a result propose QoS negotiation and reservation mechanisms to be used in UMTS, (work started on 9 May 00), proposed WI (S2-001188 – cc domain): <i>July</i>
			S2, N3: Define interactions between external QoS negotiation and reservation mechanisms and UMTS QoS negotiation and reservation mechanisms Policy Framework impacts on the architecture (work started on 9 May 00), <i>August</i>
			N1: Possible new code points in QoS IE from external networks, <i>Oct</i>
			N1: inclusion of UMTS QoS Architecture (23.107) new point codes, <i>August</i>
			S5, N3, S2, S1: Consider issues related to charging for end-to-end QoS, <i>Sept.</i>
			S2: Study on how to detect transport of user data on IP-based signalling <i>Nov.</i>
			S2, N1, N3, T2: Mapping between UMTS QoS attributes and the attributes used by external QoS mechanisms, <i>Nov.</i>
SMG2, SMG7: GERAN QoS Aspects, <i>Dec.?</i>			
S2, N1, N3: QoS for Signalling Bearer in and out of PLMN <i>July</i>			
Non-real time QoS Enhancements for packet services	Mapping of overall end to end QoS in each new interface (S2 writes WI Desc)	N4: Impacts on QoS profile anticipated, <i>July</i>	

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			N3: For Packet as per real time QoS, see “Real Time QoS for packet services” above.
		Evolution of maximum SDU size (S2 writes WI Desc)	N4: Impacts on CN protocols (e.g., GTP, MAP) anticipated, <i>Sept.</i>
		End-to-end (re-)negotiation of QoS parameters (S2 writes WI Desc)	N3: impact on interworking over GTP e.g. PPP, <i>August</i>
		HOs: maintenance of non real-time QoS while moving between cells in the PLMN including inter-SGSN change and SRNS relocation or possibly other mechanisms (S2 writes WI Desc)	See “Real Time QoS for packet services” above.
	QoS for circuit switched services	HOs: support of inter-MSC change and SRNS relocation (S2 writes WI Desc)	New or enhanced packet handling procedures to support real-time and non real-time services, See “Real Time QoS for packet services” above.
Call Control and Roaming	Provisioning of IP-based multimedia services S1 proposing WI S1-000299 to SA#8 TR22.976, WI Rapporteur, Mark Cataldo, Motorola	Call control and roaming to support IP-based multimedia services in UMTS	SMG2, SMG7: GERAN QoS Aspects, <i>Dec.</i>
			Definition of service requirements. 17.-21.7., S1#9 Issues include e.g.: <ul style="list-style-type: none"> • Roaming requirements • Requirements on supplementary services • Interworking requirements • TR22.976
			Architecture and Stage 2 80% complete in S2#14, i.e. in TSGS #9 Approved S2 WI in SP-000150. Updated work item S2-001018 WI Rapporteur Liz Daniel, Lucent S2, N1, N3, N4: Stage 2 description Issues include e.g.: <ul style="list-style-type: none"> • Mobile IP • RAB selection principles • Optimized VoIP bearer mechanisms • SIP multimedia protocol
			TR23.821 N4: Study on impacts on HSS July

			<p>N1, S2: SIP Call Control protocol over Gm reference point (CSCF – UE) <i>Dec.</i> WI to be defined, one WI proposal should cover all N1 work tasks. Richard Brook , Lucent</p> <p>N1,S3: SIP Call Control security <i>June 2001.</i></p> <ul style="list-style-type: none"> • Protocol architecture, whether SIP CC messages are transmitted via user plane or signalling • Ciphering and integrity checking [to be reviewed with security area] <p>N1: Verify that functionality exists in SIP Call Control to support the set of SS defined in 22.976, Gm IF <i>Dec.</i> <i>Note: S1 to judge whether major deviations from current behaviour are acceptable</i></p> <p>N4: SIP Call Control SS and relationship to Mg, Mw and Cx including verification of the functionality to support the set of SS defined in 22.976 <i>Dec.</i></p> <p>N1, T2: Multimedia Terminal capabilities, e.g.</p> <ul style="list-style-type: none"> • CC version, • MS CM, etc. <i>Dec.</i> <p>N1, N4: Multimedia Network capabilities, e.g. CC version, Protocol version, etc. <i>Dec.</i></p> <p>N2, N4, S2: CSCF – HSS (Cx) applications and services (SCP) <i>Dec.</i></p> <p>S2, N4 (HSS), N3 (interworking): Addressing, Identities <i>June</i></p> <p>N1, N3,(S1 for requirements): Interworking with other multimedia protocols <i>Dec.</i></p> <ul style="list-style-type: none"> • Legacy systems (e.g., H.323, 3GH.324/M, H.320, H.248) • PSTN • GSM PLMN • (Should be extensible to other protocols)
	<p>Emergency call enhancements</p> <p>N1 to define WI (Rouzbeh / Ericsson)</p>	<p>IP&PS based Emergency call enhancements</p>	<p>S1: creation of 22.976 on Service Requirements for IP-based emergency calls: <i>July</i></p> <p>N1: SIP emergency calls and packet emergency calls in general (S1 requirements needed) <i>Dec.</i></p>

			<p>S2: Stage 2 for emergency calls and packet emergency calls in general <i>80% stable: Sept. This is critical task – it does not leave too much time for stage 3 work on .</i></p>
			<p>S1, N1, N4, T3: Distinction of emergency call types to different emergency services. <i>August</i></p>
			<p>Someone (IETF, N1): Stage 3 for emergency calls and packet emergency calls in general. Dec</p>
		<p>CS based Emergency call enhancements</p>	<p>S1, N1, N4, T3: Distinction of emergency call types to different emergency services in CS domain. <i>August</i></p>
			<p>S1, N1: Emergency call recalling capability enhancement. <i>Dec.</i></p>
		<p>Access Security for IP-based services</p>	<p>S3:</p> <ul style="list-style-type: none"> • Requirements Capture, <i>Aug.</i> • Security Feature Specification, Aug (1st Draft) • Definition of Security Architecture, Dec • Integration of Security Architecture, June 2001
		<p>FIGS</p>	<p>S2, N2 S3:</p> <ul style="list-style-type: none"> • Requirements capture, Sept • Security feature specification, Nov • Feasibility study, Jan 2001 • Definition of security architecture, CRs approved Mar 2001 <p>Integration of security architecture, CRs approved at TSG level Dec 2001</p>
		<p>RAN improvements and evolution of the bearers on the Radio interface to enable efficient IP-based multimedia services in UMTS</p> <ul style="list-style-type: none"> • RAN: for detailed planning cf. IGC Bearer and Access Stratum 	<p><intentionally left blank></p>
		<p>Non-real time QoS Enhancements for packet services</p> <ul style="list-style-type: none"> • S2: for detailed planning cf. IGC QoS 	<p><intentionally left blank></p>

	<p>Real Time QoS for packet services including VoIP</p> <ul style="list-style-type: none"> • S2: for detailed planning cf. IGC QoS 	<intentionally left blank>
	<p>Billing, charging and management aspects for IP-based multimedia services in UMTS</p> <ul style="list-style-type: none"> • S5: for detailed planning cf. IGC Billing, charging and management <p>S5 to define WI(s)</p>	<intentionally left blank>
	<p>Codec aspects for the provisioning of IP-based multimedia services in UMTS</p> <ul style="list-style-type: none"> • S4: for detailed planning cf. IGC on Codecs <p>S4 to define WI(s)</p>	<intentionally left blank>
	<p>Roaming support within and between IP Multi-media network and CS Domain networks</p>	<p>S2, N4: Stage 2 <i>80% stable: June</i> Covered by work item in SP-000150 TR23.821</p> <p>N3: Internetwork roaming aspects</p> <p>S1: Roaming requirements <i>July</i> Covered by work item proposed in S1-000290 TR22.976</p>
	<p>Support of VHE/OSA by R00 network entities and protocols of the IM subsystem (e.g. CSCF)</p> <ul style="list-style-type: none"> • N5 to define work item: for detailed planning cf. IGC on Service Platform 	<intentionally left blank>
	<p>CAMEL control of VoIP</p> <ul style="list-style-type: none"> • N5 to define work item: for detailed planning cf. IGC on Service Platform 	<intentionally left blank>
<p>Enable bearer independent Circuit-switched network architecture</p> <ul style="list-style-type: none"> • S2 WI on architecture (SP-000149) • Updated WI in S2-001017 • Rapporteur Ulrich Dropmann, Siemens 	<p>Enable bearer-independent call control</p>	<p>S2: Architecture and Stage 2 description on 23.821 <i>80% complete in S2#14, i.e. in TSGS #9</i></p> <p>N3: Standardisation of protocols (user plane) over reference points between MGWs <i>Dec.</i></p> <p>N4: Standardisation of protocols over reference points between MSC server and Gateway MSC server <i>Dec.</i></p> <p>[additional work tasks possible as architecture evolves] <i>Dec.</i></p>

		<p>N4: Bearer control between MSC server and MGW (protocol issues, stage 2) <i>Dec.</i></p> <p>N3: Bearer control between MSC server and MGW (parameter value issues, stage 3) <i>Dec.</i></p> <p>N3: Bearer control (control plane, e.g., Q.AAL2) between MGWs <i>Dec.</i></p>
	Bearer independence and codec control issues for detailed planning cf. IGC Codecs	<intentionally left blank>
Circuit-switched multimedia services	<p>Circuit-switched multimedia swap and fallback</p> <ul style="list-style-type: none"> Agreed WI NP-000051 <p>Rapporteur: Juha Räsänen (juha.a.rasanen@nokia.com)</p>	<p>N1: call control and signalling aspects <i>Dec.</i></p> <p>N3: transport aspects <i>Dec.</i></p> <p>N3: inband signalling <i>Dec.</i></p> <p>S1, S2: Review whether service/stage 1 or architecture/stage 2 aspects need to be aligned <i>Dec.</i></p>
Facsimile	Real Time Fax postponed from R99 to R00, SP-000169	<p>T2: Terminal capabilities, AT commands <i>Dec.</i></p> <p>N1: signalling aspects (e.g. ICM) <i>Dec.</i></p> <p>N3: service provision <i>Dec.</i></p> <p>S1, S2: Review whether service/stage 1 or architecture/stage 2 aspects need to be aligned <i>Dec.</i></p>
Text telephony	Text Telephony	S1: Text Feature Stage 1 description
<ul style="list-style-type: none"> SP-000162 agreed WI. Rapporteur Gunnar Hellström, Ericsson Radio Systems AB, email: gunnar.hellstrom@omnitor.se tel: +46 708 204 288 	Text Feature Activation and transport	S2: Text Feature Stage 2 architecture
		S2: SIP activation and transport
		S2: 3G-324 Activation and transport
		S2: Data channel activation and transport
		S4: Voice channel activation and transport
		S2: Selection of transport method
		N3: PSTN Interworking <i>Dec.</i>
		N3: IP Interworking <i>Dec.</i>
		N3: PLMN Interworking <i>Dec.</i>
		T2: Connection of PSTN textphones to MS
T2: Terminal interfaces and functions		
T2: MMS Commonalities		
T3: USIM aspects		
Bearer Modification without pre-notification	Service Modification without pre-notification between Objectives include modification not using BICC (between Speech and Fax, Speech and Modem, and Speech and Multimedia using ISUP) and using BICC.	N1: in call modify procedure <i>Dec.</i>
Preliminary as no official work item exists on the issue	WI proposed by N3 in N3-000269	N3: interworking function, TAF <i>Dec.</i> Preliminary as no official work item exists on the issue

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			<p>N4: Out of band Transcoder Control <i>Dec.</i> Preliminary as no official work item exists on the issue</p> <p>T2: AT commands <i>Dec.</i> Preliminary as no official work item exists on the issue</p> <p>S2: tbd</p>
		<p>Bearer Modification because of radio conditions S1 requested to further elaborate requirements</p>	
Codecs	Wideband Telephony Service	AMR – Wideband specification	<p>S4,TD SP-000024: TR 26.901 v2.0.0 AMR Wideband Speech Codec Feasibility Study Report (Release 2000).</p>
			<p>S4,TD SP-000027: AMR Wideband Permanent project document WB-3: Performance Requirements, completed <i>TSG#7</i></p>
			<p>S4,TD SP-000028: AMR Wideband Permanent project document WB-4: Design Constraints, completed <i>TSG#7</i></p>
			<p>S4,WB AMR speech Codec Qualification <i>completed</i></p>
			<p>S4,WB AMR speech Codec Selection Tests <i>June to Oct. 5 candidates</i></p>
			<p>S4,WB AMR speech Codec Selection <i>oct 23 - oct 29.</i></p>
			<p>S4,Wide Band Speech Telephony Terminal Acoustic Characteristics <i>Dec.</i></p>
			<p>T1, to review Wide Band Speech Telephony Terminal Acoustic Characteristics <i>Nov.</i></p>
			<p>S4,Wide Band Speech Telephony Terminal Acoustic Test Specification <i>Dec.</i></p>
			<p>T1, to review Wide Band Speech Telephony Terminal Acoustic Test Specification <i>Nov.</i></p>
			<p>S4,Wideband Speech Codec General Description <i>Dec.</i></p>
			<p>S4: Wideband Speech Codec (ANSI C-Code, Test Sequences, Speech Transcoding Functions, Error Concealment of lost frames, Source Controlled Bit-Rate Operation, Voice Activity Detector, Frame Structure), <i>Dec.</i></p>
			<p>Wideband Speech Codec Performances Characterization <i>Feb 2001</i></p>
			<p>Codec lists <i>Dec.</i></p>

	WB AMR Implementation in CN	CN WG Tasks (CRs) <i>Dec.</i> N1: <ul style="list-style-type: none"> • Indication of supported codecs by the MS • Bearer Capability negotiation • Codec indication to MS
	WB Telephony Requirements	S1 requirements (CRs) <i>Dec.</i>
	QoS for speech and multimedia codec IGC QoS. Common Building Block. See IGC QoS documentation.	
	AMR Implementation in GERAN	GERAN WGs (SMG2 WGs)
Packet switched mobile streaming application		S4: Td 280/00
Transcoder-Free Operation (TrFO) SP-000094	OoBTC⁷	<p>N1: Adding new codecs and the signalling mechanism to negotiate the activation of the fcodecs should be studied for . Codec Negotiation between UE and MSC. Signalling for See NP-000085 24.008, 23.009, 23.108 (29.002) Assumption for R99: As there is only one Codec, AMR, this does not need to be signalled.</p> <p>N4: Codec Negotiation inter MSC, Bearer establishment inter MSC. TS 23.153 R99 part complete. capabilities moved to annex. See NP-000127</p> <p>Open issues:</p> <p>Handling of Conference Calls; Handling of Multi Party Supplementary Services; Handling of Handover UMTS to GSM; Handling of Sending a tone or Announcement; Protocol between MSCs (i.e. Iu UP Framing versus I.366).</p> <p>S2</p> <p>R2: Bearer establishment between UE and RAN, TFC control by RRC</p>
<p>⁷ The Out of Band Transcoder is deleted from the TSG RAN Work Programme as the solution does not involve the UTRAN (i.e. it is not proposed to delete the Out of Band Transcoder function). TSG RAN will not work on this unless it is found to be necessary, at which time a Work Item will be established to deal with this.</p>		

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			R3: Bearer establishment between MSC and RNC as well as RNC and Node B, Notification of the Codec mode to RAN, Iu UP control procedure (rate control, initialization, time alignment)
		TrFO specification	N1:
			N4 N4: decided to standardise TrFO for R00.
			R3 R3: User & Control Plane procedures related to the Codec Commands to UE
			S3 Prevention of user fraud
			S4 26.103 Codec list, 3G equivalent of GSM 08.62
			WG ? Harmonization of TFO and TrFO may be required
	Support of Transcoder in CN	WI description and Tdoc S2-99352 Speech Transcoder: Location and Control at the UMTS Core Network Border	
		Transcoder at Edge	The TrFO feature is linked (use of BICC, codec negotiation) with the “work item which is due to R00 (same use of BICC and of AAL2 switching).
	Tandem Free aspects for 3G and between 2G and 3G systems	Tandem Free AMR	S4 TFO AMR Specification (New specification foreseen,, replacing 08.62 for 3G) Dec 00
		TFO AMR Implementation in UTRAN ?? Inband	RAN WG Tasks (CRs) <i>Dec.</i>
		TFO AMR Implementation in GERAN ?? Inband	TSG GERAN: the GERAN support Tandem Free Operation (TFO) services.
		TFO AMR Implementation in CN	CN WG Tasks (CRs) <i>Dec.</i>
	Transmission planning in 3G networks	Equivalent Transmission Planning Aspects of the Services in UMTS (TS 03.50)	RWGs Specifications/Reports
Messaging	Multimedia Messaging	Service Requirements	T2/S1: Review of MMS Stage 1 S1: Integrated Media Streaming <i>May</i>
		Technical Realization	T2/S2: Define Reference Architecture Model T2: Fulfill open Requirements of MMS Stage 1 Release 99: e.g. minimum set of media formats, media format conversion, personalization of MMS. R99 T2/S2: Fulfill new requirements of MMS Release 00 (streaming, ...) T2: Definition of MMS primitives in MMS Stage 2

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	Advanced Cell Broadcast	Service Requirements	S1: Enhancements to release 99 CBS e.g. Charging requirements, Capacity Enhancements <i>May</i>
		CBC-RNC Protocol	R3: Refinements of TS 25.419
		Terminal aspects	T2
	IP Multicast	Service Requirements	
Terminal local features	Alternatives to AT commands	TBD	TBD
	AT commands	Edge AT commands.	T2 : New AT commands to be added to 27. 007
		MMS AT commands.	T2 : New AT commands to be added to 27. 007
		Other AT commands	T2 : New AT commands to be added to 27. 007
	Wide Area Data Synchronisation	Continues evolution of Synchronisation protocol	T2: additions to 27.103
		vObjects and Other Constructs for Use in Data Synchronisation	T2: additions to 27.103 Dec 2000
	UE Multiplexer	Multiplexing protocol (simultaneous sessions over UE).	T2: Addition to 27. 010.
	UICC/ME interface	UICC/ME Performance Enhancements	T3: Feasibility study on speed enhancements on existing UICC interface and alternatives . Dec 2000
	Terminal Local Model		T2: new TS Dec 2000
	UICC API	Test specification for UICC Java API	T3: UICC interface. Dec 2000
Java API transfer to 3GPP		T3: Java API specification Dec 2000	
UICC/USIM database	TBD	T3: (approved at TSG #05 in TP-99210)	
Service platforms	VHE Proposed S1 WI (S2-001198) Subject for approval by S1 on 16-06-00	Evolution of VHE concepts	S1, S2,T2: Introduction of VHE within the IP Multi Media Domain S1, S2,T2: Evolution of VHE within the Packet Switched and Circuit-Switched Domain
		Service Continuity	S1: Definition and requirements on VHE within a single domain and between domains (CS, PS and IM)
			S2: VHE architecture within a single domain
			S2: VHE interworking between domains
		Personal Service Environment (PSE), user profiles and user profile management	S2: PSE architecture (e.g. HSS) and interfaces
		Interaction between VHE Toolkits	S2, N4: User Profiles definition
		VHE management aspects	S1, S2, S5: Definition and Realisation of Service Deployment, etc.
		Improvements to VHE security	S1, S2, S3: User Requirements. Principles and architecture definition for the different VHE toolboxes (e.g. MeXE, SAT, CAMEL and OSA)

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		S3, N1, N2, N3, N4: (possibly) changes required from supporting platforms, e.g. gsmSCF, HLR	
Open Service Architecture Proposed S1 WI (S2-001199) Subject for approval by S1 on 16-06-00	Evolution of OSA concepts	S1, S2: Introduction of OSA in the IP Multi Media Subsystem	
		S1, S2: Evolution of OSA in the Circuit Switched and Packet Switched Domains	
	Integration of OSA within IM domain		S1: Requirements on OSA for multimedia capabilities and features
			S2, N1, N5: Interaction between SIP call control and OSA
			S2, N2, N4, N5: Interaction between HSS and gsmSCF features and OSA
			S2, N5: Interaction between Multi Media network resources and OSA
	User Profile Management, User Profile Access	N5: SCFs for user profile access/management by OSA applications	
	Improvements to OSA security		S2: Technical requirements for OSA security, implementing the VHE toolkit security requirements
			S3: Requirements Capture (Sept), Security feature specification (Nov), Feasibility study (Jan 2001), Definition of security architecture, CRs approved (Dec 2001), Integration of security architecture (CRs approved at TSG level, June 2001)
			N5: security related SCF(s) definition
			S3, N2, N4, N5: (possibly) changes required from supporting platforms, e.g. gsmSCF, HLR
New Network Service Capability Features (N-SCFs) and evolutions of existing ones, e.g. <ul style="list-style-type: none"> • Call Control SCF (Call Party Handling, SIP) • Positioning SCF • Terminal Capabilities SCF • Charging SCF E-Commerce SCF	S1: User requirements for the OSA N-SCFs		
		S2: Technical requirements for the OSA N-SCFs	
		S2: Specify the selection of SCFs within the network architecture (new and evolved existing ones)	
		N5: OSA APIs	
New internal OSA APIs and evolution of existing ones		S1: User Requirements for the internal OSA APIs	
		S2: Technical Requirements for the internal OSA APIs	
		N5: OSA APIs	
Enhancement of the Framework Service Capability Feature (Framework SCF)	S1: User requirements for the OSA Framework SCFs		

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			S2: Technical requirements for the OSA Framework SCFs
			N5: OSA APIs
		Harmonisation/co-ordination with non UMTS related initiatives (e.g. SPAN3, 3GPP2, Parlay group)	N5: Network Access Technology independence OSA API supporting VHE requirement on service continuity
CAMEL phase 4 SA1 to define WI New feature to be added for CAMEL phase 4		Existing CAMEL procedures shall be enhanced for the manipulation of media streams, where appropriate, typically for VoIP	N2, N4: unnamed WT
		CSE Initiated call setup including user interaction	N2, N4: unnamed WT
		Flexible approach to provide User Interactions during a call	N2, N4: unnamed WT
		Interactions with Optimal Routing	N2, N4: unnamed WT
		CSE control of follow-on calls	N2, N4: unnamed WT
		CSE control over MT SMS	N2, N4: unnamed WT
	MExE		3rd MExE classmark
		Enhanced Security	T2: Additional features for MExE R2000
		Support of the Terminal parts of the VHE /User Profile	T2 : Enhancements to MExE R99
		AT command support	T2: Feasibility Study and possible support
		Secure download mechanism and capabilities to support SDR concepts	T2 : Feasibility study and possible support
		Support of MP3/MPEG4 content	T2: Feasibility study and possible support
		Support of SAT/OSA/CAMEL interaction to provide advance services	T2: Feasibility study and possible support
Security S3 should generate WIs		protection for user plane data	Integrity protection in access network (Rx?, S3?)
	Integrity protection in core network (e.g., provided by IPsec) (S3?, N4)		
	Network wide encryption of user plane		S2, S3, R2, R3,, N4, SMG 2 WPA N1: authentication procedure
	Core network security: minimal solution	Protect MAP Signalling at the application layer	S2, N4 S3: Completion of CRs at TSG level, Jun
	Core network security: full solution		S2, N4: undefined

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		S3: <ul style="list-style-type: none"> • Requirements capture, Aug • Security feature specification for GTP signalling, Aug • Security feature specification for other signalling, Nov • Feasibility study including definition of work tasks for this work item: July for GTP; Jan 2001 for other signalling Definition of security architecture: CRs approved Sept for GTP; Mar 2001 for other signalling
	Key Management	S3: S3, N4, N1, SMG 2 WPA
Study on the evolution of GSM CS algorithms		S3: <ul style="list-style-type: none"> • Requirements capture, Sept • Security Feature Specification, Nov • Feasibility study, Jan 2001 • Definition of security architecture 1st draft, Mar 2001: CRs approved, May 2001 Integration of security architecture: CRs approved at TSG level May 2001
GEA 2		S3, N4 N1: <ul style="list-style-type: none"> • GEA capability indication in MS CM
GERAN	GERAN Security: Access network encryption, [integrity protection], key length, algorithm selection/design	S2, N1, N4, SMG 2 WP A: <ul style="list-style-type: none"> • Presentation to S3 of system architecture, Aug S3: <ul style="list-style-type: none"> • Requirements capture, Sept • Security Feature Specification, Nov • Feasibility study, Jan 2001 • Definition of security architecture 1st draft, Mar 2001: CRs approved, Dec 2001 SAGE: <ul style="list-style-type: none"> • Production of new algorithm, completed Oct 2001

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	Visibility and Configurability		T2, T3, RAN2, SMG2 WPA, N1 S3: <ul style="list-style-type: none"> • Requirements capture, July • Security feature specification, July • feasibility study, July • definition of security architecture: CRs approved, September Integration of security architecture: CRs approved at TSG level, Dec
	Security features to support IP-based multimedia services in UMTS	Access network security (encyrption, integrity, authentication)	S2, S3, R2, R3, N4, SMG2 WPA N1: <ul style="list-style-type: none"> • Integrity protection • Authentication
		Lawful intercept	N4 S3: <ul style="list-style-type: none"> • Requirements capture, Sept • Security feature specification, Nov • feasibility study, Jan 2001 • definition of security architecture: CRs approved, Dec Integration of security architecture: CRs approved at TSG level, June 2001
		Protection for user plane data	See above [feature/BB]
		Ip security solutions	S3
	Network based end to end security		S3: <ul style="list-style-type: none"> • Security Feature Specification, First Draft, Nov • Feasibility Study Jan 2001 • Definition of Security Architecture, CRs Approved, March 2001 • Concept presented to CN, RAAN, T, GERAN, Apr 2001
	Genral Enhancements to the R99 Security Architecture	Feasibility of an authentication vector revocation mechanism	N4, S3
		Authentication result reporting	N4, S3
		UE triggered authentication	
		Retention of P-TMSI	
Billing, charging and management	Definition of Architecture and Principles		S5: Key Administration & Distribution. Impacts on 32.101, 32.102, 30.808 and on 2G/3G Interworking. R3: Co-ordination O&M messaging Specification.

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	Performance Management		S5: XML. File Format Enhancements on Plug & Measure, Measurement Definitions, PM Monitoring. Impacts on 32.104
	Fault Management		S5: IRP Alarm Solution Set for CMIP and SNMP Test Management. Impacts on 32.111. Specify possible impact on Cell Broadcast Services, Location Services, ATM Maintenance.
	Configuration Management		S5: IRP Notification Solution Set for CMIP, SNMP. Configuration Management IRP IS and Network Resource Model. IRP CM Solution Set for CORBA, CMIP, WBEM, SNMP. Impacts on 32.106. R2000 Naming Convention Updates. CM support of LCS/CBS functions (Network Resource Model).
	Charging		S5: Charging solution to 30.802.
	Call Cell Trace		S5: Call trace solution to 32.108
	Security Management		S5; S3: Key Administration and Distribution for MAP
	[GSM LCS O&M Project]		T1.P1: Project Management
Testing	<p>identified technical <i>questions</i> related to testing (no break-down to features, building blocks or work tasks performed yet)</p> <ul style="list-style-type: none"> • Terminal Acoustic Test Spec • UE Test Specs – FDD • UE Test Specs – TDD • UE Test Specs – Protocols • UE Test Specs – ATS • UE Test Environment • UE Test Interface • UE Test Specs – Proforma • UE Electromagnetic Compatibility • UICC Interface Test • UICC Test • Base Station Testing 		
Location related issues	<p>Support of Localized Service Area (SoLSA)</p> <p>The situation regarding SoLSA in 3GPP R00 is unclear at the moment, since only one company supported a new Work Item on UTRAN-SoLSA in the S1 April meeting.</p>	<p>Basic concept of SoLSA (broadcast LSA ids, zone tariffing)</p> <p>(The list of Work Tasks is from the Work Item description contribution to S1, tdoc. S1-000278)</p>	<p>Creation of Work Item for UTRAN-SoLSA (This was supported only by one company in the S1 April meeting)</p> <p>S1: Development of SoLSA service descriptions</p> <p>S1, RAN: LSA definition</p> <p>S1, RAN: LSA selection</p> <p>R2: LSA information broadcast</p>

What is the status of this R00 work item?

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		R3: Iu signalling support for SoLSA
		R3: Possible Iur signalling support for SoLSA
		R3: Possible Iub signalling support for SoLSA
		S2, R2: Adapt GSM stage 2 SoLSA for UTRAN
		CN WGs : Adapt SoLSA core network CRs
		RAN WGs: SoLSA specifications for UTRAN
		T WGs: Adapt SoLSA UE and USIM specifications
		S1: Study the usage of geographical information for SoLSA
	Localized Service Area (LSA) indication	S1: LSA display in UE
	Preferential access (cell access priority for LSA users)	SA, CN and RAN WGs: Iu interface and MAP signalling
	Idle mode support (favouring LSA cells in idle mode)	S2, RAN and T WGs : Adapt GSM specifications for UTRAN and UE
	Active mode support (favouring LSA cells in active mode)	SA, CN, RAN and T WGs: Adapt GSM specifications for UMTS, UTRAN and UE:
	Exclusive access (private cells)	S1: To be studied if supported in UTRAN
	LSA only access (type cordless or WLL)	S1: To be studied if supported in UTRAN
	SoLSA interoperation aspects	S2: GERAN-SoLSA and UTRAN-SoLSA interoperation
Location Services	Service description (Stage 1 development in S1)	S1: Describe new service features <i>July</i> predefined areas, location of all UE in area? accuracy classes?
	Overall system aspects of LCS	S2: Agree Work Item on LCS system and core network aspects <i>May</i>
		S2: Specify LCS Stage 2 for R00 and new service features <i>Sept.</i> predefined areas, location of all UE in area? accuracy classes?
		S2: Exception procedures <i>Sept.</i> CN WGs: corresponding Stage 3. No N1 work has been identified.
	LCS network management	S5 (to be more detailed)
	Security aspects of LCS	S3 (to be more detailed) <i>Sept.</i>
LCS support in the core network CS domain	N4: Impact of R00 architecture e.g. on MAP signalling for LCS	

LCS support in the core network PS domain (in R00 architecture)	N1: Layer 3 LCS signalling UE (MS) -SGSN (UMTS PS and GSM-GPRS)
	N4 : MAP signalling for LCS
Iu interface support for LCS	R3: Iu development <i>Sept.</i> - assistance data handling - to be further defined
LCS in UTRA TDD Work Item: "Support of Location Services in UTRA TDD"	R2: UTRAN stage 2 <i>Sept.</i> - exception procedures - possible impact of new LCS service features
	R2: Radio Resource Management (for LCS TDD)
	R1: Location measurements TDD <i>Sept.</i>
	R3: Iur, Iub support for LCS measurements +results TDD
[LCS support in UTRAN: cell coverage based, R99]	R3 : [Iur transport of cell co-ordinates - to be included in R99] <i>June</i>
Advanced LCS methods - OTDOA-IPDL - assisted GPS Work Item: "Support of Location Services in UTRA FDD"	R2: LCS signaling UE-SRNC (TDD&FDD)
	R1: Location measurements FDD <i>Sept.</i>
	R3: Iur and Iub support for LCS measurements +results FDD
	R2, R3: Stage 3 specifications on assistance data
LCS interoperation aspects	S2 and SMG2: Co-ordinated development of GSM LCS Phase 2 and UMTS LCS
	S2; SMG2; SMG12 : Common LCS System and CN stage 2 specification, combine 23.171 & 03.71 add LCS in GPRS and PS domain <i>Sept.</i>
	[Separate GERAN LCS stage 2 specification based on radio parts of 03.71, SMG2]
	[Corresponding Stage 3 GSM specifications]
LCS application interfaces (LCS-OSA) (Related to service platforms)	S1 : (LCS-OSA) Service description <i>July</i>
	S2: Corresponding LCS-OSA stage 2 specification, 23.171 <i>Sept.</i>
	Possible enhancements in MExE support for LCS?: S1: Impacts on 22.057 T2: Impacts on 23.057
	N2: Possible enhancements in CAMEL Phase 4 for LCS?: S1: Impacts on 22.078 N2: Impacts on 23.078 & 29.078
	N5: Possible OSA support for LCS, impacts on 29.198 & 29.998

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		Universal Geographic Area Description (GAD)	S2: Possible update of 23.032 <i>Sept.</i>
TEI⁸	TEI Common WI for all TSGs needs to be approved.		Applicable to all WGs.
Overall co-ordination and general issues	There are no features, building blocks and work tasks from the overall co-ordination, rather: <ul style="list-style-type: none"> • Overall Co-ordination • Vocabulary 		

Deleted Work Items

This section reflects the WI deleted from previous version.

Optimisation of signalling. [MOVE TO DELETED]	Turbocharger (N1?) <ul style="list-style-type: none"> • N1 internal WI postponed from R99, open whether part of R00 (SP-000169) 	[to be defined] <i>Dec.</i> Proposal from N1 to delete the WI.
	Layer 3 Segmentation <ul style="list-style-type: none"> • N1, N4, R3 (?) WI postponed from R99, open whether part of R00 (SP-000169) 	[to be defined] <i>Dec</i> Proposal from N1 to delete the WI..
Enhanced User Identity Confidentiality [MOVE TO DELETED]		N1: <ul style="list-style-type: none"> • Procedures using encrypted IMSI • Response to paging with non-encrypted IMSI (roaming)
		S2, R2, R3, N4

⁸ To be used carefully!