Technical Specification Group Services and System Aspects
Meeting #8, Dusseldorf, Germany, 26-28 June 2000

TSGS#8(00)0317

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.

Contacts for comments

For sake of sharing the workload, S2 has established 12 Inter-Group Co-ordination (**IGC**s). 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	*Convenor*	convenor's e-mail address
1. Bearer and Access Stratum	*François Courau*, Alcatel	francois.courau@alcatel.fr
2. QoS	*Oscar Lopez-Torres*, T-Mobil	Oscar.Lopez@t-mobil.de
3. CC and roaming	*Alexander Milinski*, Siemens	Alexander.Milinski@icn.siemens.de
4. Codecs	*Ian Doig*, Motorola	IANDOIG1@email.mot.com
5. Messaging	*Martin Guntermann*, Mannesmann Mobilfunk	Martin.guntermann@d2mannesmann.de
6. Terminal local features	*Paul Voskar*, Nokia	Paul.voskar@nokia.com
7. Service platforms	*Christophe Gourraud*, Ericsson	christophe.gourraud@lmc.ericsson.se
8. Security	*Chris Pudney*, Vodafone-Airtouch	chris.pudney@vf.vodafone.co.uk
9. Billing, charging and management	*Yukio Hiramatsu*, NTT	hiramatu@MAGNET.NETLAB.NTT.CO.JP
10. Testing	*by interim: Ian Doig*, Motorola	IANDOIG1@email.mot.com
11. Location related issues	*Jan Kall*, Nokia	jan.kall@nokia.com
12. Overall Co-ordination and general issues	*Alain Sultan*, ETSI/MCC	alain.sultan@etsi.fr

Features, Building Blocks and Work Tasks of R00

Inter Group Co-ordination	*Feature*	*Building block*	*WG: work task* **expected completion date**
Bearer and Access Stratum	**Evolution of transport**	**Evolution of the Transport in the UTRAN**[1]	**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 CN[2] *** 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
			N4: IP Transport of CN protocols (e.g., CAP, MAP)
		Evolution of Bearers in the CN[3] *** (Combine with above for WI)**	**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 TDD[4]	**To be further investigated**	**R1; R2; R3; R4**
	RAN improvement[5]	**RRM Support over Iub and Iur**	**R3:** RRM optimisation (5 issues)
		Node B synchronisation for TDD[6]	**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

		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, *Sept* **N1:** End-to-End multimedia QoS negotiation *Nov*
			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, *July* **RAN3** handover for real time services in PS domain, *August* **N1:** on GPRS GMM and SM aspects, *July* **N4:** on GTP aspects, *July* **N1:** changes to QoS re-negotiation procedure, *August*
		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): *July*
			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), *August*
			N1: Possible new code points in QoS IE from external networks, *Oct* **N1:** inclusion of UMTS QoS Architecture (23.107) new point codes, *August*
			S5, N3, S2, S1: Consider issues related to charging for end-to-end QoS, *Sept.*
			S2: Study on how to detect transport of user data on IP-based signalling *Nov.*
			S2, N1, N3, T2: Mapping between UMTS QoS attributes and the attributes used by external QoS mechanisms, *Nov.*
			SMG2, SMG7: GERAN QoS Aspects, *Dec.*?
			S2, N1, N3: QoS for Signalling Bearer in and out of PLMN *July*
	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, *July*

			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, *Sept.*
			N3: impact on interworking over GTP e.g. PPP, *August*
		End-to-end (re-)negotiation of QoS parameters (S2 writes WI Desc)	See "Real Time QoS for packet services" above.
		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)	New or enhanced packet handling procedures to support real-time and non real-time services, 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)**	**SMG2, SMG7:** GERAN QoS Aspects, *Dec.*
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**	**Definition of service requirements.** *17.-21.7., S1#9* Issues include e.g.: • 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.: • Mobile IP • RAB selection principles • Optimized VoIP bearer mechanisms • SIP multimedia protocol **TR23.821**
			N4: Study on impacts on HSS July
			N1, S2: SIP Call Control protocol over Gm reference point (CSCF – UE) *Dec.* WI to be defined, one WI proposal should cover all N1 work tasks. Richard Brook , Lucent

			N1,S3: SIP Call Control security *June 2001.* • Protocol architecture, whether SIP CC messages are transmitted via user plane or signalling • Ciphering and integrity checking [to be reviewed with security area]
			N1: Verify that functionality exists in SIP Call Control to support the set of SS defined in 22.976, Gm IF *Dec.* *Note: S1 to judge whether major deviations from current behaviour are acceptable*
			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 *Dec.*
			N1, T2: Multimedia Terminal capabilities, e.g. • CC version, • MS CM, etc. *Dec.*
			N1, N4: Multimedia Network capabilities, e.g. CC version, Protocol version, etc. *Dec.*
			N2, N4, S2: CSCF – HSS (Cx) applications and services (SCP) *Dec.*
			S2, N4 (HSS), N3 (interworking): Addressing, Identities *June*
			N1, N3,(S1 for requirements): Interworking with other multimedia protocols *Dec.* • Legacy systems (e.g., H.323, 3GH.324/M, H.320, H.248) • PSTN • GSM PLMN • (Should be extensible to other protocols)
	Emergency call enhancements **N1 to define WI (Rouzbeh / Ericsson)**	**IP&PS based Emergency call enhancements**	**S1:** creation of 22.976 on Service Requirements for IP-based emergency calls: *July*
			N1: SIP emergency calls and packet emergency calls in general (S1 requirements needed) *Dec.*
			S2: Stage 2 for emergency calls and packet emergency calls in general *80% stable: Sept.This is critical task – it does not leave too much time for stage 3 work on .*
			S1, N1, N4, T3: Distinction of emergency call types to different emergency services. *August*

			Someone (IETF, N1): Stage 3 for emergency calls and packet emergency calls in general. Dec
		CS based Emergency call enhancements	**S1, N1, N4, T3:** Distinction of emergency call types to different emergency services in CS domain. *August*
			S1, N1: Emergency call recalling capability enhancement. *Dec.*
		Access Security for IP-based services	**S3:** • Requirements Capture, Aug. • Security Feature Specification, Aug (1st Draft) • Definition of Security Architecture, Dec • Integration of Security Architecture, June 2001
		FIGS	**S2, N2** **S3:** • Requirements capture, Sept • Security feature specification, Nov • Feasibility study, Jan 2001 • Definition of security architecture, CRs approved Mar 2001 Integration of security architecture, CRs approved at TSG level Dec 2001
		RAN improvements and evolution of the bearers on the Radio interface to enable efficient IP-based multimedia services in UMTS • **RAN:** for detailed planning cf. IGC Bearer and Access Stratum	<intentionally left blank>
		Non-real time QoS Enhancements for packet services • **S2:** for detailed planning cf. IGC QoS	<intentionally left blank>
		Real Time QoS for packet services including VoIP • **S2:** for detailed planning cf. IGC QoS	<intentionally left blank>
		Billing, charging and management aspects for IP-based multimedia services in UMTS • **S5:** for detailed planning cf. IGC Billing, charging and management S5 to define WI(s)	<intentionally left blank>

		Codec aspects for the provisioning of IP-based multimedia services in UMTS • **S4:** for detailed planning cf. IGC on Codecs S4 to define WI(s)	<intentionally left blank>
		Roaming support within and between IP Multi-media network and CS Domain networks	**S2, N4:**Stage 2 *80% stable: June* Covered by work item in SP-000150 TR23.821
			N3: Internetwork roaming aspects
			S1: Roaming requirements *July* Covered by work item proposed in S1-000290 TR22.976
		Support of VHE/OSA by R00 network entities and protocols of the IM subsystem (e.g. CSCF) • **N5 to define work item:** for detailed planning cf. IGC on Service Platform	<intentionally left blank>
		CAMEL control of VoIP • **N5 to define work item:** for detailed planning cf. IGC on Service Platform	<intentionally left blank>
	Enable bearer independent Circuit-switched network architecture • **S2 WI** on architecture (SP-000149) • **Updated WI in S2-001017** • Rapporteur Ulrich Dropmann, Siemens	**Enable bearer-independent call control**	**S2:** Architecture and Stage 2 description on **23.821** *80% complete in S2#14, i.e. in TSGS #9*
			N3: Standardisation of protocols (user plane) over reference points between MGWs *Dec.*
			N4: Standardisation of protocols over reference points between MSC server and Gateway MSC server *Dec.*
			[additional work tasks possible as architecture evolves] *Dec.*
			N4: Bearer control between MSC server and MGW (protocol issues, stage 2) *Dec.*
			N3: Bearer control between MSC server and MGW (parameter value issues, stage 3) *Dec.*
			N3: Bearer control (control plane, e.g., Q.AAL2) between MGWs *Dec.*
		Bearer independence and codec control issues for detailed planning cf. IGC Codecs	<intentionally left blank>
	Circuit-switched multimedia services	**Circuit-switched multimedia swap and fallback** • **Agreed WI NP-000051** Rapporteur: Juha Räsänen (juha.a.rasanen@nokia.com)	**N1:** call control and signalling aspects *Dec.*

			N3: transport aspects *Dec.*
			N3: inband signalling *Dec.*
			S1, S2: Review whether service/stage 1 or architecture/stage 2 aspects need to be aligned *Dec.*
	Facsimile	**Real Time Fax**postponed from R99 to R00, **SP-000169**	**T2:** T erminal capabilities, AT commands *Dec.*
			N1: signalling aspects (e.g. ICM) *Dec.*
			N3: service provision *Dec.*
			S1, S2: Review whether service/stage 1 or architecture/stage 2 aspects need to be aligned *Dec.*
	Text telephony • **SP-000162** agreed WI. Rapporteur Gunnar Hellström, Ericsson Radio Systems AB, email: gunnar.hellstrom@omnitor.se tel: +46 708 204 288	**Text Telephony**	**S1**: Text Feature Stage 1 description
			S2: Text Feature Stage 2 architecture
		Text Feature Activation and transport	**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
		Text Feature Interworking	**N3**: PSTN Interworking *Dec.*
			N3: IP Interworking *Dec.*
			N3: PLMN Interworking *Dec.*
		Text Feature Terminal Aspects	**T2**:Connection of PSTN textphones to MS
			T2: Terminal interfaces and functions
			T2: MMS Commonalities
			T3: USIM aspects
	Bearer Modification without pre-notification Preliminary as no official work item exists on the issue	**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. WI proposed by N3 in N3-000269	**N1:** in call modify procedure *Dec.*
			N3: interworking function, TAF *Dec.* Preliminary as no official work item exists on the issue
			N4: Out of band Transcoder Control *Dec.* Preliminary as no official work item exists on the issue
			T2: AT commands *Dec.* Preliminary as no official work item exists on the issue
		Bearer Modification because of radio conditions S1 requested to further elaborate requirements	**S2:** tbd
Codecs	**Wideband Telephony Service**	**AMR – Wideband specification**	**S4**,TD SP-000024: TR 26.901 v2.0.0 AMR Wideband Speech Codec Feasibility Study Report (Release 2000).
			S4,TD SP-000027: AMR Wideband Permanent project document WB-3: Performance Requirements, completed *TSG#7*

	S4,TD SP-000028: AMR Wideband Permanent project document WB-4: Design Constraints, completed *TSG#7*
	S4,WB AMR speech Codec Qualification *completed*
	S4,WB AMR speech Codec Selection Tests *June to Oct. 5 candidates*
	S4,WB AMR speech Codec Selection oct 23 - oct 29.
	S4,Wide Band Speech Telephony Terminal Acoustic Characteristics *Dec.*
	T1, to review Wide Band Speech Telephony Terminal Acoustic Characteristics *Nov.*
	S4,Wide Band Speech Telephony Terminal Acoustic Test Specification *Dec.*
	T1, to review Wide Band Speech Telephony Terminal Acoustic Test Specification *Nov.*
	S4,Wideband Speech Codec General Description *Dec.* **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), *Dec.* Wideband Speech Codec Performances Characterization *Feb 2001* Codec lists *Dec.*
	T1 Conformance tests (CRs to 34 series) ***IGC Testing*** *June 2001*
WB AMR Implementation in UTRAN	**RAN WG** Tasks (CRs) *Dec.*
WB AMR Implementation in CN	**CN WG** Tasks (CRs) *Dec.* **N1:** • Indication of supported codecs by the MS • Bearer Capability negotiation • Codec indication to MS
WB Telephony Requirements	**S1** requirements (CRs) *Dec.*
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	**OoBTC**[7]	**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.
			N4: Codec Negotiation inter MSC, Bearer establishment inter MSC. TS 23.153 **R99** part complete. capabilities moved to annex. See NP-000127 **Open issues:** 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).
			S2
			R2: Bearer establishment between UE and RAN, TFC control by RRC
			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

[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.

			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 speccification forseen,, replacing 08.62 for 3G) Dec 00**
		TFO AMR Implementation in UTRAN ?? Inband	**RAN WG** Tasks (CRs) *Dec.*
		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) *Dec.*
	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 *May*
		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
	Advanced Cell Broadcast	**Service Requirements**	**S1:** Enhancements to release 99 CBS e.g. Charging requirements, Capacity Enhancements *May*
		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

		v**Objects 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
			S2, N4: User Profiles definition
		Interaction between VHE Toolkits	**S1, S2:** Develop definition and architectural consequences for the VHE toolkit interactions
		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)
			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. • **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 exiting 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
			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**	**T2:** Additional features for MExE R2000
		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
			S3: • 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:**
	Study on the evolution of GSM CS algorithms		**S3, N4, N1, SMG 2 WPA**

			S3: • 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: • 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:** • Presentation to S3 of system architecture, Aug **S3:** • Requirements capture, Sept • Security Feature Specification, Nov • Feasibility study, Jan 2001 • Definition of security architecture 1st draft, Mar 2001: CRs approved, Dec 2001 **SAGE:** • Production of new algorithm, completed Oct 2001
	Visibility and Configurability		**T2, T3, RAN2, SMG2 WPA, N1** **S3:** • 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: • Integrity protection • Authentication

		Lawful intercept	**N4** **S3:** • 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:** • 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.
	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	identified technical *questions* related to testing (no break-down to features, building blocks or work tasks performed yet) • 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	**Support of Localized Service Area (SoLSA)** 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. What is the status of this R00 work item?	**Basic concept of SoLSA (broadcast LSA ids, zone tariffing)** (The list of Work Tasks is from the Work Item description contribution to S1, tdoc. S1-000278)	Creation of Work Item for UTRAN-SoLSA (This was supported only by one company in the S1 April meeting)
			S1: Development of SoLSA service descriptions
			S1, RAN: LSA definition
			S1, RAN: LSA selection
			R2: LSA information broadcast
			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 *July* 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 *May*
			S2: Specify LCS Stage 2 for R00 and new service features *Sept*. predefined areas, location of all UE in area? accuracy classes?
			S2: Exception procedures *Sept.* **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) *Sept.*
		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 *Sept.* - assistance data handling - to be further defined
		LCS in UTRA TDD **Work Item: "Support of Location Services in UTRA TDD"**	**R2:** UTRAN stage 2 *Sept.* - exception procedures - possible impact of new LCS service features
			R2: Radio Resource Management (for LCS TDD)
			R1: Location measurements TDD *Sept.*
			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] *June*
		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 *Sept.*
			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 *Sept.*
			[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 *July*
			S2: Corresponding LCS-OSA stage 2 specification, 23.171 *Sept.*
			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, imoacts on 29.198 &29.998
		Universal Geographic Area Description (GAD)	**S2:** Possible update of 23.032 *Sept.*
TEI[8]	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: • Overall Co-ordination • Vocabulary		

Deleted Work Items
This section reflects the WI deleted from previous version.

[8] To be used carefully!

Optimisation of signalling. **[MOVE TO DELETED]**	**Turbocharger (N1?)** • **N1** internal WI postponed from R99, open whether part of R00 (**SP-000169**)	[to be defined] *Dec.* Proposal from N1 to delete the WI.
	Layer 3 Segmentation • **N1, N4, R3 (?)** WI postponed from R99, open whether part of R00 (**SP-000169**)	[to be defined] *Dec* Proposal from N1 to delete the WI..

Enhanced User Identity Confidentiality **[MOVE TO DELETED]**		**N1:** • Procedures using encrypted IMSI • Response to paging with non-encrypted IMSI (roaming)
		S2, R2, R3, N4