Technical Specification Group Services and System Aspects
Meeting #7, Madrid, Spain, 15-17 March 2000

TSGS#7(00)0108

Source: **TSG SA WG2** Intergroup coordination chair persons ad-hoc meeting.
Title: **Proposal for the Release 2000 IGCs, Features, Building Blocks and Work Tasks v.0.7**
Agenda Item: **5.2.3**

Introduction

This document is an initial attempt to describe the *work items* of R00 in terms of their function as *feature, building blocks* and *work task.* The features and building blocks has not yet presented to nor discussed with other WG's.
The definition of *features, building blocks* and *work tasks* is described in SP-000109.
A full description of the term *work item* can be found in the 3GPP Working Procedures (http://www.3gpp.org/About_3GPP/3gpp_wp.zip).

Inter Group Co-ordination groups (IGCs)

For the sake of technical project management/intergroup co-ordination, several technical areas are identified with responsible persons, evolving from R99 IGC groups:

1. Bearer and Access Stratum(François Courau, Alcatel)
2. QoS (Oscar Lopez-Torres, T-Mobil)
3. CC and roaming (Ulrich Dropmann, Siemens)
4. Codecs (Ian Doig, Motorola)
5. Messaging (Martin Guntermann, Mannesmann Mobilfunk)
6. Terminal local features (Paul Vosker Nokia)
7. Service platforms (Christophe Gourraud, Ericsson)
8. Security (Chris Pudney, Vodafone-Airtouch)
9. Billing, charging and management (Yukio Hiramatsu, NTT)
10. Testing (N.N. Motorola)
11. Location related issues (Jan Kall, Nokia)
12. Overall Co-ordination and general issues (Alain Sultan, MCC)

Definition of the IGCs, Features and Building Blocks, Work Tasks of R00

See the table bellow.

Inter Group Co-ordination	***Feature***	***Building block***[1]	***work task***[2]
Bearer and Access Stratum (Francois Courau Alcatel)	Evolution of transport	Evolution of the Transport in the UTRAN[3]	Introduction of an option allowing an IP transport in the UTRAN
		Evolution of the Transport in the CN[4]	
		Evolution of Bearers in the CN[5]	Evolution of the bearers inside the PLMN
			Evolution of the bearers at the inter-working point with other types of networks
		Radio Interface Improvement	To be discussed at RAN level. It shall normally contain the left over from R99 postponed to R00
		RAN improvement[6]	To be discussed at RAN level. It shall normally contain the left over from R99 postponed to R00

[1] please note that the building blocks not very stable at the moment
[2] please note that work tasks are not stable at all the moment
[3] These building blocks are considered as independent.
[4] These building blocks are considered as independent.
[5] 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.
[6] These building blocks shall be considered as independent from any features and followed as such.

<table>
<tr><td>QoS (Oscar Lopez-Torres, T-Mobil)</td><td colspan="3">identified technical questions related to QoS (no break-down to features, building blocks or work tasks performed yet)
• Real Time QoS for packet services
• Non-real time QoS Enhancements for packet services
• QoS for speech
• QoS for Multimedia
• QoS for circuit switched – data
• QoS for VoIP
• Requirements for an IP call control protocol to supply QoS session-compatibility information.
• QoS Charging-sensitive parameters
• QoS verification/requirements on parameter values in external networks/terminals (; e.g., VoIP fixed network terminals)</td></tr>
<tr><td rowspan="5">Call Control and roaming (Ulrich Dropmann, Siemens AG)</td><td rowspan="5">Provisioning of IP-based multimedia services
[S1 WI on service requirements including roaming]</td><td rowspan="2">Call control and roaming to support IP-based multimedia services in UMTS
[S2 WI on architecture]
Selection of multimedia call control protocol (e.g. H.323, SIP)
Addressing and Routing
...</td><td><particular call control and roaming protocol standardisation is part of work task of CN WG's and to be reviewed with CN WG's></td></tr>
<tr><td><other issues></td></tr>
<tr><td rowspan="3">"Security features to support IP-based multimedia services in UMTS
[S3, Technical Area Security]</td><td>Authentication between mobile and „Gatekeeper“</td></tr>
<tr><td>Integrity protection for Mobile to „Gatekeeper“ signalling</td></tr>
<tr><td>Lawful Interception in the R’2000 architecture
IPsec</td></tr>
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		Evolution of the bearers on the Radio interface to enable efficient IP-based multimedia services in UMTS [RAN: Technical Area Bearer and access stratum]	Introduction of Header Compression/Stripping at the RNC
		QoS to support IP-based multimedia services in UMTS [S2: QoS]	
	Enable bearer independent Circuit-switched network architecture [S2 with requirements on architecture]	Enable bearer-independent call control	Standardisation of protocols over reference points between media gateways
			Standardisation of protocols over reference points between MSC server and Gateway MSC server
		Bearer independence and codec control issues (+)	Support of Transcoder in CN (*+)
			Transcoder-Free (out-of-band signalling) (*+)
		Separation of switching and control by open interface	Standardisation of protocols over reference points between MGW and MGWC/MSC server
	High Speed Circuit Data*	<detailed break down not done>	
	Layer 3 Segmentation	<detailed break down not done>	
	Turbocharger	<detailed break down not done>	
	GLR (*)	<detailed break down not done>	

+ to be reviewed whether this belongs to this technical area or to codec

* this feature might be part of R99 if ready for SA#7. In that case it will would be removed from the R00 project plan.

	Call Forwarding Enhancement (*)	<detailed break down not done>	
	Real Time Fax (*)	<detailed break down not done>	
	Automatic Establishment of Roaming Relations	<detailed break down not done>	
	Text telephony		
Codecs (Ian Doig, Motorola)		Specification of the video codec(s) ??	No Work in this area intended
	Codec for Multimedia Telephony Service	3G Audio-Visual Terminal Characteristics **R99**/**00** June 2000	*General Description* **R99**
			Modifications to H.324 **R99**
			Call Set-Up Requirements **R99**
			Terminal Display and Camera Characteristics For H.324 Narrow-band Video Telephony Service **R99** June 2000 (CS)
			Terminal Display and Camera Test Specifications For H.324 Narrow-band Video Telephony Service **R99** June 2000 (CS)
			Terminal Display and Camera Characteristics For H.323 Narrow-band Video Telephony Service **R00** December 2000 (PS)
			Terminal Display and Camera Test Specifications For H.323 Narrow-band Video Telephony Service **R00** December 2000 (PS)
			Narrow Band (3.1kHz) Speech & Video Telephony Terminal Acoustic Characteristics **R99** June 2000

			Narrow Band (3.1kHz) Speech & Video Telephony Terminal Acoustic Test Specification. **R99** June 2000
		QoS for speech and multimedia codec	**ICG QoS**. Common Building Block
			TR 26.912 QoS Speech and Multimedia Codec Quantitative performance evaluation of H.324 Annex C over 3G **R99** March 2000
		Floating Point Implementation for AMR June 2000 **R99** Common Building Block ?	*Verification of the AMR floating point performance* **R99** June 2000
	Wideband Telephony Service *R00*	**AMR – Wideband specification *R00***	WB AMR speech Codec feasibility study report March 2000
			WB AMR speech Codec Qualification (see section 7.1) June 2000
			WB AMR speech Codec Selection Tests June to September 2000
			WB AMR speech Codec Selection October 2000
			Wide Band Speech Telephony Terminal Acoustic Characteristics December 2000 + **TSG T WG1**
			Wide Band Speech Telephony Terminal Acoustic Test Specification December 2000+ **TSG T WG1**
			Wideband Speech Codec General Description December 2000 Wideband Speech Codec ANSI C-Code December 2000 Wideband Speech Codec Test Sequences December 2000

			Wideband Speech Codec Speech Transcoding Functions December 2000 Wideband Speech Codec Error Concealment of lost frames December 2000 Wideband Speech Codec Source Controlled Bit-Rate Operation December 2000 Wideband Speech Codec Voice Activity Detector December 2000 Wideband Speech Codec Frame Structure December 2000 Wideband Speech Codec Performances Characterization Tbd 2001 Codec lists December 2000
			T1 Conformance tests (CRs to 34 series) ***ICG Testing*** June 2001
		WB AMR Implementation in UTRAN	**RAN WG** Tasks (CRs) December 2000
		WB AMR Implementation in CN	**CN WG** Tasks (CRs) December 2000
		WB AMR Requirements	**S1** requirements (CRs) December 2000
		QoS for speech and multimedia codec	**ICG QoS**. Common Building Block
	Transcoder-Free (out-of-band signalling) R00 See SA2#12 tds 419, 448, 449	**OoBTC**	**N1** Codec Negotiation between UE and MSC. Signalling for R00
			N2 Codec Negotiation inter MSC, Bearer establishment inter MSC. TS 23.153 **R99** part complete. **R00** to move to annex

			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	**N1**
			N2
			R3
	Mandatory Speech Codec for Narrowband Telephony Service R99	AMR Specification **R99**	**AMR Characterization Report for 3G R00** June 2000 R99
			AMR Characterization Report for 2G (complete) **R99**
			AMR speech Codec feasibility study report **R99** March 2000
			AMR - Noise Suppression 2G only **R99** *June 2000*
			AMR – Specification set (complete) **R99**
		Floating Point Implementation for AMR June 2000 **R99** Common Building Block ?	*Verification of the AMR floating point performance* **R99** June 2000
	Tandem Free aspects for 3G and between 2G and 3G systems R00	**Tandem Free AMR**	**TFO AMR Specifications** June 2000 R00
		TFO AMR Implementation in UTRAN ?? Inband	**RAN WG** Tasks (CRs) December 2000

		TFO AMR Implementation in CN	**CN WG** Tasks (CRs) December 2000
	Support of Transcoder in CN R00	WI description and Tdoc S2-99352 Speech Transcoder: Location and Control at the UMTS Core Network Border	
	Transmission planning in 3G networks R00	*Echo control for speech and multimedia services* March 2000 **R99**	TS *26.915 Echo control for speech and multimedia services* **R99** March 2000
			CRs to existing specs **R99** March 2000
	:	03.50 equivalent **R00**	Specifications **R00**
Messaging (Martin Guntermann, Mannesmann Mobilfunk)	identified technical *questions* related to terminal local features (no break-down to features, building blocks or work tasks performed yet) • Advanced Cell Broadcast • Multimedia Messaging • SMS cell broadcast CBS • SMS • 3G terminal characteristics		
Terminal local features (Paul Voskar, Nokia)	identified technical *questions* related to terminal local features (no break-down to features, building blocks or work tasks performed yet) • Alternative AT commands • AT commands • UE capabilities • UE Multiplexer • UICC/ME interface • UICC API		
Service platforms (Christophe Gourraud, Ericsson)	VHE/OSA	Evolutions of VHE concepts	TBD

		Support of VHE/OSA by R00 network entities and protocols (e.g. CSCF, MExE entities)	TBD
		Personal Service Environment (PSE), user profiles and user profile management	PSE architecture and interfaces
			User Profiles definition
			SCFs for user profile access/management by OSA applications
		VHE/OSA management aspects	TBD
		Improvements to VHE/OSA security	Principles and architecture definition
			(possibly) security related SCF(s) definition
		New Network Service Capability Features (N-SCFs) and evolutions of existing ones e.g. GPRS & SMS charging Multimedia SCF(s) Conferencing	SCFs requirements
			SCFs stage 2 specification
			SCFs stage 3 specification
		New Framework Service Capability Features and evolutions of existing ones (F-SCFs) e.g. Interfaces between framework and service capability servers	SCFs requirements
			SCFs stage 2 specification
			SCFs stage 3 specification

		Harmonisation/co-ordination with non UMTS related initiatives (e.g. SPAN3/SPAN6, Parlay group)	TBD
	CAMEL phase 4	MO calls: Mid call procedure	TBD
		MO/MF calls: Creation of call parties - Call Party Handling	TBD
		MT calls: Mid Call procedure	TBD
		CSE Initiated call setup	TBD
		Procedures for USSD	TBD
		User Interaction scripts	TBD
		Enhancements to CSE control of call duration – playing of tones	TBD
		Enhancements to Call Forwarding interactions	TBD
		Interactions with Optimal Routing	TBD
	MExE	AT command support	TBD
		3rd MExE classmark	TBD
		Interactions with other service platforms building blocks (VHE/OSA, CAMEL), e.g. user profiles, terminal capabilities	TBD
Security (Chris Pudney, Vodafone)	Integrity protection for user plane data		
	Core network signalling security		

	FIGS		
	Network wide encryption		
	Secure mobile platform for applications		
	Study on the evolution of GSM CS algorithms		
	GEA 2		
	„Mandatory“ GPRS encryption		
	Enhanced User Identity Confidentiality		
Billing, charging and management (Yukio Hiramatsu, NTT)	identified technical *questions* related to billing, charging and management (no break-down to features, building blocks or work tasks performed yet) • Telecom Mgmt - X.25 • Performance Mgmt • Charging issues • Configuration Mgmt • Fault Mgmt • Verify interoperation between S5 O&M and RAN O&M		

Testing (N.N.,)	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 (Jan Kall, Nokia)	Support of Localised Service Area (SoLSA)	Basic concept of SoLSA (broadcast LSA ids, zone tariffing)	
		Localized Service Area (LSA) indication (LSA display in UE)	
		Preferential access (cell access priority for LSA users)	
		Exclusive access (private cells)	
		Active mode support (favoring LSA cells in active mode)	
		LSA only access (type cordless or WLL)	
		Idle mode support (favoring LSA cells in idle mode)	
	Location Services	Service description (stage 1 release 2000 update)	
		Overall system aspects of LCS	

		LCS support in the core network PS domain	
		LCS support in the core network CS domain	
		Iu interface support for LCS	
		LCS support in UTRAN including UE	
		LCS application interfaces	
		Universal Geographic Area Description (GAD)	
Overall co-ordination and general issues (Alain Sultan, MCC)	There are no features, building blocks and work tasks from the overall co-ordination, rather: • Overall Co-ordination • Vocabulary		