Technical Specification Group RAN
Meeting #7, Madrid, Spain, 13-15 March 2000

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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:

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
		RNS 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
QoS: EDGE – GERAN
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</td></tr>
<tr><td></td><td></td><td>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>	

+ 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.

	GLR (*)	<detailed break down not done>	
	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		
Codec (Ian Doig, Motorola)	Codec for Circuit switched Multimedia Telephony Service	**Specification of the video codec(s)**	Narrow Band (3.1kHz) Speech & Video Telephony Terminal Acoustic Characteristics
			Narrow Band (3.1kHz) Speech & Video Telephony Terminal Acoustic Test Specification.
		H.324	General Description
			Modifications to H.324
			Call Set-Up Requirements
			Terminal Display and Camera Characteristics For H.324 Narrow-band Video Telephony Service
			Terminal Display and Camera Test Specifications For H.324 Narrow-band Video Telephony Service
	Codec for packet switched Multimedia Telephony Service	**H.323**	Terminal Display and Camera Characteristics For H.323 Narrow-band Video Telephony Service
			Terminal Display and Camera Test Specifications For H.323 Narrow-band Video Telephony Service

	Codec for Low Bitrate Multimedia Telephony Service		
	Mandatory Speech Codec for Narrowband Telephony Service	AMR Specification	**AMR Characterization Report** March 2000 R99
			Floating Point Implementation for AMR March 2000 R99
			AMR - Noise Suppression
	Tandem-Free for AMR June 2000 soonest R00		
	Wideband Telephony Service	*AMR – Wideband specification*	WB AMR speech Codec Qualification (see section 7.1)
			Wide Band Speech Telephony Terminal Acoustic Characteristics
			Wide Band Speech Telephony Terminal Acoustic Test Specification
			WB AMR speech Codec; General description
			WB AMR speech Codec; C-source code
			WB AMR speech Codec; Test sequences
			WB AMR speech Codec; Transcoding Functions
			WB AMR speech Codec; Error concealment of lost frames
			WB AMR speech Codec; comfort noise for AMR Speech Traffic Channels
			WB AMR speech Codec; Source Controlled Rate operation

			WB AMR Speech Codec; Voice Activity Detector for AMR Speech Traffic Channels
			WB AMR speech Codec; Frame Structure
			WB AMR speech Codec; Interface to Iu and Uu
			Codec lists
			RAN WGs Tasks (CRs)
			CN WG Tasks (CRs)
	Transcoder-Free (out-of-band signalling)	**OoBTC**	**N1** Codec Negotiation between UE and MSC
			N2 Codec Negotiation inter MSC, Bearer establishment inter MSC
			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, initialisation, time alignment)
	Support of Transcoder in CN		
	Transmission aspects of Speech service in 3G network (requirements for Bearer) March 2000 R99		

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
			Principles and architecture definition

		Improvements to VHE/OSA security	(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		
	?	GERAN, packet side	
	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., Motorola)	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 support in GERAN,...	
		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		