Source:	**SA**
Title:	**Rel-5 BB-level WI Descriptions for Charging Management under the OAM&P Feature**
Document for:	**Decision**
Agenda Item:	**7.5.3**

Charging Management (S5-010747)

?? The two (2) separate Rel-4 BBs (SA#10 approved) have been combined into one BB for Rel-5 (i.e. combined with IMS charging).

?? Rel-5 will cover both on-line and off-line IMS Charging (define the charging interfaces; identify CDRs and CM issues).

?? For on-line IMS Charging input from SA2 is still needed.

The Approval target date for all Rel-5 deliverables is shifted from March to **June 2002 (TSG#16)**.

Attachment:

S5_24	S5-010747	B 5.2	WID	Draft Work Item Description: Charging Management (Building Block: OAM-CH)	SWG_B (CB)	SA5 approved

Source:	**SA#14 plenary**
Title:	**Charging Management (Building Block: OAM-CH)**
Document for:	**Approval**

Work Item Description

Title: Charging Management (Building Block: **OAM-CH**)

1   3GPP Work Area

	Radio Access
	Core Network
X	Services (specifically, 3G Telecom Management: Charging Management)
	Terminals

2   Linked work items

??	(1273)	Provisioning of IP-based multimedia services (SA1 Feature)
??	(1367)	VHE enhancements (SA1 Feature)
??	(1637)	OSA enhancements (SA1 Feature)
??	(2062)	Wideband Telephony Service - AMR (SA4 Feature)
??	(1536)	Location Services enhancements (SA2 Feature)
??	(2464)	MExE enhancements (T2 Feature)
??	(2546)	UMTS QoS Architecture for PS Domain (SA2 Feature)
??	(2556)	End to End QoS for PS Domain including IMS (SA2 Feature)
??	(1142)	Charging and OAM&P (SA5 Feature)

3   Justification

Currently (i.e. in 3GPP release 4), only the charging functionality for the Circuit Switched (CS) and Packet Switched (PS) domains and for the MMS, are standardised. More advanced features, such as the IMS, or to provide service-related charging information for other new services, are not specified. Therefore, the specification and standardisation of more sophisticated functionality is proposed for these areas. Functional enhancements to the existing Release 4 charging specifications (e.g. MMS) are also being considered.

As more services, such as the ESS and Presence Service, are standardised in 3GPP, it is necessary to provide a mechanism for operators to charge for these advanced services based on information gathered in the service nodes and/or the core network nodes that are involved in providing transport capacities for the delivery of the service.

The IMS subsystem, currently being defined, will avail new services from which significant benefits are accruable for operators. This new subsystem will require a specification and standardisation of charging functionality that has not here-to-for been specified for UMTS.

Also required by these new charging features are considerations of architectural implications, the management of charging as new services are defined, and the method of defining the information model, as well as the impacts on the existing charging specifications, i.e. the charging principles and the CS and PS domains. Also, the addition of more sophisticated functionality is planned in certain areas in the existing specifications, such as the charging characteristics.

Finally, charging functionality for LCS needs to be provided. This entails addition of functionality to the PS and CS nodes that collect CDRs, as well as the specification of charging functionality for the LCS nodes.

4   Objective

The objective of this work item is:
- ?? to accommodate the charging requirements of the features listed above
- ?? To provide charging functionality for the new services, such as Presence, ESS
- ?? To specify the charging functionality for the IMS
- ?? To upgrade the existing charging specifications as appropriate in order to incorporate changes and additions

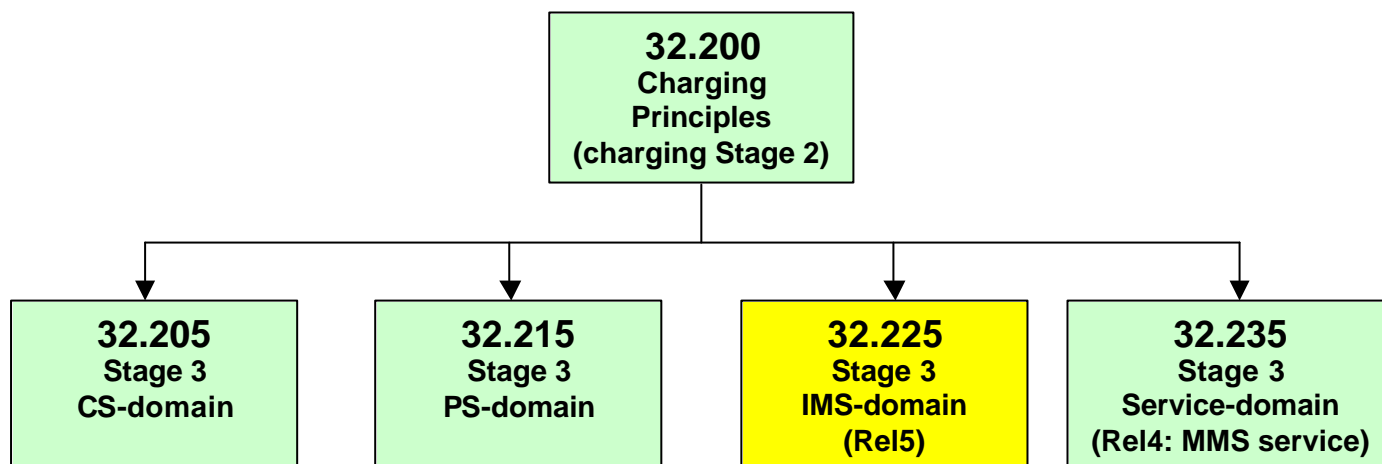necessary for the above functionalities and services

5 Service Aspects

Appropriate network nodes will need to collect and forward service related charging data.

6 MMI-Aspects

None

7 Charging Aspects

Charging Management - 32.200-series

```
                    ┌─────────────────────┐
                    │      32.200         │
                    │     Charging        │
                    │    Principles       │
                    │ (charging Stage 2)  │
                    └─────────────────────┘
```

| 32.205 Stage 3 CS-domain | 32.215 Stage 3 PS-domain | 32.225 Stage 3 IMS-domain (Rel5) | 32.235 Stage 3 Service-domain (Rel4: MMS service) |

The new structure of the SA5.CB charging specifications (TSs) comprises:
1) a set of Implementers' Guides and
2) an "umbrella" specification (TS 32.200) that applies to all of the Implementers' Guides.
   TS 32.200 is a tutorial to the charging systems to which the TSs apply and describes charging principles, architecture, and requirements.

The Implementers' Guides are specialised according to several criteria. Operating domains is one criterion.

Hence, Implementers' Guide exists for the CS Domain (TS 32.205) and for the PS domain (TS 32.215).

Because of its significant feature enhancements, the IMS (subsystem) of the PS domain has its own Implementers' Guide (TS 32.225).

Another implementers' guide (TS 32.335) has been created to expeditiously deal with charging for special types of advanced services that cross the boundaries of the guides cited above. For Release 4, TS 32.235 has only addressed MMS charging. In Release 5, it will address MMS enhancements, ESS, Presence and LCS, as far as the required stage1 and stage2 documents are available from SA1 and SA2.

The table below summarises the new structure of the SA5.CB charging TSs:

TS #	Tentative Title	Release	Editor
32.200	Charging principles	4 & 5	Ericsson (AHLBÄCK Hans)
32.205	Charging data description for the Circuit Switched (CS) domain	4 & 5	Nortel (BENDER, James)
32.215	Charging data description for the Packet Switched (PS) domain	4 & 5	Alcatel (LEHNERT Matthias)
32.225	Charging data description for IMS subsystem	5	Lucent (SHARON, Ariel)
32.235	Charging data description for application services	4 & 5	Siemens (GOERMER, Gerald)

8 Security Aspects

None

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes				X	
No	X	X			
Don't know			X		X

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	**Title**	**Prime resp. WG**	**2ndary resp. WG(s)**	**Presented for information at plenary#**	**Approved at plenary#**	**Comments**
32.225	Charging data description for IMS subsystem	SA5		TSG#15 (03/02)	TSG#16 (06/02)	

Affected existing specifications					
Spec No.	**CR**	**Subject**	**Approved at plenary#**	**Comments**	
32.200			TSG#16 (06/02)	SA1/SA2 have secondary responsibility	
32.205			TSG#16 (06/02)		
32.215			TSG#16 (06/02)		
32.235			TSG#16 (06/02)		

11 Work item rapporteur

Karl-Heinz NENNER (T-Mobil) Karl-Heinz.Nenner@T-Mobil.de

12 Work item leadership

SA5

13 Supporting Companies

Alcatel, Ericsson, Lucent, Nokia, Nortel, Siemens, T-Mobil

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14b The WI is a **Building Block** parent **Feature(s):**
  ?? (1273) Provisioning of IP-based multimedia services (SA1 Feature)
  ?? (1367) VHE enhancements (SA1 Feature)
  ?? (1637) OSA enhancements (SA1 Feature)
  ?? (2062) Wideband Telephony Service - AMR (SA4 Feature)
  ?? (1536) Location Services enhancements (SA2 Feature)
  ?? (2546) UMTS QoS Architecture for PS Domain (SA2 Feature)
  ?? (2556) End to End QoS for PS Domain including IMS (SA2 Feature)
  ?? (1142) Charging and OAM&P (SA5 Feature)

15 Work Tasks under this Building Block

Building Block	Work Task	Description	Release
Charging Management	Charging Principles	Provide (enhancements of) charging principles for the Circuit Switched and Packet Switched domains, the IMS subsystem and services (e.g. MMS and LCS),	Release 5
	Circuit Switched Charging	Define enhancements to existing Charging Data Records (CDRs) or new CDRs as needed to support both circuit-switch network evolution and new services.	Release 5
	Charging evolutions Packet switched domain	Interworking/alignment with other domains and services. Enhancements for the Charging Characteristics	Release 5
	IMS Charging Aspects	Define the charging interfaces; identify CDRs and CM issues.	Release 5
	Service related charging	MMS enhancements, LCS, Presence Service, ESS.	Release 5