Technical Specification Group Services and System Aspects **TSGS#13(01)0461**

Meeting #13, Beijing, China, 24-27 September 2001

Source: **SA5**

Title: **Rel-5 WI Descriptions for Charging and OAM&P (Operations, Administration, Maintenance & Provisioning) (Feature: OAM and 5 Building Blocks)**

Document for: **Approval**

Agenda Item: **7.5.3**

Tdoc	Work Item Title (Type)	Status
SP-000524 S5-000568	Subscription Management (Feature: SM)	Approved at SA#10
SP-010286 S5-010463	User Equipment Management	Approved at SA#12 as Feasibility Study
SP-010461 S5-010527	Charging and Operations, Administration, Maintenance & Provisioning (Feature: OAM)	New at SA#13
SP-010461 S5-010525	Principles, high level Requirements and Architecture (Building Block: OAM-AR)	New at SA#13
SP-010461 S5-010562	Network Infrastructure Management (Building Block: OAM-NIM)	New at SA#13
SP-010238 S5-010489	Performance Management (Building Block: OAM-PM)	Approved at SA#12
SP-000524 S5-000575	Charging Management (Building Block: OAM-CH)	Approved at SA#10
SP-000524 S5-000576	Charging Management for IMS (Building Block: OAM-CH-IP)	Approved at SA#10

3GPP TSG-SA5 (Telecom Management) **S5-010527**
Meeting #22, Paris, France 3-7 September 2001 **S5A010538**

Work Item Description

Title: Charging and OAM&P (Operations, Administration, Maintenance & Provisioning) (Feature: **OAM**)

1 3GPP Work Area

	Radio Access
	Core Network
X	Services (specifically, Charging and OAM&P)
	Terminals

2 Linked work items

- (2) Evolutions of the transport in the UTRAN (RAN Feature)
- (1273) Provisioning of IP-based multimedia services (SA1 Feature)
- (1367) VHE enhancements (SA1 Feature)
- (1536) Location Services Enhancements (SA2 Feature)
- (1637) OSA enhancements (SA1 Feature)
- (2062) Subscription Management (SA5 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)
- (35000) Feasibility Study on User Equipment Management (SA5)

  - Principles, high level Requirements and Architecture (SA5 BB)
  - Network Infrastructure Management (OAM-NIM) - new SA5 BB proposed at SA#13, which replaces the former Configuration Management (SA5 BB) and Fault Management (SA5 BB)
  - Performance Management (SA5 BB)
  - Charging (SA5 BB)
  - Charging Management for IMS. (SA5 BB)

3 Justification

The 3GPP specifications need to evolve in Rel5 to allow Charging and OAM&P additions and enhancements.

4 Objective

The objective of this work item (Feature) is to continue to lay down the Charging and OAM&P Framework to be followed by the 3G Telecom Management standardization and met by all other subsequent specifications - to be produced by all 3GPP TSGs (e.g. SA5, RAN O&M, GERAN O&M, ...- pertinent to 3G Systems' Telecom Management).

5 Service Aspects
OAM&P enhancements arising from Service Aspects (as defined by S1) of Rel5.

6 MMI-Aspects
Unknown at this time.

7 Charging Aspects
None (This feature is itself about Charging and OAM&P)

8 Security Aspects
Unknown at this time.

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes			X	X	
No	X	X			
Don't know					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**
None						

Affected existing specifications				
Spec No.	**CR**	**Subject**	**Approved at plenary#**	**Comments**
32-series (SA5)			03/2002	Release 5

11 Work item rapporteurs

Albert YUHAN (SA5 Chair, VoiceStream Wireless), Michael TRUSS (SA5 Vice-Chair, Motorola)

12 Work item leadership

SA5

13 Supporting Companies

T-Mobil, Motorola, Telia, Vodafone Group, BT, France Telecom, Ericsson, Siemens, Bouygues Telecom, Mannesmann MobilFunk, Nortel Networks, Hutchison 3G, VoiceStream Wireless.

14 Classification of the WI (if known)

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

14a The WI is a **Feature**: List of **Building Blocks** under this **Feature:**

- Principles, high level Requirements and Architecture (SA5)
- Network Infrastructure Management (OAM-NIM) - new SA5 BB proposed at SA#13, which replaces the former Configuration Management (SA5) and Fault Management (SA5)
- Performance Management (SA5)
- Charging Management (SA5)
- Charging Management for IMS. (SA5)

3GPP TSG-SA5 (Telecom Management) **S5-010525**
Meeting #22, Paris, France, 3-7 September 2001 **S5A010539**

Work Item Description

Title: Principles, high level Requirements and Architecture (Building Block: **OAM-AR**)

1 3GPP Work Area

	Radio Access
	Core Network
x	Services (specifically, 3G Telecom Management: Principles to be followed, high level requirements and Architecture)
	Terminals

2 Linked work items

- Subscription Management (SA5 Feature)
- Evolutions of the transport in the UTRAN (RAN Feature)
- Evolutions of the transport in the CN (CN4 Feature)
- Security enhancements (SA3 Feature)
- (and any other Feature requiring this BB: "Principles, high level Requirements and Architecture")
- User Equipment management feasibility study (SA5)
- Generic User Profile (SA1 Feature)
- End to End QoS for PS Domain including IMS (SA2 Feature)
- UMTS QoS Architecture for PS Domain (SA2 Feature)
- VHE Enhancements (SA1 Feature)

3 Justification

The 3GPP TSs 32.101 and 32.102 need to evolve in Rel5. The new areas to be incorporated include:

- Study of Charging and OAM&P aspects of IMS
- QoS Management
- Subscription Management WT:(Service Operations Management Framework).
- Management of Service Specific Entities
- Management of User Equipment
- Management of Wideband Distribution Subsystems (WDS)
- Update and SA5 internal alignment of UOAM procedures

4 Objective

The objective of this work item (BB) is to continue to lay down the technology Principles to be followed by the 3G Telecom Management standardization and enumerate the high level requirements and Architecture that shall be met by all other subsequent specifications - to be produced by all 3GPP TSGs (e.g. S3 Security, RAN O&M, GERAN O&M, ...- pertinent to 3G Systems' Telecom Management.

5 Service Aspects

Management of Service Specific Entities to ensure that the services are fully operational

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes			X	x	
No	X	X			
Don't know					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**
None						

Affected existing specifications				
Spec No.	**CR**	**Subject**	**Approved at plenary#**	**Comments**
32.101			03/2002	Release 5
32.102			03/2002	Release 5
32.800			03/2002	Release 5

11 Work item raporteurs

Michael TRUSS, Motorola (32.101), Tommy BERGGREN, Telia (32.102)

12 Work item leadership

SA5

13 Supporting Companies

Motorola, Telia, Vodafone Group, BT, France Telecom, Ericsson, Siemens, Bouygues Telecom, Mannesmann MobilFunk, Nortel Networks.

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):**

- Charging and OAM&P (SA5)
- Subscription Management (SA5)
- Evolutions of the transport in the UTRAN (RAN)
- Evolutions of the transport in the CN (CN4)
- Security enhancements (SA3)
- (and any other Feature requiring this BB: "Principles, high level Requirements and Architecture")
- User Equipment Management (SA5)
- Generic User Profile (SA1)
- End to End QoS for PS Domain including IMS (SA2)
- UMTS QoS Architecture for PS Domain (SA2)
- VHE Enhancements (SA1)

3GPP TSG-SA5 (Telecom Management) **S5-010562**
Meeting #22, Paris, France, 3-7 September 2001 **S5C010377**

Work Item Description

Title: Network Infrastructure Management (Building Block: **OAM-NIM**)

1 3GPP Work Area

	Radio Access
	Core Network
x	Services (specifically, 3G Telecom Management: Network Infrastructure Management)
	Terminals

2 Linked work items

- Principles, high level Requirements and Architecture (BB OAM-AR)
- Evolutions of the transport in the UTRAN (RAN Feature)
- Evolutions of the transport in the CN (CN4 Feature)

3 Justification

The 3GPP TSs in the 32.1xx, 32.3xx, 32.4xx and 32.6xx series need to evolve in Rel5. The new areas to be incorporated include:

- Impact of Trouble ticketing management on Itf-N
- Notification Log IRP
- Bulk CM enhancements
- Active CM introduction (non-bulk)
- State Management
- Extensions to the Core Network Resource Model
- Inventory management
- Backwards Compatibility rules
- CORBA framework alignment with ITU-T SG4

4 Objective

The existing IRP Information Services (IS) and Network Resource Models (NRM) need to be extended to support new entities and functionality in the Radio Access and Core Networks.
This is necessary in order to accomplish a more complete framework for CM, FM and PM over the Itf-N.

5 Service Aspects
Support of CM, FM and PM ensures that the network services are fully operational.

6 MMI-Aspects
None

7 Charging Aspects
None

8 Security Aspects
None

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes			X	x	
No	X	X			
Don't know					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**
32.1xx 32.3xx 32.4xx 32.6xx	Possibly new specifications for "Kernel CM IRP", "Notification Log IRP" and other new features.	SA5	none	12/2001	03/2002	Release 5

Affected existing specifications				
Spec No.	**CR**	**Subject**	**Approved at plenary#**	**Comments**
32.1xx 32.3xx 32.4xx 32.6xx			03/2002	Release 5

11 Work item rapporteurs

Thomas TOVINGER (Ericsson), Jörg SCHMIDT (Motorola)

12 Work item leadership

SA5

13 Supporting Companies

Alcatel, AWS, Ericsson, Mannesmann Mobilfunk, Motorola, Nortel Networks, NTTDoCoMo, 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):**

- Charging and OAM&P (SA5)
- Evolutions of the transport in the UTRAN (RAN)
- Evolutions of the transport in the CN (CN4)
- (and any other Feature requiring this BB: "Network Infrastructure Management")

15 Work Tasks under this Building Block

BB	WT #	Work task	Comments	Release
Network Infrastructure Management (OAM-NIM)	WT1	Consistency check with TR 32.800 (UOAM) **Driver:** Mannesmann Mobilfunk	Check the consistency of the Release 4 version of 32.800 with all FM/CM documents	Rel-5
	WT2	Study the relevance of an alarm removal function **Driver:** Ericsson	Based on Tdoc S5F010xx	Rel-5
	WT3	CORBA framework alignment with ITU-T SG4, notification handling part. **Driver:** AWS	Feasibility study and if possible, alignment with ITU-T SG4. Restricted to notification handling.	Rel-5
	WT4	Impact of Trouble ticketing management on Itf-N **Driver:** Ericsson	Based on S5F000104. To be reworked for new IS	Rel-5
	WT5	Notification Log IRP **Driver:** Motorola		Rel-5
	WT6	Test management **Driver:** Siemens	The goal is to support a mechanism to allow basic test management over Itf-N	Rel-5
	WT7	Security alarms **Driver:?**	The goal is to provide support for security alarms	Rel-5
	WT8	Bulk CM enhancements **Driver**: T-Mobil	Activation and Upload filter enhancements.	Rel-5
	WT9	Active CM introduction (non-bulk) **Driver**: AWS	Mainly extensions to 32.60x, including: • Object creation • Object deletion • Attribute setting	Rel-5
	WT10	Extensions to the Generic Network Resource Model **Driver:** Siemens	Extensions to 32.62x, e.g. additional attributes or generic object classes.	Rel-5
	WT11	State Management **Driver:** Siemens	Addition of state management definitions to each relevant specification. Define state management attributes and their behaviour. Add state management attributes to existing managed object classes.	Rel-5
	WT12	Extensions to the Core Network Resource Model **Driver:** T-Mobil	CN related objects/attributes in 32.63x, e.g. in support of LCS/CBS resources/functions, addition of necessary new ME types.	Rel-5
	WT13	Possible new Solution Sets for existing IRPs **Driver:** Siemens	Feasibility study and possibly definition of new SSs, e.g. SNMP SS for Notification IRP or possible new CMIP SS for Notification IRP.	Rel-5
	WT14	Inventory management **Driver**: T-Mobil	Inventory management. Starting point is S5C010348.	Rel-5
	WT15	Alignment with 32.102 **Driver:** Ericsson	Introduction of new description methodology for all CM IS documents, and compliance statements etc.	Rel-5
	WT16	New Kernel CM IRP **Driver**: AWS	New common CM IRP based on Basic CM IRP	Rel-5
	WT17	Backwards Compatibility rules **Driver**: Ericsson	Backwards Compatibility rule definitions. Expected to result in recommendations to SWG-A, possibly also affecting 32.6xx specifications.	Rel-5
	WT18	Performance management **Driver**: ?	Possibly IRP (IS)-related specifications for PM, *scope TBD*	Rel-5 candidate

Abbreviations used:

IRP	Integration Reference Point
IS	Information Service
NRM	Network Resource Model
SNMP	Simple Network Management Protocol (IETF)
SS	Solution Set
CORBA	Common Object Request Broker Architecture
FS	Feasibility Study
CM	Configuration Management
FM	Fault Management
PM	Performance Management