Technical Specification Group Services and System Aspects    *TSGS#10(00)0524*
Meeting #10, Bangkok, Thailand, 11-14 December 2000
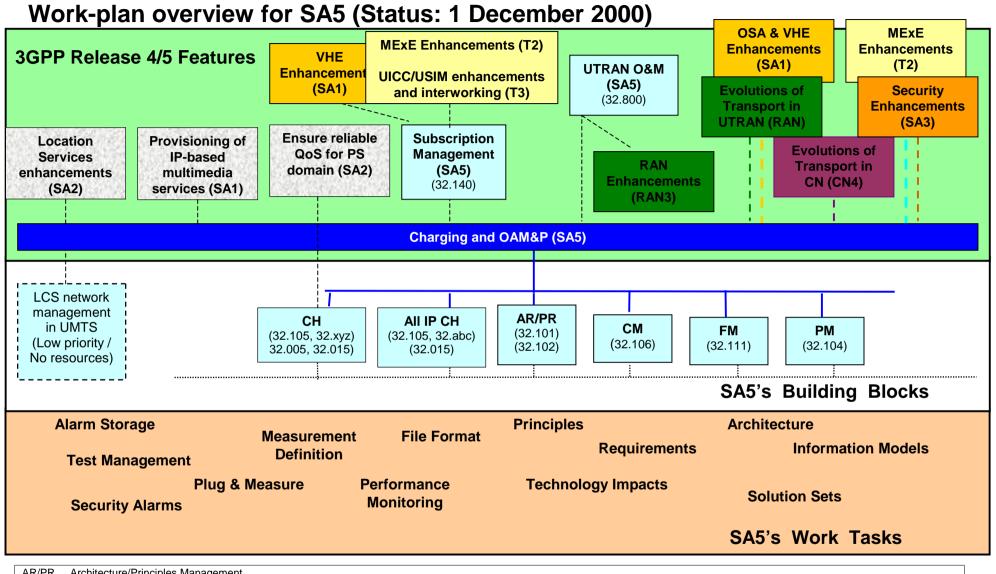
**Source:**        **SA WG5**

**Title:**         **SA5 proposed Work-Plan & Work Items for Release 4/5**

**Document for:**  **Approval**

**Agenda Item:**   **7.5.3**

| Tdoc | Work Item Title (Type) | Status |
|---|---|---|
| S5-000568 | Subscription Management (Feature: SM) | Provisionally approved at SA#9 |
| S5-000569 | UTRAN Operations and Maintenance procedures (Feature: UOAM) | Provisionally approved at SA#9 |
| | | |
| S5-000570 | Charging and OAM&P (Operations, Administration, Maintenance & Provisioning) (Feature: OAM) | New at SA#10 |
| S5-000571 | Principles, high level Requirements and Architecture (Building Block: OAM-AR) | Provisionally approved at SA#9 |
| S5-000572 | Configuration Management (Building Block: OAM-CM) | New at SA#10 |
| S5-000573 | Fault Management (Building Block: OAM-FM) | Provisionally approved at SA#9 |
| S5-000574 | Performance Management (Building Block: OAM-PM) | New at SA#10 |
| S5-000575 | Charging Management (Building Block: OAM-CH) | New at SA#10 |
| S5-000576 | Charging Management for all-IP UMTS networks (Building Block: OAM-CH-IP) | New at SA#10 |

# Work-plan overview for SA5 (Status: 1 December 2000)

**3GPP Release 4/5 Features**

OSA & VHE Enhancements (SA1)

MExE Enhancements (T2)

MExE Enhancements (T2)

UICC/USIM enhancements and interworking (T3)

VHE Enhancement (SA1)

UTRAN O&M (SA5) (32.800)

Evolutions of Transport in UTRAN (RAN)

Security Enhancements (SA3)

Location Services enhancements (SA2)

Provisioning of IP-based multimedia services (SA1)

Ensure reliable QoS for PS domain (SA2)

Subscription Management (SA5) (32.140)

RAN Enhancements (RAN3)

Evolutions of Transport in CN (CN4)

**Charging and OAM&P (SA5)**

LCS network management in UMTS (Low priority / No resources)

| CH (32.105, 32.xyz) 32.005, 32.015) | All IP CH (32.105, 32.abc) (32.015) | AR/PR (32.101) (32.102) | CM (32.106) | FM (32.111) | PM (32.104) |

**SA5's Building Blocks**

Alarm Storage

Measurement Definition

File Format

Principles

Architecture

Test Management

Requirements

Information Models

Plug & Measure

Performance Monitoring

Technology Impacts

Security Alarms

Solution Sets

**SA5's Work Tasks**

| | |
|---|---|
| AR/PR | Architecture/Principles Management |
| CH | Charging |
| CM | Configuration Management |
| FM | Fault Management |
| PM | Performance Management |
| OAM&P | Operations, Administration, Maintenance & Provisioning |

## Work Item Description

**Title:**  Subscription Management (Feature: **SM**)

### 1    3GPP Work Area

| | |
|---|---|
| | Radio Access |
| **X** | Core Network<br>*(A work item needs to be identified in conjunction with CN to enable subscription data management in the Core Network)* |
| **X** | Services (specifically, 3G Telecom Management: Service Operations Management) |
| **X** | Terminals<br>*(for<br>1: subscriber management interaction;<br>2: management information transportation; and<br>3: subscription profile modification on USIM if applicable)* |

### 2    Linked work items

- VHE Enhancements (SA1)
- (U)SIM Toolkit enhancements (T3)
- MExE enhancements: 22.057 (SA1) and 23.057 (T2)
- Charging and OAM&P  (SA5 Feature)
    - Principles, high-level requirements and architecture (SA5 BB)
    - Configuration Management (SA5 BB)
    - Charging Management (SA5 BB)
- Core Network work item to be identified jointly between SA5 and CN by March 2001.

### 3    Justification

The move in Release 5 towards supporting complex services will substantially increase the Subscription Management challenge from purely voice network concerns to include:

- Multimedia
- Data services
- Value Added Services
- End-to-end applications

### 4    Objective

This work item will capture the operational requirements leading to solutions necessary for this Subscription Management challenge.

There is an expectation that some of the Work Tasks will need to be carried out by other 3GPP TSGs/WGs, or jointly between SA5 and other 3GPP TSGs/WGs.

This work item will derive all necessary Release 5 Subscription Management Work Tasks to support these detailed Subscription Management requirements.

### 5    Service Aspects

This Work Item will develop Subscription Management solutions to support the Services Framework proposed in Release 5 as developed by SA1.

### 6    MMI-Aspects

Yes for end-user/consumer Subscription Management interactions with their Service Provider.

### 7    Charging Aspects

Yes

### 8    Security Aspects

Yes

### 9    Impacts

| Affects: | USIM | ME | AN | CN | Others |
|---|---|---|---|---|---|
| **Yes** | X | X | | X | |
| **No** | | | | | |
| **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 |
| 32.140 | Service Operations Management: Subscription Management | SA5 | SA1 (for service definitions) SA2 (for architecture) T2 (for terminal capabilities) T3 (for USIM aspects) CN (to be identified) | TSG#13 (09/01) | TSG#14 (12/01) | Proposed timescale – Release 5 |

| Affected existing specifications | | | | |
|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | Comments |
| 22.121 (SA1) | | | TSG#14 (12/01) | Release 5 |
| 22.127 (SA1) | | | TSG#14 (12/01) | Release 5 |
| 32.101 (SA5) | | | TSG#14 (12/01) | Release 5 |
| 32.105 (SA5) | | | TSG#14 (12/01) | Release 5 |
| 32.106 (SA5) | | | TSG#14 (12/01) | Release 5 |

**11          Work item raporteurs**

32.140 – Geoff CARYER (BT) geoff.caryer@btinternet.com

**12          Work item leadership**

SA5

**13          Supporting Companies**

BT, VoiceStream, Telenor, Telia, Sonera, Bouygues Telecom, FT

**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**

- **OAM-AR** Principles, high level Requirements and Architecture – (SA5) (WT: Service Operations Management Framework)
- **OAM-CM** Configuration Management (SA5)
- **OAM-CH** Charging (SA5)
- **VHE1-PSE** Personal Services Environment  (PSE), user profiles and user profile management (SA2), (Part of the VHE Enhancements Feature), SA5 may need to place requirements under this building block to achieve Subscription Management.
- SA5 may need to request a Building Block, Subscription profile management under one or both of the following building blocks in the release 5 timeframe:
  - **USAT1** (U)SIM Toolkit enhancements (T3), SA5 may need to request a Building Block , Subscription profile management on USIM.
  - **MEXE1-ENHANC** MExE Improvements and Investigations, SA5 may need to request a Building Block, Subscription profile management on USIM.

# Work Item Description

**Title:** <mark>UTRAN Operations and Maintenance procedures</mark> (Feature: **UOAM**)

## 1        3GPP Work Area

|   | |
|---|---|
|   | Radio Access |
|   | Core Network |
| X | Services (specifically, 3G Telecom Management: UTRAN O&M procedures) |
|   | Terminals |

## 2        Linked work items

- RAN Enhancements (RAN3 Feature)
- RRM Support over Iub and Iur: RRM optimisation (RAN3 BB)
- Charging and OAM&P  (SA5 Feature)
    - Principles, high level Requirements and Architecture (SA5 BB)
    - Configuration Management (SA5 BB)
    - Fault Management (SA5 BB)
    - Performance Management (SA5 BB)

## 3        Justification

The use of multi-vendor networks increases the need to have a common network management method.
This concept is already covered by the IRPs. However, in order to verify the completeness of the IRPs and their co-operation with other resource management interfaces, a total overview of management procedures is needed. These procedures where deduced from experiences of operating GSM networks.

## 4        Objective

To capture procedures and guidelines for identifying solutions to manage a multi-vendor network effectively.
It shall develop:

- Use cases for the complete O&M process from NMC to Node B
- Guidelines for solutions
- General O&M requirements

## 5        Service Aspects
*None*
## 6        MMI-Aspects
*None*
## 7        Charging Aspects
*None*
## 8        Security Aspects
*None*
## 9        Impacts

| Affects: | USIM | ME | AN | CN | Others |
|---|---|---|---|---|---|
| **Yes** | | | X | | |
| **No** | | | | | |
| **Don't know** | X | X | | 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 |
| 32.800 | Management level procedures and interaction with UTRAN | SA5 | RAN3 | TSG#11 (03/01) | TSG#12 (06/01) | Release 4 |

| Affected existing specifications | | | | |
|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | Comments |
| 32-Series (SA5) | | | TSG#12 (06/01) | Release 4 |
| 25.433 (RAN3) | | | TSG#12 (06/01) | Release 4 |
| 25.430 (RAN3) | | | TSG#12 (06/01) | Release 4 |

## 11        Work item raporteurs

Bert BODEN (Mannesmann Mobilfunk) bert.boden@d2mannesmann.de

**12**        **Work item leadership**
              SA5
**13**        **Supporting Companies**
              Mannesmann Mobilfunk, T-Mobil, Viag Interkom, Vodafone Group, France Telecom, Telenor.


**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)
- Configuration Management (SA5)
- Fault Management (SA5)
- Performance Management (SA5)


# 15    Work Tasks under this Feature

| Building Block | Work Task | Release |
|---|---|---|
| To be Identified | Consistency check with RAN3 NBAP (25.433) document. | Release 4 |
|  | Consistency check with RAN3 IUB Interface: General Aspects and Principles (25.430) document. | Release 4 |

## Work Item Description

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

**1　　　3GPP Work Area**

|   |   |
|---|---|
|   | Radio Access |
|   | Core Network |
| X | Services  <mark>(specifically, Charging and OAM&P)</mark> |
|   | Terminals |

**2　　　Linked work items**

- Evolutions of the transport in the UTRAN (RAN Feature)
- Evolutions of the transport in the CN (CN4 Feature)
- Security enhancements (SA3 Feature)
- VHE enhancements (SA1 Feature)
- OSA enhancements (SA1 Feature)
- MExE enhancements (T2 Feature)
- Subscription Management (SA5 Feature)
- UTRAN Operations & Maintenance Procedures (SA5 Feature)

  - Principles, high level Requirements and Architecture (SA5 BB)
  - Configuration Management (SA5 BB)
  - Fault Management (SA5 BB)
  - Performance Management (SA5 BB)
  - Charging Management (SA5 BB)
  - Charging Management for all-IP UMTS networks (SA5 BB)

**3　　　Justification**

The 3GPP specifications need to evolve in Rel4 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, SA3 Security, 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 Rel4/5.*

**6　　　MMI-Aspects**
*None.*

**7　　　Charging Aspects**
*Unknown at this time.*

**8　　　Security Aspects**
*Charging and OAM&P enhancements arising from Security Aspects (as defined by S3) of Rel4/5.*

**9　　　Impacts**

| Affects: | USIM | ME | AN | CN | Others |
|---|---|---|---|---|---|
| **Yes** | <mark>**X** (potentially)</mark> | <mark>**X** (potentially)</mark> | <mark>**X** (potentially)</mark> | <mark>**X** (potentially)</mark> | |
| **No** | | | | | |
| **Don't know** | | | | | <mark>**X**</mark> |

**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) | | | TSG#12 (06/01) | Release 4 |

**11　　　Work item raporteurs**
　　　Albert YUHAN (SA5 Chair, VoiceStream Wireless), Michael TRUSS (SA5 Vice-Chair, Motorola)

**12　　　Work item leadership**

SA5

**13**    **Supporting Companies**

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

**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)
- Configuration Management (SA5)
- Fault Management (SA5)
- Performance Management (SA5)
- Charging Management (SA5)
- Charging Management for all-IP UMTS networks (SA5)

- LCS network management in UMTS (SA5 BB requested by SA2 under Feature: Location Services enhancements) **Status:** Low priority/ No resources.

**3GPP TSG-SA5 (Telecom Management)**  SA5#16(00)0571
**Meeting #16, Tokyo, JAPAN, 27 Nov - 1 Dec 2000**

## 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 (S5 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")

**3    Justification**

The 3GPP TSs 32.101 and 32.102 need to evolve in Rel4/5. The new areas to be incorporated include:
- Subscription Management WT:(Service Operations Management Framework).
- IP Management

**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**

*None*

**6    MMI-Aspects**

*None*

**7    Charging Aspects**

*None*

**8    Security Aspects**

*None*

**9    Impacts**

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

| Affected existing specifications | | | | |
|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | Comments |
| 32.101 | | | TSG#12 (06/01) | Release 4 |
| 32.102 | | | TSG#12 (06/01) | Release 4 |

**11    Work item raporteurs**

Michael TRUSS, Motorola (3GPP TS 32.101), Tommy BERGGREN, Telia (3GPP TS 32.102)

**12    Work item leadership**

SA5

**13    Supporting Companies**

Motorola, Telia, Telenor, Vodafone Group, BT, France Telecom, Sonera, 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")

## Work Item Description

| Title: | ==Configuration Management== (Building Block: **OAM-CM**) |
|---|---|

**1          3GPP Work Area**

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

**2          Linked work items**
- Principles, high level Requirements and Architecture (SA5 BB)
- Fault Management (SA5 BB)
- Performance Management (SA5 BB)
- Subscription Management (S5 Feature)

**3          Justification**

3GPP TS 32.106 needs to evolve for Releases 4 and 5. The new areas to be incorporated include:
- Improved support of Fault Management (FM)
- Improved support of Performance Management (PM)
- Extensions to the Basic CM Information Service & Network Resource Model (NRM)

**4          Objective**

The Notification IRP Information Service and the Basic CM Information Service & Network Resource Model need to be extended to support entities and functionality in the Radio Access and Core Networks.
This is necessary in order to reach a more complete framework that supports FM and PM as well as putting necessary NEs and services in the 3G network into place.

**5          Service Aspects**
*None*

**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 |
| 32.106-x | Possibly new parts for extended NRM and/or new Solution Sets | SA5 | none | TSG#13 (09/01) | TSG#14 (12/01) | Release 5 |

| Affected existing specifications | | | | | |
|---|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | | Comments |
| 32.106 Parts 1-8 | | | TSG#12 (06/01) | | Release 4 |
| 32.106 Parts 1-8 | | | TSG#14 (12/01) | | Release 5 |

**11          Work item rapporteurs**

Thomas TOVINGER, Edwin TSE (Ericsson), Di ZHOU (Siemens), Randall SCHEER (Lucent Technologies), Trevor PIRT (Motorola)

**12          Work item leadership**

SA5

**13          Supporting Companies**

Alcatel, Ericsson, Lucent Technologies, Motorola, Nortel Networks, NTT DoCoMo, 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)
- UTRAN Operations and Maintenance procedures (SA5)

# 15      Work Tasks under this Building Block

| Building block | Work Task | Description | Release |
|---|---|---|---|
| CM | Consistency check with TR 32.800 (UOAM) | | Release 4 |
| CM | Reorganisation of the Basic CM IRP to enable reuse. | E.g. Separation of IS, Generic NRM and UMTS specific NRMs. | Release 4 |
| | Enhanced Passive CM support | Enhanced Information service in Notification IRP and "read-only/passive" part of Basic CM IRP, e.g. removal of Extended event type. | Release 5 |
| | Active CM introduction | Including:<br>• Object creation<br>• Object deletion<br>• Attribute set | Release 5 |
| | Extensions to the generic part of Basic CM IRP Network Resource Model | E.g. additional attributes or generic object classes. | Release 5 |
| | State Management | Addition of state management definitions to each relevant 32.106 part 5-7 specification. Define state management attributes and their behaviour. Add state management attributes to existing managed object classes. | Release 5 |
| | Bulk CM Data support. | Bulk CM Data Up/Download. (Initially based on input from TMF CCM). | Release 5 |
| | Network Resource Model For Core Network resources/functions | CN related objects/attributes in Basic CM IRP NRM, e.g. in support of LCS/CBS resources/functions. | Release 5 |
| | Enhancements To UTRAN Network Resource Model | More detailed UTRAN Network Resource Model, for example based on input from TMF CCM work. | Release 5 |
| | CORBA Framework Unification | Feasibility study and if possible, alignment  with T1M1 and ITU-T SG4. | Release 5 |
| | Possible new Solution Sets for existing IRPs | FS and possibly definition of new SSs, e.g. SNMP SS for Notification IRP. | Release 5 |

Abbreviations used:

| | |
|---|---|
| IRP | Integration Reference Point |
| IS | Information Service |
| TMF | TeleManagement Forum |
| CCM | Common Configuration Management |
| NRM | Network Resource Model |
| SNMP | Simple Network Management Protocol (IETF) |
| SS | Solution Set |
| CORBA | Common Object Request Broker Architecture |
| Solution Set | Feasibility Study |

## Work Item Description

| Title: | <mark>Fault Management</mark> (Building Block: **OAM-FM**) |
|---|---|

### 1　　　3GPP Work Area

| | |
|---|---|
| | Radio Access |
| | Core Network |
| **X** | Services (specifically, 3G Telecom Management: Fault Management) |
| | Terminals |

### 2　　　Linked work items

- Principles, high level Requirements and Architecture (SA5 BB)
- Configuration Management (SA5 BB)

### 3　　　Justification

Release 99 of 3GPP TS 32.111-family has covered the basic needs of Fault Management. However, additional areas have now to be supported by Fault Management.  Due to progress made simultaneously in other standard bodies, it is now important to attempt a possible alignment with their outputs.

### 4　　　Objective

The objective of this work item is to further improve and detail the Requirements and Interface specifications (IRP definitions) that are necessary to ensure support of new Fault Management features introduced in Release 4/5.

### 5　　　Service Aspects

*None known so far.*

### 6　　　MMI-Aspects

*None known so far.*

### 7　　　Charging Aspects

*None known so far.*

### 8　　　Security Aspects

*Some security aspects will be considered while providing support of security alarms.*

### 9　　　Impacts

| Affects: | USIM | ME | AN | CN | Others |
|---|---|---|---|---|---|
| **Yes** | | | X | X | |
| **No** | 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 |
| **None** | | | | | | |

| Affected existing specifications | | | | |
|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | Comments |
| 32.111 | | | TSG#12 (06/01) | Release 4 |
| 32.111 | | | TSG#14 (12/01) | Release 5 |

### 11　　　Work item raporteurs

Patrick JURÉ (Lucent Technologies) pjure@lucent.com

### 12　　　Work item leadership

SA5

### 13　　　Supporting Companies

Lucent Technologies, Ericsson, Mannesmann Mobilfunk, Motorola, Nortel Networks, Siemens

| 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)
- UTRAN Operations and Maintenance procedures (SA5)

# 15  Work Tasks under this Building Block

| Building block | Work task | Comments | Release |
|---|---|---|---|
| FM | Consistency check with TR 32.800 (UOAM) |  | Release 4 |
|  | Partial re-synchronization | Specify a means to allow partial and more efficient synchronization of the Alarm List | Release 4 |
|  | Study the relevance of an alarm removal function |  | Release 4 |
|  | Enhancement of R99 with pre and post conditions on operations and alarm data model | This includes definition of new concepts and structures to be used commonly by Fault and Configuration Management group | Release 4 |
|  | Investigate consensus Alignment of CORBA SS with T1M1.5 | The goal to approach the alignment of the CORBA Solution Set with T1M1.5 CORBA Framework as soon as possible | Release 5 |
|  | SetComment function | The goal is to support the management of comments attached to alarms | Release 4 |
|  | Impact of Trouble ticketing management on Itf-N |  | Release 4 |
|  | support of a storage mechanism for alarms | The intention is to re-use if possible a log service already defined | Release 5 |
|  | Test management | The goal is to support a mechanism to allow basic test management over Itf-N | Release 5 |
|  | Security alarms | The goal is to provide support for security alarms | Release 5 |
|  | Investigate Alignment with ITU-T Q.821 | Study of Q.821 to check for possible alignment of existing features in 32.111-2 with Q.821 and for possible enhancements of 32.111-2 based on Q.821 | Release 5 |
|  | Impact of IP on fault management |  | Release 5 |
|  | Impact on ITF-N of correlation on network management |  | Release 5 |
|  | Investigate XML Solution Set |  | Release 5 |

## Work Item Description

**Title:**     **Performance Management** (Building Block: **OAM-PM**)

**1**              **3GPP Work Area**

|   | |
|---|---|
|   | Radio Access |
|   | Core Network |
| X | Services (specifically, 3G Telecom Management: OAM&P) |
|   | Terminals |

**2**              **Linked work items**
- OAM&P (Operations, Administration, Maintenance & Provisioning) Enhancements (SA5 Feature)

**3**              **Justification**
During the lifetime of a UMTS network, its logical and physical configuration will undergo changes of varying degrees and frequencies in order to optimise the utilisation of the network resources. These changes will be executed through network configuration management activities and/or network engineering, see 3GPP TS 32.106.

Many of the activities involved in the daily operation and future network planning of a UMTS network require data on which to base decisions. This data refers to the load carried by the network and the grade of service offered. In order to produce this data performance measurements are executed in the NEs, which comprise the network. The data can then be transferred to an external system, e.g. an Operations System (OS) in TMN terminology, for further evaluation. It is necessary to describe the mechanisms involved in the collection of the data and the definition of the data itself.

This building block is aiming at the addition of functionality, as specified in the list of "children" Work Tasks below, which was not completed in Release 99 (Rel3).

**4**              **Objective**
The objective of this building block is to provide the following functionality in the 3G PM specification 32.104:

- Performance monitoring
- File format enhancement
- Plug and Measure
- Measurement definitions

**5**              **Service Aspects**
*None*
**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** |
| 32.104 | | | TSG#11 (03/01) | PM enhancements for Release 4 |
| 32.104 | | | TSG#14 (12/01) | PM enhancements for Release 5 |

**11            Work item rapporteurs**
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**12            Work item leadership**
SA5
**13            Supporting Companies**
Ericsson LM, Mannesmann Mobilfunk, Motorola, Nortel, Siemens, Telenor, 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**:

- OAM&P (Operations, Administration, Maintenance & Provisioning) Enhancements (SA5)

# 15      Work Tasks under this Building Block

| Building Block | Work Task | Description | Release |
|---|---|---|---|
| PM | Performance monitoring | Define the functional requirements for the generation of performance alarms for the standard measurement set specified in TS 32.104, including the control and configuration of performance thresholds. | Release 4/5 |
| | File format enhancement | Non-3G-standard measurement results to be contained in the PM files;<br>Ability to select measurement results that are included in the PM files;<br>Control of the transfer of PM result files from the network to the NM. | Release 4/5 |
| | Plug and Measure | Scoping of measurements inside a node with automatic reconfiguration of the measurement when a scoped resource is added or removed. | Release 4/5 |
| | Measurement definitions | Definition of the standard measurement set for UMTS | Release 4/5 |
| | Consistency check with TR 32.800 (UOAM) | | Release 4 |

## 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**
- Ensure reliable QoS for PS domain (SA2 Feature)
- Subscription Management (SA5 Feature)
- Charging and OAM&P (SA5 Feature)

    - All IP Charging (OAM-CH-IP) (SA5 Building Block)
    - Principles, high level Requirements and Architecture (SA5 Building Block: OAM-AR, WT: Service Operations Management Framework)

**3**                    **Justification**
Currently (i.e. in 3GPP release 99), only the basic charging functionality for the Circuit Switched (CS) and Packet Switched (PS) domain are standardised.  More advanced features, such as the ability to differentiate the mechanism to generate CDRs based on subscription information, or to provide service-related charging information, are not specified, or only on very limited scale.  Therefore, the specification and standardisation of more sophisticated functionality is proposed for these areas.

**4**                    **Objective**
The objective of this work item is to standardise the following functionality:
- Subscription dependent charging characteristics;
- Service related charging.
- Architectural impacts from charging information delivery and correlation.

**5**                    **Service Aspects**
Appropriate network nodes will need to collect and forward service related charging data.

**6**                    **MMI-Aspects**
        *None*

**7**                    **Charging Aspects**
Three technical specifications will be re-organised and updated (TS 32.105 – dropped from R99), TS 32.005, and TS 32.015).  Technical specification TS 32.105, re-titled "3G charging and billing", will describe charging requirements, principles, architecture, bearer services, and added value services.  It is anticipated that charging requirements and principles will be completed in the release 4 time frame.  The remaining topics will be presented in release 5.  Charging event data for the circuit switched domain will be described in TS 32.005 and charging event data for the packet switched domain will be broached in TS 32.015.  This work will be executed via a series of CRs.
A new technical specification is proposed (TS 32.xyz) to describe CS and PS service related charging and/or protocols. It may be decided to have separate documents to cover service related charging and protocols.

**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 |
| 32.105 | | SA5 | | TSG#11 (03/01) | TSG#11 (03/01) | Release 4 |
| 32.105 | | SA5 | | TSG#13 (09/01) | TSG#14 (12/01) | Release 5 |
| 32.xyz | | SA5 | | TSG#13 (09/01) | TSG#14 (12/01) | Release 5 |
| **Affected existing specifications** | | | | | | |
| Spec No. | CR | Subject | | Approved at plenary# | | Comments |
| 32.005 | | | | TSG#11 (03/01) | | Release 4 |
| 32.015 | | | | TSG#11 (03/01) | | Release 4 |

**11**        **Work item rapporteur**
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**12**        **Work item leadership**
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**13**        **Supporting Companies**
AT&T Wireless, Ericsson, Lucent, 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):**
- Charging and OAM&P  (SA5)
- Subscription Management  (SA5)
- Ensure reliable QoS for PS domain (SA2)

# 15     Work Tasks under this Building Block

| Building Block | Work Task | Description | Release |
|---|---|---|---|
| Charging Management | Subscription-dependent charging characteristics | This task aims at the specification of more sophisticated functionality for the CN nodes to support subscriber and/or subscription parameter specific charging characteristics in the PS and the CS domains. | Release 4 |
| | Architectural impacts from charging information delivery and correlation. | The definitions of mechanisms to collect and correlate charging information from various sources of the core network. | Release 4/5 |
| | Service-related charging | This task is intended to avail charging for value added services provided to subscribers, e.g. multimedia messaging. | Release 4/5 |

## Work Item Description

**Title:** ==Charging Management== **for all-IP UMTS networks** (Building Block: **OAM-CH-IP**)

**1　　　　　3GPP Work Area**

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

**2　　　　　Linked work items**
- Provisioning of IP-based multimedia services (SA1 Feature)
- Ensure reliable QoS for PS domain and IM subsystem (SA2 Building Block)
- Charging Management (SA5 Building Block)
- Configuration Management (SA5 Building Block)

**3　　　　　Justification**
The wireless "All IP" architecture, currently being defined, will avail new services from which significant benefits are accruable for operators.  This new architecture 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.

**4　　　　　Objective**
The objective of this work item is to standardise the following issues:
- All IP charging and billing architectural needs.
- All IP charging protocols solution set;
- Configuration management of charging and billing;
- All IP service related charging;
- All IP network aspects of charging;
- Identification of CDRs for All IP wireless systems;
- Formal definitions of CDRs for All IP wireless systems;
- Near real-time and batch CDR generation, processing, and transport.

Note that, as the all IP architecture evolves, some of the above items require in-depth analysis within SA5 in order to determine their scope for standardisation for UMTS.

In specifying the above requirements and functions, the work performed by others (e.g. the 3G.IP Charging & Billing Ad Hoc committee) on the requirements for the all IP charging functionality, as well as standards developed by others (e.g. the IETF) will be re-used when appropriate.

**5　　　　　Service Aspects**
Appropriate network nodes will need to collect and forward service related charging data.

**6　　　　　MMI-Aspects**
　　　　　*None*

**7　　　　　Charging Aspects**
This work will impact TS 32.105 (which was withdrawn from R99 and moved to Release 4/5) re-titled "3G charging and billing", and will describe charging requirements, principles, architecture, bearer services, and added value services for the All IP networks.  It is anticipated that this work will be completed in the release 5 timeframe.
A new technical specification is proposed (TS 32.xyz) to describe charging event data for All IP UMTS networks, as well as protocols (or solution set).  It may be decided to have separate documents to cover charging event data and protocols separately.

**8　　　　　Security Aspects**
　　　　　*None*

## 9 Impacts

| Affects: | USIM | ME | AN | CN | Others |
|----------|------|-----|-----|-----|--------|
| Yes | | | | X | |
| No | X | 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.xyz | | SA5 | | TSG#13 (09/01) | TSG#14 (12/01) | Release 5 |
| 32.105 | | | | TSG#13 (09/01) | TSG#14 (12/01) | Release 5 |
| **Affected existing specifications** | | | | | | |
| Spec No. | CR | Subject | | Approved at plenary# | | Comments |
| 32.015 | | | | TSG#14 (12/01) | | Release 5 |

Details on the modification of existing specifications and generation of new specifications will be defined while proceeding with the work encompassed by this Building Block.  For example, one new specification may not be sufficient to specify the new functionality.

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**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)
- Provisioning of IP-based multimedia services (SA1 Feature)

# 15      Work Tasks under this Building Block

| Building Block | Work Task | Description | Release |
|---|---|---|---|
| **Charging Management** for All IP UMTS networks | All IP C&B architectural needs. | Co-ordination with SA2 to determine All IP UMTS architectural aspects impacting C&B.  Concurrently determining C&B architectural implications from the All IP C&B requirements and from the charging perspective. | Release 5 |
| | All IP C&B solution set. | SA5 CH information modelling and protocol specification.  The intention is to analyse IETF AAA developments for compatibility of the two endeavours. | Release 5 |
| | Configuration management of C&B. | The means and mechanisms to enact C&B configuration management will be defined.  The purpose is to permit convenient C&B modifications, as new All IP services and features are introduced. | Release 5 |
| | All IP service related charging. | The determination of impacts on charging by services. that are unique for All IP UMTS networks. | Release 5 |
| | All IP network aspects of charging. | The determination of impacts on charging by the connectivity of All IP UMTS networks with other networks.  Besides billing, this information can then be used for customer care and planning. | Release 5 |
| | Identification of CDRs for All IP UMTS systems. | CDRs, suitable for the All IP UMTS environment, will be determined from those defined in current TS's and from those defined by external All IP CDRs definition efforts (e.g.3G.IP). | Release 5 |
| | Formal definitions of CDRs for All IP UMTS systems. | The preceding CDRs require formal definitions in a compiler compatible syntax.  This task is intended to select and employ a suitable syntax. | Release 5 |
| | Near real-time and batch CDR generation, processing, and transport. | It must be possible to have multiple output streams for batch and near real time transfer of the preceding CDRs. Aspects to achieve multiple out streams will be described; e.g., routing records based on CDR content, their indicators, and configurability by the operator. | Release 5 |