

Source: SA5 (Telecom Management)
Title: Updated WID Rel-6 OAM-Trace
Document for: Approval
Agenda Item: 7.5.3

3GPP TSG-SA5 (Telecom Management)
Meeting #40, Sanya, CHINA, 15 - 19 November 2004

S5-042746

Title: Work Item Description: [WI: title: Trace Management]
WI type: [Building Block]

Work Item Description

Title: Trace Management (OAM-Trace)

1 3GPP Work Area

X	Radio Access
X	Core Network
X	Services
	Terminals

2 Linked work items

- Performance Management (OAM-PM) ñ SA5 BB
- Principles, High Level Requirements and Architecture (OAM-AR) ñ SA5 BB
- Network Infrastructure Management for possible File Transfer Management aspects (OAM-NIM) ñ SA5 BB

Also, work from 3GPP WGs other than SA5 has been identified according to the following list:

- CN4 on trace activation/deactivation over Mc;
- CN4 on trace activation/deactivation over Cx;
- RAN3 for trace activation/deactivation over the RNS ñ CN interface and for availability of IMSI/IMEI in RNS;
- CN4 on trace activation/deactivation impacts to MAP;
- CN4 on trace activation/deactivation impacts to GTP (SGSN ñ GGSN).

3 Justification

Subscriber and Equipment Trace provide very detailed information at call level on one or more specific mobile(s). This data is an additional source of information to Performance Measurements and allows going further in monitoring and optimisation operations.

Contrary to Performance Measurements, which are a permanent source of information, Trace is activated on user demand for a limited period of time for specific analysis purposes.

Trace plays a major role in activities such as determination of the root cause of a malfunctioning mobile, advanced troubleshooting, optimisation of resource usage and quality, RF coverage control and capacity improvement, dropped call analysis, Core Network and UTRAN end-to-end UMTS procedure validation.

Subscriber and Equipment Trace is also available for GSM-only systems.

4 Objective

The main objective of this work item is to produce the Technical Specifications for Subscriber and Equipment Trace in 3GPP Release 6 according to the responsibilities of SA5 pertaining to high-level concepts and requirements of trace, to Subscriber and UE activity trace data definition and management, to trace data collection control and configuration management, and to bulk interfaces for trace data transfer from the network to the network manager.

The Technical Specifications to be produced are:

3GPP

- TS 32.421 Trace concepts and requirements;
- TS 32.422 Trace control and configuration management;
- TS 32.423 Trace data definition and management.

The contents will be aligned with the 3GPP SA5 management principles and architecture.

Additionally, the objective is to maintain the GSM-only specification(s) for Subscriber and Equipment Trace. For this purpose, the Technical Specifications to be produced in Release 6 are:

- TS 52.008 GSM subscriber and equipment trace.

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	1 st resp. WG	2 nd resp. WG(s)	Presented for Information	Presented for Approval	Comments
32.421	Trace Concepts and Requirements	SA5		06/2002	06/2003	Completed SA#18
32.422	Trace Control and Configuration Management	SA5		03/2004	09/2004	Completed SA#25
32.423	Trace Data Definition and Management	SA5		09/2004	12/2004	Completed SA#26
52.008	GSM Subscriber and Equipment Trace	SA5		09/2004	12/2004	Functionally identical to GSM 12.08. Completed SA#26
Affected existing specifications						
Spec No.	CR	Subject		CR Approved	Comments	
32.101		Principles and High-level Requirements			Completed SA#23	

11 Work item rapporteurs

Kari Ronka (Nokia); kari.t.ronka@nokia.com

12 Work item leadership

SA5

13 Supporting Companies

Lucent Technologies, Motorola, Nokia, Nortel Networks, Orange

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 ñ OAM - SA5 Feature

Work Tasks under this Building Block

SA5 approved WIDs for the following WTs can be found at: ftp://ftp.3gpp.org/tsg_sa/WG5_TM/Work_Item_sheets/

Feature	Building Block	Work Task #	WT Title/Description	SA5 Tdoc#	Driving company	Supporting companies (driving company listed first, other companies in alphabetical order)
OAM&P	OAM-Trace	WT1	Trace Concepts and Requirements	S5-042626	Motorola	Motorola, Lucent , Nokia, Nortel, Orange
OAM&P	OAM-Trace	WT2	Trace Control and Configuration Management	S5-042644	Lucent	Lucent , Motorola, Nokia, Nortel, Orange
OAM&P	OAM-Trace	WT3	Trace Data Definition and Management	S5-042627	Nortel	Nortel, Motorola, Lucent , Nokia, Orange
OAM&P	OAM-Trace	WT4	Trace Impacts on Network Signaling Interfaces	S5-042645	Nokia	Nokia, Motorola, Lucent , Nortel, Orange
OAM&P	OAM-Trace	WT5	GSM Subscriber and Equipment Trace	S5-042631	Nokia	Nokia, Motorola, Lucent , Nortel, Orange
OAM&P	OAM-Trace	RAN3-WT1	Subscriber and Equipment Trace support in UTRAN	RP-030355	Nortel	Nortel, Lucent, Nokia, Motorola, Telefónica, Orange
OAM&P	OAM-Trace	CN4-WT1	Rel6 - Trace Management, stage3, network	NP-040433	Nokia	Nokia, Lucent , Nortel, Orange

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Meeting #40, Sanya, CHINA, 15 - 19 November 2004

S5-042746

Title: Work Item Description: [WI: title: Trace Management]
WI type: **Building Block**

Work Item Description

Title: ~~Rel6~~—Trace Management ([OAM-Trace](#))

1 3GPP Work Area

X	Radio Access
X	Core Network
X	Services
	Terminals

2 Linked work items

- ~~Rel6~~ Performance Management ñ ~~Building Block led by SA5~~ ([OAM-PM](#)) - SA5 BB
- ~~Rel6~~ Principles, High Level Requirements and Architecture ñ ~~Building Block led by SA5~~ ([OAM-AR](#)) - SA5 BB
- ~~Rel6~~ Network Infrastructure Management for possible File Transfer Management aspects ñ ~~Building Block led by SA5~~ ([OAM-PM](#)) - SA5 NIM

Also, ~~potential~~ work from 3GPP WGs other than SA5 has been identified according to the following list (~~corresponding Rel6 WIs to be identified~~):

- ~~CN1 on trace activation/deactivation over SIP between IMS entities;~~
- CN4 on trace activation/deactivation over Mc;
- CN4 on trace activation/deactivation over Cx;
- ~~SA3 for possible security impacts;~~
- ~~GERAN for trace activation/deactivation over the BSS ñ CN interface and for availability of IMSI/IMEI in BSS;~~
- RAN3 for trace activation/deactivation over the RNS ñ CN interface and for availability of IMSI/IMEI in RNS;
- ~~SA2 for possible LCS impacts;~~
- CN4 on trace activation/deactivation impacts to MAP;
- CN4 on trace activation/deactivation impacts to GTP (SGSN ñ GGSN).

3 Justification

Subscriber and Equipment Trace provide very detailed information at call level on one or more specific mobile(s). This data is an additional source of information to Performance Measurements and allows going further in monitoring and optimisation operations.

Contrary to Performance Measurements, which are a permanent source of information, Trace is activated on user demand for a limited period of time for specific analysis purposes.

Trace plays a major role in activities such as determination of the root cause of a malfunctioning mobile, advanced troubleshooting, optimisation of resource usage and quality, RF coverage control and capacity improvement, dropped call analysis, Core Network and UTRAN end-to-end UMTS procedure validation.

Subscriber and Equipment Trace is also available for GSM-only systems.

4 Objective

The main objective of this work item is to produce the Technical Specifications for Subscriber and Equipment Trace in 3GPP Release 6 according to the responsibilities of SA5 ~~SWG-D~~ pertaining to high-level concepts and requirements of trace, to Subscriber and UE activity trace data definition and management, to trace data collection control and configuration management, and to bulk interfaces for trace data transfer from the network to the network manager.

The Technical Specifications to be produced are:

- TS 32.421 i Trace ~~Concepts~~ concepts and ~~Requirements~~ requirements;
- TS 32.422 i Trace ~~Control~~ control and ~~Configuration~~ configuration ~~Management~~ management;
- TS 32.423 i Trace ~~Data~~ data ~~Definition~~ definition and ~~Management~~ management.

The contents will be aligned with the 3GPP SA5 management principles and architecture.

Additionally, the objective is to maintain the GSM-only specification(s) for Subscriber and Equipment Trace. For this purpose, the Technical Specifications to be produced in Release 6 are:

- TS 52.008 i GSM ~~Subscriber~~ subscriber and ~~Equipment~~ equipment ~~Trace~~ trace.

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	1 st resp. WG	2 nd resp. WG(s)	Presented for Information	Presented for Approval	Comments
32.421	Trace concepts and requirements	SA5		TSG#16 (06/02)	TSG#18 (12/02) <u>06/2003</u>	<u>Completed SA</u> <u>Approved in TSG#18</u>
32.422	Trace control and configuration management	SA5		TSG#23 (03/04)	TSG#25 (09/04)	<u>Completed SA#25</u>
32.423	Trace data definition and management	SA5		TSG#25 (09/04)	TSG#26 (12/04)	<u>Completed SA#26</u>
52.008	GSM Subscriber and equipment trace	SA5		TSG#25 (09/04)	TSG#26 (12/04)	<u>Technically Functionally identical to GSM 12.08_</u> <u>Completed SA#26</u>
Affected existing specifications						
Spec No.	CR	Subject		CR Approved	Comments	
32.101		Principles and High-level Requirements				

11 Work item raporteurs

~~Christian Toeche (Nortel Networks)~~ Kari Rönkä (Nokia); kari.t.ronka@nokia.com; toeche@NORTELNETWORKS.COM

12 Work item leadership

SA5

13 Supporting Companies

Lucent Technologies, Motorola, Nokia, Nortel Networks, Orange

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**
~~Charging and OAM&P in (OAM) - Feature led by SA5(SA5 Feature)~~

15 Work Tasks under this Building Block

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Feature	Building Block	Work Task #	WT Title/Description	SA5 Tdoc#	Driving company	Supporting companies (driving company listed first, other companies in alphabetical order)
OAM&P	OAM-Trace	WT1	Trace Concepts and Requirements	S5-042626	Motorola	Motorola, Lucent Technologies, Nokia, Nortel Networks, Orange
OAM&P	OAM-Trace	WT2	Trace Control and Configuration Management	S5- 042629 042644	Lucent Technologies	Lucent Technologies, Motorola, Nokia, Nortel Networks, Orange
OAM&P	OAM-Trace	WT3	Trace Data Definition and Management	S5-042627	Nortel Networks	Nortel Networks, Motorola, Lucent Technologies, Nokia, Orange
OAM&P	OAM-Trace	WT4	Trace Impacts on Network Signaling Interfaces	S5- 042630 042645	Nokia	Nokia, Motorola, Lucent Technologies, Nortel Networks, Orange
OAM&P	OAM-Trace	WT5	GSM Subscriber and Equipment Trace	S5-042631	Nokia	Nokia, Motorola, Lucent Technologies, Nortel Networks, Orange
OAM&P	OAM-Trace	RAN3-WT1	Subscriber and Equipment Trace support in UTRAN	RP-030355	Nortel	Nortel, Lucent, Nokia, Motorola, Telefunica, Orange
OAM&P	OAM-Trace	CN4-WT1	Rel6 - Trace Management, stage3, network	NP-040433	Nokia	Nokia, Lucent Technologies, Nortel Networks, Orange