

Source: TSG-T2
Title: TSG-T2 Status Report
Agenda item: 8
Document for: Information

Status Report

TSG-T2 "Mobile Terminal Services and Capabilities"

1. Summary

TSG-T2 has held one meeting since the creation of the 3GPP. It was held 27-29 January 1999 in Nice hosted by ETSI. A joint T2 SWG1/SMG4 MExE meeting was held 17-19 February 1999 in Helsinki hosted by Nokia.

During the first meeting of TSG T2, the Terms of Reference of TSG-T2 were developed and agreed (see section 4 of this report).

Furthermore, a work plan was agreed identifying six working areas which are listed below. For each of the working areas a sub working group (SWG) was established, and for some of the SWGs chairmen were assigned. The ToRs of the SWGs were agreed and can be found in section 6-11 of this report.

SWG1 Execution Environment (Chairman: Mark Cataldo, Motorola) will have the responsibility for developing, approving and maintaining specifications for a terminal execution environment using wireless, fixed, and cordless access.

SWG2 Terminal Interfaces (no chairman yet) is responsible for the development of specifications relating to external interfaces to terminals. SWG2 will also consider alternatives to AT commands.

SWG3 Messaging (no chairman yet) has the responsibility for defining UMTS-specific messaging applications to allow non-real time multimedia messaging, a Short Message Service, and Cell Broadcast Services.

SWG4 Services End to End Interworking (no chairman yet) has the responsibility for developing, approving and maintaining reports and specifications for: Report on Services over IP, report on SAT/MExE/CAMEL scenarios for the support of VHE, and for the review of end to end services. UMTS 21.04, *Requirements for the support of data services in UMTS* will be an input to this SWG.

SWG5 Multi-mode Terminals (Convenor: Sofi Persson, Telia) will consider other systems and their multi-mode coexistence with UMTS from a terminal and service point of view.

SWG6 Terminal Features and Performance (Chairman: Kiyohito Nagata, DoCoMo) will cover aspects as terminal safety and environmental requirements. In addition, SWG6 will work on general features, reviewing all terminal features and identifying a minimum set of features required to support a given application

The T2 work plan identifies also input documents from SMG and ARIB for the various working areas. Maintenance of the listed SMG specifications will still be done within SMG, except GSM 21.04 "Requirements for the support of data services in UMTS" which will be transferred to the 3GPP.

2. TSG-T2 Meeting Calendar

Meeting	Date	Host	Location
SMG4 Plenary #1/99 TSG-T WG2	15-19 March 1999	Nortel Networks	London
TSG-T WG2	(19-21 April 1999)		(Japan)
TSG-T	(22-23 April 1999)		(Japan)
SMG4 Plenary #2/99 (TSG-T WG2)	1-4 June 99	no host	

() = to be confirmed

3. List of Tdocs submitted to TSG-T#2

Tdoc (99)	Agenda item	Title	Source
003	12	Liaison statement regarding service development process	T1, T2
005	12	LS regarding the specification of MMI for Mobile Station (T2-99050)	T2
007	12	LS regarding the technical co-ordination between the 3GPP TSGs (T1-99010/T2-99023/T3-99029)	T1, T2, T3
018	11	LS from T3 and T2 "Technical co-ordination between the 3GPP TSGs" (T3-99029, T2-99023)	T3, T2
023	12	LS from T2 "Project team support for WG's of 3GPP TSGs" (T2-99052)	T2
026	8	T2 Status Report	T2
027	8	GSM 21.04 "Requirements for the support of data services in UMTS"	T2

4. Terms of Reference of TSG Terminals WG 2 : Mobile Terminal Services & Capabilities

TSGT2#1(99)028

The technical specification development work within 3GPP is accomplished by Technical Specification Groups (TSGs) according to the principles and rules contained in the Project reference documentation (Partnership Project Description , Partnership Project Agreement, Partnership Project Working Procedures).

In particular the TSG Working Groups report to the TSGs which in turn report to the Project coordination Group (PCG), and may organize their work and liaise with other groups as appropriate.

Each Working Group has the responsibility to develop, approve and maintain the specifications within its terms of reference. The TSG Terminals (TSG-T) Working Group 2 is responsible for specifying the Services and Capabilities to be delivered on UMTS Terminal Equipment and ensuring that terminals based on the relevant 3GPP specifications meet the 3GPP objectives.

TSG-T WG2 will liaise closely with:

- ARIB IMT-2000 Study Committee, Air Interface Working Group, Sub-Working Group 4 (Terminals)
- SMG4
- with other groups as required

Specifically, TSG-T WG2 will address the following areas of work :

Service capability protocols,

Messaging,

Services end-to-end interworking,

Model/framework for terminal interfaces and service (application) execution

Multi-mode terminals

Terminal Performance issues

5. TSG-T2 Work Program

	Target & Specification	Scope	ETSI documents identified	ARIB documents identified	Priority & Time Plan
SWG 1 Execution Environment	MExE requirements (stage 1: TSG-SA WG1)	stage 1 (TSG-SA WG1) based on ETSI 02.57	02.57	-	July 99
	MExE functional description	stage 2/3 based on ETSI 03.57	03.57	-	Dec 99
SWG 2 Terminal Interfaces	physical interface	report on options	04.02, 07.10	Vol.4, Ch.8	April 99
	AT commands for 3GPP	list of AT commands, structure based on ETSI 07.07 incl. SMS	07.07	Vol.4, Ch.8	April 99
	alternatives to AT commands	report on options	-	-	Dec 99
	report of other applications (e.g. object exchange, ME-ME interaction)	identify applications not covered elsewhere + and propose method of handling in WG2	04.02, 07.08	Vol.4, Ch.8	April 99
SWG 3 Messaging	SMS specification	stage 2/3 of SMS base on ETSI 03.40	03.40, 04.11, 03.38, 03.39, 03.47, 03.42	TTC ?	stage1 April 99 stage 2/3 Dec 99
	Cell Broadcast specification	stage 2/3 of CBS base on ETSI 03.41	03.41, 04.12, 03.38, 03.49	TTC ?	stage1 April 99 stage 2/3 Dec 99
	advanced cell broadcast	(need input from TSG-SA WG1) stage 2/3	-	-	Dec 99
	multimedia messaging service	(see TD T2-99014~) stage 2/3	-		Dec 99
SWG 4 Services end to end Interworking	services over IP	report on service over IP incl. FAX	SMG4 work, 21.04		Dec 99
	SAT/MExE/CAMEL scenarios for VHE	report on scenarios	02.78, 03.78, 09.78, 02.57, 03.57, 11.14		Dec 99
	review end-to-end services	report on services			Dec 99
SWG 5 Multi-mode Terminals	aspects of multi-mode terminals	report of work already done	EN 301 242 Tdoc SMG 905/97		May 99
		report on issues that need additional treatment to allow efficient multi-mode terminal implementations			July 99
SWG 6 Terminal Features and Performance	safety requirements	report on safety requirements & regulations in different regions	?	Vol4, chapter 4	Apr 99
	environment & reliability requirements	report on identifying requirements for the regions	?	Vol4, chapter 2.9	Apr 99
		discussion document on the need for common requirements	?	Vol4, chapter 2.9	May 99
	spec (if needed)	harmonised 3GPP requirements			(Dec 99 ?)
	general features	report: - review all terminal features - identify min set for certain applications where the application is supported work close with TSG-SA WG1 + others, see TD T2-99038		Vol4, chapter 2.1; TTC?	July 99

6. Terms of Reference for SWG1 Execution Environment

TSGT2#1(99)034

Responsibility

Based on the responsibility and requirements in the terms of reference defined for 3GPP TSG-T WG2, the Execution Environment SWG has the responsibility for developing, approving and maintaining specifications for a terminal execution environment using wireless, fixed, and cordless access. The existing terminology "Mobile Station (Application) Execution Environment" [MExE] has become well known in the industry, and is used in the Execution Environment SWG to carry forward the momentum created within ETSI, and will apply to the above access methods. The specifications for MExE shall support the capability:-

- to define a set of execution environments and APIs in the terminal equipment which will support the ability to run and present applications, applets and content
- of 3G terminals to transfer and upgrade services, applications, applets and content to/from 3G terminals
- to run and present applications, applets and content on any 3G terminal, including wireless, fixed, and cordless access
- to support a security model authenticating both the MExE MS and MExE servers maintaining the security of the user's personal data and network's data
- to support the user to finely control access privileges and acceptance of services, applications, applets and content transferred to the MExE MS
- to define a set of expanded classes for MExE devices and services, applications, applets and content
- to provide the user with a more sophisticated customisable user interface
- to provide the user and MExE service provider with the capability to control the "look and feel" of services, applications, applets and content
- to enable user access to MExE service provider and a wide variety of 3rd party services, applications, applets and content
- to support both internet and wireless optimised protocols
- to support the negotiation of capabilities and content between the MExE MS and the MExE service provider
- to support the user management of services, applications, applets and content
- to support the collection of charging information for the billing of MExE users

Constraints

SWG1 Execution Environment shall:-

- follow the guidelines and principles outlined by the LS from the ETSI Applications and Automatic Execution Workshop¹ as far as possible

Input Documents

SWG1 Execution Environment shall use as base specifications the following documents:-

- the MExE Stage 1² document (GSM 02.57) as an input specification for the requirements
- the MExE Stage 2³ document (GSM 03.57) as an input specification for the functional description

Additionally, SWG1 Execution Environment may take into consideration (and determine the applicability of) the ETSI MExE Release 99 work item description and other inputs when determining future MExE standardisation work.

Output Documents

The following specifications shall be supported:-

- SWG1 Execution Environment shall support, and as necessary assist in, the definition of the MExE Stage 1 requirements document to be produced by TSG-SA WG1 (Services)
- SWG1 Execution Environment shall produce the MExE Stage 2/3 functional description and information flows specification(s)

SWG1 Execution Environment Liaisons

SWG1 Execution Environment shall liaise with:-

- Market Representation Partners,
- T1,
- ARIB,
- TTC,
- TTA,
- ETSI SMG and STCs (in particular SMG4 MExE),
- 3GPP committees (such as TSG-SA WG1 Services, TSG-T WG2 SWG SWG4 Services end to end Interworking etc.)
- other applicable organisations (such as the WAP Forum, Sun Microsystems etc.)

to further the standardisation of MExE.

¹ TSGT2#1(99)032

² GSM 02.57, version 7.0.0

³ GSM 03.57

7. Terms of Reference for SWG2 Terminal Interfaces

TSGT2#1(99)042

This group will be responsible for the development of specifications relating to external interfaces to terminals. The interface specifications will allow a terminal to communicate via a wired or wireless means, to one or more external devices. Specifications will cover physical, transport and applications layers. Where possible, existing standards and protocols will be utilised to realise these functions. The use of these external interfaces will allow remote control of terminals, transfer of data and execution of standard applications.

Initially, application layer specifications will make use of and build upon existing GSM AT commands, though the group will evaluate possible alternatives as developments occur in the computer industry.

Inputs Documents

ETSI: 04.02, 07.07, 07.08, 07.10

ARIB: Specification of Mobile Station for 3G Mobile System Volume 4 Section 8.

Output Documents

Report of physical interface options	April 1999
List of supported AT commands	April 1999
Report of Object exchange and other applications	April 1999
Report on alternatives to AT commands	December 1999

8. Terms of Reference for SWG3 Messaging

TSGT2#1(99)041

Responsibility

Based on the responsibility and requirements in the terms of reference defined for 3GPP TSG-T WG2, the Messaging SWG has the responsibility for defining UMTS-specific messaging applications to allow non-real time multimedia messaging, a Short Message Service, and Cell Broadcast Services. The SWG will take inputs from all the partners and in particular the GSM Short Message Service needs to be analysed and shall be used as a starting point. The work already done to date in SMG on UMTS non-real time multimedia messaging should also be analysed.

The specifications for Short Message Service shall support the capability to send and receive short messages to and from a terminal.

The specifications for Cell Broadcast Service shall support the capability to broadcast messages to all terminals in a given geographic area, without sending the same message multiple times across the core network infrastructure.

The specifications for Advanced Cell Broadcast Service will be developed in accordance with the requirements of TSG-SA WG1 (Services).

The specifications for non-real time Multimedia Messaging shall support the capability to send and receive multimedia messages to and from a terminal, and shall permit the user to select the nature of the messages she wishes to download.

Constraints

The work of SWG3 shall follow the requirements set by TSG-SA WG1 (Services).

Input Documents

SWG3 Messaging shall use as base specifications the following documents:

- on SMS: GSM 03.40 (further relevant specifications: 03.38, 03.39, 03.42, 03.47, 04.11)
- on Cell Broadcast: GSM 03.41 (further relevant specifications: 03.38, 03.49, 04.12)
- on Multimedia Messaging Service: TSG T WG2 (99)014

Output Documents

The following specifications shall be elaborated:

- SMS – a specification for stages 2 and 3 of SMS
- CBS – a specification for stages 2 and 3 of Cell Broadcast
- ACBS – a specification for stages 2 and 3 of Advanced Cell Broadcast
- MMS – a specification for stages 2 and 3 of Multimedia Messaging Service

SWG3 Messaging Liaisons

SWG3 Messaging shall liaise with:

- Market Representation Partners
- T1, ARIB, TTC, TTA
- ETSI SMG and STCs (in particular SMG4 DGMH)
- 3GPP committees (such as TSG-SA WG1 Services)
- other applicable organisations

to further the standardisation of Messaging Services.

9. Terms of Reference for SWG4 Services end to end interworking

TSGT2#1(99)045

Responsibility

Based on the responsibility and requirements in the terms of reference defined for 3GPP T2 SWG4, the Services End to End Interworking SWG has the responsibility for developing, approving and maintaining reports and specifications for

- **Report on Services over IP**

There is currently no requirement foreseen for the explicit definition of any IP-based services. Support for such services shall be provided by exploiting the availability of end-to-end applications based on downloaded toolkit applications (e.g. MExE).

The report shall identify the external standards bodies working on the relevant IP-based services, and recommend the use of specific external standards.

The report shall be available in December 1999.

- **Report on SAT/MExE/CAMEL scenarios for the support of VHE**

The report shall identify how the VHE shall use the SAT/MExE/CAMEL toolkit mechanisms to provide a global support of the user's personalised VHE.

Additional requirements could be identified for the VHE.

The report shall analyse some sample services which require the end to end support of combinations of MExE, CAMEL and SAT and check that it is possible for operators/providers to implement these in an efficient way.

The report shall be available in December 1999.

- **Review of end to end services**

A report shall be produced which maps 3G end-to-end services to the toolkit mechanisms in UMTS.

The report shall be available in December 1999.

Constraints

SWG4 Services End to End Interworking shall not identify new protocols, but instead exploit the facilities of external standards bodies and the UMTS toolkits.

Input Documents

SWG4 Services End to End Interworking shall use the following documents:-

- the GMM report
- UMTS 21.04
- GSM 02.57, GSM 03.57, GSM 11.14
- the relevant ARIB reports and specifications
- relevant external standards bodies
- the relevant services specifications by TSG SA1

Output Documents

SWG4 Services End to End Interworking shall produce the 3 reports identified under Responsibility above.

SWG4 Services End to End Interworking Liaisons

SWG4 Services End to End Interworking shall liaise with:-

- Market Representation Partners,
- T1,
- ARIB,
- TTC,
- TTA,
- ETSI SMG and STCs
- 3GPP committees (such as TSG-SA WG1 Services, VHE, TSG-CN WG2 etc.)
- other applicable organisations

as appropriate.

10. Terms of Reference for SWG5 Multimode Terminals

TSGT2#1(99)046

Responsibility

The responsibility for the Multi-mode Terminal SWG in TSG T2 is, in alignment with the Terms of Reference for the T2, to consider other systems and their multi-mode coexistence with UMTS from a terminal and service point of view.

Tasks

The main task of the TSG T2 SWG5 Multi-mode Terminals is to collect information on work already done concerning different aspects impacting multi-mode terminals. These aspects include impact of changing mode on services as well as various signalling aspects (such as handover etc.).

This information will be gathered from within 3GPP as well as other relevant bodies.

The purpose is also to identify issues that need additional treatment and to provide overview information on multi-mode aspects to enable efficient multi-mode terminal implementations.

Input documents

This list is not meant to be complete, and can be extended at any time.

- EN 301 242, DECT/GSM integration based on dual-mode terminals
- Tdoc SMG 905/97, Complexity and dual-mode GSM/UMTS terminal complexity analysis

Output documents

The following documents shall at least be provided:

- Report containing work already done
- Report on issues that need additional treatment to allow efficient multi-mode terminal implementations

Liaisons

The group will liaise with ETSI SMG, EP DECT and ARIB as well as other bodies as required.

11. Terms of Reference for SWG6 Terminal Features and Performance

TSGT2#1(99)047

Responsibility

Based on the responsibility and requirements in the terms of reference defined for 3GPP TSG-T2, the Terminal Features and Performance SWG has the responsibility for investigating and creating the reports and, if required, specifications on the items listed below.

Safety Requirements

The purpose is to identify the different regional requirements and relevant regulatory aspects for electrical safety, safety of radio equipment , SAR, etc.

Input documents

The following documents have been identified so far: ARIB Vol.4 Chapter 4.

Output documents

Report on safety requirements and regulations in different regions.

Environmental and Reliability Requirements

The purpose is to identify the different regional requirements and any relevant regulatory aspects for temperature range, supply voltage, humidity ,vibration and shock stability and reliability. The output of this study should then be analysed and the requirements to be harmonised should be identified. If needed, a specification with harmonised requirements should be developed.

Input Documents

The following documents have been identified so far: ARIB Vol 4 Chapter 2.9.

Output documents

Report identifying relevant requirements in different regions.

Discussion document on the need for common requirements.

If needed, a specification containing harmonised requirements.

General Features

The purpose is to collect and review requirements on terminal features, and to identify the minimum set for certain applications where the application is supported.

Input Documents

The following documents have been identified so far: ARIB Vol 4 chapter 2.1, TTC document?, TSG T2#1(99)038

Output Documents

Report containing an overview of terminal features.

SWG6 Liaisons

It is recognised that SWG6 Terminal Features and Performance needs to liaise closely with, in particular, TSG-S1 and TSG-T1.