Source: **T1**

Title: **Task 160 Terms of Reference**

Agenda item: **5.1.3**

Document for: **Approval**

Terms of Reference For MCC Task 160

Producing 3GPP ATSs / PIXIT/ for UE ~~R99~~

1. Reasons for proposing the Task

~~The 3GPP Release 99 for the core specifications will be delivered in January 2000. The 3G protocol and signalling conformance test specifications for UE in R99 are expected to be delivered within 2000.~~

The MCC task 160 was setup in June 2000 under the responsibility of 3GPP TSG-T / T1 for the development of TTCN test cases for R99. The team consists of the skilled protocol / TTCN experts coming from ten companies of four 3GPP partners. Since then more than 500 TTCN test cases have been drafted for the UE conformance testing.

The funding of an expert team as MCC task force has proved to be the most efficient and cost-effective way to develop the test specifications. In order to stabilise and to maintain the all available TTCN ATSs and to develop new TTCN test cases for R99, Rel 4 and Rel 5 the MCC task 160 should continue. PCG/OP have approved the TSG T / T1 request and granted funding for 2002 and 2003 for the MCC task.

~~3GPP T1 had a common workshop with ETSI MTS and PEX to examine the requirements from a large spectrum of viewpoints and to introduce the latest experiences gained from the deployment of the methodologies and new TTCN features by ETSI. The majority of the 3G mobile manufacturers prefer to have a TTCN specification with a high quality. A number of 3G tester vendors gave the commitment to implement the TTCN specification being developed.~~

~~Writing a TTCN specification needs skilled specialists. Voluntary contributions are so far very limited. In order to boost and accelerate the 3G ATS development, a specific MCC Task needs to be created.~~

2. Consequences if not agreed

All test cases ~~being~~ produced by the Task will mainly qualify an UE for world~~-~~wide roaming and interoperability with the 3GPP networks. Without such tests the UE interoperability ~~of 3G UE~~ cannot be guaranteed. Should the Task not be installed in a timely manner, a delay of the 3GPP conformance test specifications in R~~elease~~ 99, Rel4 and Rel 5 ~~by at least one year (i.e. end of 2001)~~ would be accounted. Such a delay is unacceptable by the 3GPP ~~market~~markets.

3. Detailed description

3.1 **Subject title**: 3GPP TTCN specifications for UE R99, Rel 4, Rel 5.

3.2 **Reference Technical Body**: 3GPP TSG T / T~~(~~1~~)~~

3.3 **Other interested Technical Bodies**: 3GPP TSG RAN(2), TSG CN(1), ~~ETSI SMG(7)~~TSG GERAN(4) and GERAN(5) , ETSI MTS

3.4 **Target dates for the start of work**: ~~March 2000~~Jan. 2002

3.5 **Target dates for the conclusion of the work**: ~~March 2001~~Dec 2003

3.6 Resources required

3.6.1 **Necessary manpower**

The total resources required for the Task are 116~~35~~ mm, split as follow:

~~? for drafting of deliverables: 30 MM~~

~~? for assisting and updating of test descriptions and ICS documents: 1 MM~~

~~2 for travelling and attending TSG-T1 and TSG-T1 SIG meetings: 2 MM~~

✍ ~~for management, co-ordination and quality assurance: 2 MM.~~

		2002	2003
R99	Maintenance of existing test cases	22	11
	Intersystem / Inter RAT HO	6	
	High chip rate TDD	10	2
Rel-4	Low Chip Rate TDD	14	13
	ROHC PDCP	4	-
	Inter RAT HO	-	3
	Enhanced Radio Bearer	-	3
	Facsimile and emergency call enhancements	2	-
Rel-5	L2 ARQ II/III	-	3
	Voice over IP	-	15
	HSDPA	-	5
Rel-indepd.	UMTS 1800 /1900	**-**	3
		58	***58***

3.6.2 Estimated costs, additional to the manpower

- Expected travels within Europe: ~~10~~4 travels/ year
- Expected intercontinental travels: ~~7~~5 travels/ year

3.6.3 Qualification required, mix of skills

~~Required are three TTCN specialists. Their experience in production of TTCN is essential for the success of the Task. Two of them should have the knowledge on the 3G access protocols over the radio interface. The other one needs to have the detailed knowledge on GSM Layer 3 protocols. The major tasks are to produce TTCN test cases based on the test structure and test purposes provided and approved by TSG-T1 for R99 and to produce a main ATS document including PIXIT pro-forma. The three specialists should be available preferably full time and will approximately require 30 MM. It is expected that an ETSI PEX member will be the Task leader, and will manage the resources, give general technical support, quality checking and participate at the TSG T1, TSG T1 SIG and the Task team meetings. The approximate amount of efforts for the PEX is 5 MM.~~

The experts should have deep 3GPP protocol knowledge at the Uu and Um interfaces and good skill at writing of the TTCN test cases.

3.7 Scope of Terms of Reference

The technical areas of the Task cover the conformance test specifications for UE both at the radio access for MAC, RLC, RRC layers and for non-access L3 protocols SMS, MM, GMM, SM and CC. The TTCN being developed should meet the UE requirements supporting voice call, Emergency call, SMS, Fax, CS data up to 64 kb/s and PS data services .Among these are:

- Development and maintenance of MAC, RLC, PDCP, BMC ATS in R99, Rel 4 and Rel 5,
- Development and maintenance of RRC ATS in R99, Rel 4 and Rel 5,
- Development of test cases for auto-calling restrictions and multiple radio access system ~~(GSM/3G)~~ cell selection/re-selection and hand-over in R99, Rel 4 and Rel 5,
- ~~Modification and migration of the existing GSM Idle mode, MM, CC and SMS test cases,~~ Development and maintenance of NAS ATS in R99, Rel 4 and Rel 5
- Drafting an ATS design document describing the test model, interfaces, styles and specifying PIXIT pro-forma,
- Project co-ordination management and quality assurance,
- Assisting the updating test descriptions and ICS.

3.8 Context of the tasks

The ATSs and 34.123-3 is the 3rd part of TS 34.123.

~~3G TSG T1 are developing two TS which should be a starting point for the Task.~~

~~3G TS 34.123-1: (MS) Protocol conformance specification, R99 (June 2000)~~

- ~~3G TS 34.123-2: ICS pro-forma (June 2000)~~

The first part of TS 34.123 specifies the test structure, test purposes and give each test case a ~~short~~ prose description. The second one specifies necessary ICS questions for UE manufacturers on ~~baseline and service implementation~~ the UE capabilities and the test case applicability.

~~An ATS design document will be produced firstly by the Task team. An intensive discussion (probably by e-mail) with TSG T1-SIG is needed at the Task starting phase. It is also worthwhile that the discussion for the skeleton of the design document can be already started at the beginning of year 2000 within TSG T1~~

~~SIG. Once a first draft of the design document is available, the three main tasks for the TTCN development can be started in parallel. The TTCN test cases will be designed manually for R99.~~

~~Whenever the draft version 1.0.0 of the intended deliverable is available the validation of the 3G test cases should be started by the TSG T1 members. The validation through implementation of test cases is a key issue for the quality of ATS. The test cases should be produced in a manner that allows all of them to be validated by March 2001.~~

3.9 Related activity in other bodies and necessary co-ordination of schedules

Changes in ~~GSM 11.10 of SMG7~~TS 51.010 of GERAN 4 and GERAN 5 and the stability of the relevant core specifications ~~in R99~~ of CN1 and RAN2, especially changes in TS 25.331, will have impact on the progress of the Task.

3.10 Base documents and their availability

- ~~3G~~ TS 23.022: Functions related to Mobile Station (MS) in idle mode and group receive mode~~, R99~~
- ~~3G~~ TS 24.008: Mobile radio interface layer 3 specification, Core Network Protocols - Stage 3~~, R99~~
- ~~3G~~ TS 25.321: MAC protocol specification, ~~R99~~
- ~~3G~~ TS 25.322: RLC protocol specification, ~~R99~~
- ~~3G~~ TS 25.331: RRC protocol specification, ~~R99~~
- ~~GSM 1~~TS51.010-1: Mobile station conformance specification, ~~R98~~
- ~~GSM 1~~TS51.010-2: PICS pro-forma, ~~R96~~
- ~~GSM 1~~TS51.010-3: L3 Abstract Test Suites, ~~R96~~

3.11 Work item from the ETSI Work Programme for which the Task is required

DTS/TSGT-0134123-3U

3.12 Expected output(s)

~~3G~~ TS 34.123-3: Abstract Test Suites

- ~~Version 1.0.0: September, 2000~~
- Version 3.0.0 (R99): March 200~~1~~2
- Version4.0.0:Dec.2002