Source:	**TSG T WG1**
Title:	**TTCN Task team Terms of Reference**
Agenda item:	6.1
Document for:	Approval

Summary

Discussions continue between the 3GPP organisation Partners on the necessary 3GPP funding for creation of an MCC Task developing 3GPP test specifications for UE. Not all of the Partners have signalled their agreement to contribute to this work. The activities cannot proceed until funding has been agreed.

On the assumption that the Task is agreed, the financial liability will be equally split among the Organisational Partners. The total budget required for this task is 1 014 kEuro. The 3G TTCN Task will be spread over 3 years so more than one third of that budget is required in year 2000. ETSI GA34 approved the ETSI MCC budget for 2000 including the ETSI contribution to the Task.

1. A ToR for the intended MCC Task is proposed for TSG-T approval.

2. It is requested to forward the ToR

- **to the TSG-SA meeting for endorsement and**

- **to PCG for the final approval / agreement.**

The intention is that as soon as the 3G Partners agree on the funding matters the Task IK on the 3G TTCN specification can be immediately launched. The information provided in ToR can hopefully help the 3G Partners to reach the funding agreement.

Terms of Reference

For MCC Task IK

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.

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 3G networks. Without such tests the interoperability of 3G UE cannot be guaranteed. Should the Task not be installed in a timely manner, a delay of the 3G conformance test specifications in Release 99 by at least one year (i.e. end of 2001) would be accounted. Such a delay is unacceptable by the 3G market.

3. Detailed description

3.1   **Subject title**: 3G TTCN specifications for UE R99

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

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

3.4   **Target dates for the start of work**: March 2000

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

3.6   **Resources required**

3.6.1   **Necessary manpower**

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

- for drafting of deliverables: 30 MM

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

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

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

3.6.2 Estimated costs, additional to the manpower

- Expected travels within Europe: 10

- Expected intercontinental travels: 7

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.

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 MM 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 services .Among these are:

- Development of MAC, RLC ATS,

- Development of RRC ATS,

- Development of test cases for auto-calling restrictions and multiple radio access system (GSM/3G) cell selection/re-selection and hand-over,

- Modification and migration of the existing GSM Idle mode, MM, CC and SMS test cases,

- 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

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

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 and the stability of the relevant core specifications in R99 of CN1 and RAN2 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 11.10-1: Mobile station conformance specification, R98

- GSM 11.10-2: PICS pro-forma, R96

- GSM 11.10-3: 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 2001