Agenda Item: xx

Source: Alcatel, Ericsson, Motorola, Nokia, Nortel Networks, Qualcomm, T-Mobil

Title: Principles for UE testing and related indication from UE

Document for: Decision

1   Background

There has recently been some discussions on indication of test specification version signalled from the UE in the UE capability. In order to not delay the launch of Release 99 products, there is a need to decide on this issue as soon as possible.

The basic problem is the unavailability of 3rd party test equipment and other independent means to test the full scope of the Release 99 core specification functionality in the UE. This could potentially lead to a risk of interoperability problems when features and functions are introduced in the network, leading to pressure to recall terminals with errors in the implementation of those features and functions. On the other hand, it is not realistic to delay the introduction of volumes of Release 99 UEs until there are possibilities to test the full scope of Release 99 functionality.

One possibility to minimise this problem in the future is to not mandate too large sets of functionality in the UE at the same time. Also for Release 99, it could be beneficial to remove some functionality. However, this is not a solution to the problem of lack of testing tools, this is a question in relation to the core specification and thus if pursued should be reflected in those.

This contribution proposes a way forward that will not delay the introduction of commercial Release 99 UEs, and a mechanism, which would allow to distinguish early UEs from UEs released later when better possibility for 3rd party verification exist.

2   Phases of Release 99 terminals

It is envisaged that the introduction of Release 99 terminals will be done in the following phases.

A) Friendly users period

- Each vendor is at own risk.

- Low volumes that are likely to need to be upgraded / recalled

B) Interim period

- Purpose: To ensure that the market can be initiated with reasonable low risk for the involved parties.

- Terminals tested to a subset of prioritised testcases, including test cases covering forward compatibility for the functionalities, which can be expected introduced during the interim period of operation.

- The scope of minimum test cases for Interim testing shall be set by the industry.

C) Full scope period

- Terminals tested with 3rd party test equipments supporting the "full" Release 99

Networks should be able to handle co-existing Fully tested terminals and Interim-tested terminals. It should be possible to identify the test covereage of terminal e.g. so as to avoid activating selected functions to Interim-tested terminals.

3   Indication of test coverage

To allow distinguish Interim-tested terminals when later activating outside the scope of Interim testing, it is beneficial if the terminal indicate that is and terminal which has beeen tested in the interim phase, ie. not the full set of tests specified have been performed on third party test equipment or other eqipment independent from the terminal manufacturer. This should be a parameter taking two values: "Interim tested" or "Fully tested". During the interim period, terminals shall only set the value "Interim tested". This would allow the network to identify "interim tested" terminals and potentially avoid using certain functionality for which problems have been found with "interim tested". The scope of minimum test cases for Interim test period is defined by the industry.

The status that the "full" set of test cases are available for testing is defined by the industry. From this point in time, terminals tested to the "full" set of test cases shall indicate "Fully tested".It is proposed that this parameter is signalled as UE Capability information to the UTRAN.

It should be noted that terminals are designed to comply with the core specifications. The limitation indicated is merely on the coverage of the testing of the terminal.

4   Proposal

It is proposed to:

A. Agree the principles above and inform TSG CN, TSG SA and TSG T about them.

B. Add an indicator in the UE capability signaling to indicate "Interim tested" or "Fully tested" (for now a reserved value)