

Title	Proposed Content for the early UE RAN TR – Requirements
Source	Siemens
Agenda Item	8.7.11

Introduction

This document proposes input for the requirement section of the proposed TR (ref.[1]).

Discussion

Considerations about suitable criteria's for the selection of the best suited signalling mechanism(s) for early UE handling should be performed before actual deciding on a proper one. Several areas of considerations are discussed below and result in a set of suggested requirements.

Overall handling of early UEs

Limited complexity in implementing and operating network nodes will serve both, operators and vendors interests.

A situation where, due to time pressure, operators drive their vendors to provide quick solutions for emerging problems with early UEs bears the danger that this may lead to unforeseeable complexity in terms of inter working between several solutions, especially in case of roaming. We assume a common understanding that a situation where operators/vendors will need to cope with a huge amount of different, highly specialised, terminal individual workaround solutions (network patches, special configurations etc.) shall be avoided. Note, that the problem will increase with the number of different UEs appearing on the market.

One way to keep networks manageable without unnecessary increase complexity is to keep discussions within 3GPP fora and to work on solutions together. As the grade of willingness of vendors to announce failures in UE implementations (or operators to share intermediate workaround solutions) cannot be estimated (and should not be discussed here), it should be obvious that the mechanisms and procedures to be finally selected should rather encourage vendors to discuss problems in public within 3GPP.

Commitment to 3GPP standard and sufficiently tested shipped UE

The mechanisms and procedures should not encourage UE vendors not to implement and test (as far as possible) the full set of R99 features. Choosing a signalling mechanism that is able to identify a certain UE model bears the risk that it creates or increases the very problem it tries to fix.

Discovering failures should in the end contribute to stable set of specifications

Agreed solutions should be standardised to enable a long term stability. Solutions which may provide a quick work around will de-stabilise the standard in the long term. 'Private' solutions bear the risk that they prevent necessary corrections in the standard and may have a lifetime for the entire 3G network operation.

A set of requirements intended to go into the proposed standard is given below:

- 1) *The proposed signaling mechanisms for handling of early UEs shall only be used to solve failures which are published within 3GPP and which have agreed workaround solutions.*
- 2) *Any method proposed to cope with the problem of early UE's should be assessed with respect to the danger that related discussions are shifted to groups or private conversations outside of 3GPP.*
- 3) *Mechanisms for handling 'early UEs' shall not encourage the (mis-)use for proprietary support of terminals not compliant with the 3GPP core specifications*
- 4) *The discussed solution shall not prevent to introduce corrections/clarifications in the respective specification(s).*
- 5) *Avoid special handling of a huge amount of different failures in 'early UEs'.*
- 6) *Minimise problems in case of roaming- and inter-vendor-operability.*
- 7) *Minimise implementation and maintenance effort in CN and UTRAN.*

Proposal

It is proposed to discuss the suggested requirements for early UE handling to capture them in requirement section of the proposed TR (ref.[1]).

Further it is proposed to assess the proposed solutions based on finally agreed requirements and the problem statement (discussed in [2]).

References

- [1] RP-020880, Proposed TR skeleton "Recommended measures in UTRAN to overcome early User Equipment (UE) implementation faults"
- [2] RP-020881, Proposed Content for the early UE RAN TR – Problem Statement