

Source: Ericsson
Title: On the proposed TR on “Recommended User Equipment (UE) measures to overcome specific infrastructure faults”
Agenda item: 6.1.2
Document for: DISCUSSION and DECISION

Introduction

This contribution is addressing the two questions posed by CN1 to CN Plenary in the Liaison Statement N1-030305 (NP-030014) triggered by the Liaison Statement GP-030322.

1. Study the problem and to decide whether documenting such problems is needed.
2. If TSG CN see that such documenting of known problems is needed then it is requested to define the right forum and format for the documentation.

With this discussion paper we would like to address the severe consequences of introducing a 3GPP TR on “Recommended User Equipment (UE) measures to overcome specific infrastructure faults” as proposed at CN1#28 (N1-030223). The technical errors reported in the proposed TR are however not challenged here.

It is undeniable that the problems identified in this LS sourced from the proposed TR are network implementation problems; furthermore patches to those problems are known to exist. It is also undeniable that the safest solution would be to rollout these patches. So a natural question is; when will those patches be rolled out, and is there any reason why they would not be? Assuming the rollout period is relatively short, is it then really worth the effort and risk to ‘patch’ the UEs?

The existence of the proposed TR would partly remove the incentive for network manufacturers to provide corrections as well as for operators to update their old networks urgently, leaving it to UE implementation ‘workarounds’ to solve network errors. On a similar issue discussed in CN1#27 meeting in Bangkok, CN1 recommends back to GERAN that operators should rollout network updates in a synchronised fashion, and that the related mechanisms did not need to be standardised (N1-022489). The same principle shall apply also for the problems reported in the received LS.

Properties of the TR

It is currently unclear on what basis and principles problems of similar nature can be allowed into the proposed TR. It is also unclear how much the TR would be allowed to grow, since it is unlikely that anything will ever be removed from it. It has furthermore been said that the “workarounds” contained in the proposed TR should only be intermediate, but for what period of time and criteria cannot easily be answered. Furthermore, when the network implementation errors are eventually fixed, what would be done about the UEs with these ‘workarounds’? No ‘exit strategy’ has been, or can easily be defined. If additions to the proposed TR would be allowed also after a commercial launch of some R’99 UEs, it would be impossible to ‘patch’ those UEs.

Since the TR is proposed for Release 6, it has been argued that the 'workarounds' do not need to be implemented in R99 UEs. However, in the 'Introduction' of the TR the target is said to be 'R99 and later UEs'. The TR obviously should be seen as a proposed TR *for Release 99*, and is as such introduced far too late.

Consequences of the TR

3GPP is creating advanced standards where the principle to do the work based on features and in phases is a fundamental one. Allowing the existence of a TR like the proposed one, recommending 'workarounds' in otherwise compliant UEs, will set a very dangerous precedence that will make the quality and consistency of the standard deteriorate. It will then be an increasingly difficult task for 3GPP to base future work on existing standards, securing backwards- as well as forward compatibility, when some existing UE implementations are non-compliant due to implemented 'workarounds' recommended by 3GPP. It is not evident that 'patched' UEs will behave well also in upgraded and compliant networks.

It has been argued that the proposed TR does not mandate the use of the 'recommended workarounds' in the UE. However, if 3GPP approve such a TR, it with no doubt becomes a de facto standard forcing the UE manufacturers to comply with it. The 'workarounds' mandated by this de facto standard would add new requirements to the design and thus introduce an additional development cost. Who should bear that extra cost? In the future it may be discovered that these 'recommended workarounds' have unexpected side effects and manufacturers may find that UEs have to be recalled, or networks may have to find even more elaborate ways to overcome these unexpected side effects. Who should bear the cost of this?

Generally, not all networks have the stated problems. By introducing 'workarounds', operators who have correctly and timely updated their networks also suffer from reduced features. Proposed handling is admitting that erroneous network implementations and no attempt to fix them urgently by means of patches are allowed without penalties or anyone being held responsible.

Yet another question that must be answered is that allowing 'workarounds' in the UE would lead to those UEs not being compliant to the 3GPP standard. How would these UEs then be conformance tested?

Conclusions

It is concluded that the problems currently identified in the proposed TR are network implementation problems and that patches to those exist. With this in mind the safest solution would be to rollout the network patches urgently. The existence of a TR like the one proposed would partly remove the incentive for manufacturers to provide corrections as well as for operators to update their old networks urgently, leaving it all to UE implementation 'workarounds'. It is furthermore argued that the existence of a TR, recommending 'workarounds' in otherwise compliant UEs, will set a very dangerous precedence that will make the quality and consistency of the standard deteriorate. In addition it will add cost to development, and there would also be cost in case of a later need to recall delivered UEs. Another drawback is that also operators with well-behaving networks would suffer from reduced functionality in the UEs with such 'workarounds'.

Furthermore a similar issue was discussed at CN1#27 (N1-022489). In this case, CN1 recommendation was that R99 upgrades should be well co-ordinated by the operator in its network, but that the related mechanisms did not need to be standardised. The same principle shall apply also here.

Ericsson concludes that documenting 'workarounds' in a TR is unproven and detrimental. The principle of upgrading networks to correct faults should continue to be the error correcting method. This is in line with the

view of TSG GERAN liaised in GP-030322 to GSMA Board, in which TSG GERAN asks the GSMA Board to note the detected interoperability problems and consider actions to correct the situation. TSG GERAN appreciates the challenge of installing corrections to every existing piece of affected network equipment, but stresses the fact that such interoperability problems need to be solved in order to facilitate the deployment of commercial R99 User Equipments.