

**Agenda item:**

**Source:** Nokia, Motorola, T-Mobile, Ericsson, Panasonic, NTT DoCoMo, Qualcomm, Telecom Italia  
**Title:** Feature clean up  
**Document for:** Discussion and Decision

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## **1. INTRODUCTION**

The purpose of this paper is to initiate discussions on feature pruning as, noted in RAN plenary #26. A request to simplify specifications has been expressed in numerous presentations in RAN future evolution WS in Toronto. Hence there should be a significant desire among the industry to initiate such an activity.

RAN WG1 and WG2 have had such an initiative for rel-99 specification, but very little success. As the WCDMA networks and terminals are now in use in live networks, and new features like HSDPA/HSUPA are to bring new capabilities into the system, it should be possible to remove features, which seems not being used. This would simplify specification, but also it would enable evolution with less complexity as some unused features unnecessarily complicate new feature development.

In the last RAN meeting removal of TGPL2 was discussed [1], and the work has now progressed in WGs [2-5]. We feel that together with this issue also other areas of specification should be considered.

## **2. DISCUSSIONS AND PROPOSAL**

Feature prioritisation was discussed already in R99 phase and the result was that only no coding option was dropped from specifications [6]. However, several features were proposed to be removed from specifications. In the documents [7-10] we proposed RAN working groups to investigate a feasibility of removal of some UTRAN features from the specification in order to simplify the specifications. Feeling in the working groups was that specification clean up would be beneficial for speeding up the introduction of new features and UTRAN evolution in general. Thus, the discussion has continued after the WG meetings resulting the list below on features, which could be removed from the specifications.

Based on the initial analyses [7-10] and further discussion after the working group meeting the following set of features could be removed from the specifications.

- 80 ms TTI for DCH
  - In the scope of recent discussions of delays, and the need to enhance this behaviour, it is going to be unlikely that DCH based services will be based on 80 ms TTI in future.
- SSdT
  - As now the WCDMA networks have started and it is expected that infrastructure vendors and operators are having clearer picture what features are implemented and used in networks it is going to make use of some features less relevant. It seems that SSdT is part of the latter case unlikely to be introduced in the networks. In addition, all efforts to speed up UE testing time are welcomed, and hence we consider this feature possible to remove.
- TGPL2
  - This is proposed to be removed in CRs [2-5], which are technically endorsed by the working groups.
- Observed time difference to GSM cell
  - This measurement was defined for compressed mode optimization purposes. Using these time difference measurement results the network could optimize a BSIC re-confirmation compressed mode patten for each UE. However, this feature has not been well finalised in the specifications. Furthermore, the feature has not been seen necessary in real networks. As some further work

would anyway be expected to make this compressed mode optimisation feature feasible, it would mean that the feature is not likely to become usable in practice.

- Support of dedicated pilot as sole phase reference
  - The support is not mandatory in HSDPA and not applicable for F-DPCH. Concerns have also been raised about the usage of the feature in real networks.
- Tx diversity closed loop mode2
  - Feature is not defined for HSDPA and F-DPCH and therefore it is not efficiently usable in the networks.
- DSCH
  - This feature is optional and the not used in real networks. Furthermore, the introduction of HSDPA will diminish the benefits that DSCH could provide.
- DRAC
  - This feature is optional. Furthermore, motivation for the removal of this feature is rather similar as the one of SSDT and UL short scrambling code. It is unlikely that DRAC will be introduced in the networks.

As noted in the introduction, considerations of feature complexity may have some impacts to the features introduced in later releases. Hence also features optional to the system should be discussed as their impacts to new solutions and their combatibility to baseline.

### 3. CONCLUSION

In this document we propose RAN to consider a removal of a set of UTRAN features listed in in Section 2 in order to simplify specifications. This feature clean up would simplify specification and enables smooth evolution with less complexity. Currently unused features are complicating and delaying new feature development, which on the other hand delays the introduction of new services and features on the market.

### REFERENCES

- [1] RP-040524 Removal of TGPL2 Ericsson, Nokia
- [2] R1-050110, Technically endorsed RAN1 CRs for TGPL2
- [3] R2-050585, R2-050586, R2-050587, R2-050588, Technically endorsed RAN2 CRs to RAN plenary#27
- [4] R3-050246, R3-050247, R3-050248, R3-050249, R3-050250, R3-050251, R3-050252, R3-050253, Technically endorsed RAN3 CRs to RAN plenary#27
- [5] R4-050034, R4-050035, R4-050036, R4-050037, R4-050038, R4-050039, R4-050040, R4-050041 Technically endorsed RAN4 CRs to RAN plenary#27
- [6] R12-020033 Report of the joint TSG-RAN WG1/WG2 meeting
- [7] R1-050172, Feature Clean-Up, Nokia, Motorola
- [8] R2-050583, Feature Clean-Up, Nokia, Motorola
- [9] R3-050245, Feature Clean-Up, Nokia, Motorola
- [10] R4-050214, Feature Clean-Up, Nokia, Motorola