

Agenda item : 10
Source : Drafting session¹
Title : Draft liaison statement to WG4 on work split between WG1 and WG4 on Radio link procedures
To : 3GPP RAN, WG4
Copy : WG2
Document for :

3GPP TSG RAN WG1 reviewed during its second meeting a liaison statement sent by WG4 related to the scope and structure of S4.03 on System level protocol aspects and split of work for the definition of radio link procedures. That liaison statement was contained in 3GPP TSG RAN WG4 85/99 (3GPP RAN WG1 88/99). Discussion that took place in WG1 showed that there is a potential overlap between WG1 and WG4 as far as the definition of the layer 1 procedures are concerned. 3GPP RAN WG1 would like to ask guidance from the 3GPP RAN on the following issues:

- 1) Concerning the activities of WG1 related to physical layer procedures and provision of measurements to higher layers to support idle mode and connected mode procedures, it is the belief of WG1 that WG1 is responsible for the definition of the physical layer procedures themselves, such as closed loop power control and the measurement procedures. Some aspects of the handover procedures are currently documented by WG1 but should be moved to WG2.
- 2) It is the view of WG1 that WG4 will be in charge of the setting of the minimum performance requirements for such procedures and measurements and definition of associated testing methods. Some examples are provided below :
 - a) For fast power control
 - i) WG4 should defined the “average” uplink power control performance at the UE knowing that the TPC command can be wrongly. Similarly the implementation of downlink power control in the UE should lead to minimum performance requirement for the setting of the TPC command knowing that the SIR evaluation at the UE has a limited accuracy. The accuracy of the SIR might be also an alternative assuming that such information is made available.
 - ii) For the UE, the power control range, the associated power control step sizes and their accuracy are items to be specified in S4.01 and S4.02 since those documents

¹ Nortel Networks, Ericsson, France Telecom, Nokia, Telia, Omnitel

should specify the support of different power levels. Values (apart from their accuracy) would be referenced in S1.14 ad S1.24, and their use specified in S1.14 and S1.24. However the decision on which should be the most appropriate range and the different step sizes should be done jointly by WG1, WG4, the RAN and the terminal group, given that the step sizes have an impact on power control efficiency but are also linked to the power control accuracy.

iii) As far as the Closed Loop power control range for the BTS is concerned, it might not need to be part of the specification or only minimum step sizes would be specified. From the power control perspective, some level of standardisation may be needed depending on its impact on the operation of the mobile. Efficiency of the downlink power control is a matter for complete conformance in WG4, where essential conformance relates to all aspects that an operator would like to check to make sure that the equipment works appropriately. The efficiency of the power control only partly relates to the essential conformance where the essential conformance relates to aspects to be checked from the regulatory perspective, in order to ensure that the equipment does not cause any harm to other systems or other operator. Essential conformance for the power control may exist due to its relationship with spurious emissions and switching transient mainly

b) For the measurements

i) The measurement procedures in relation with setting of the idle periods durations (parametrisation of the slotted mode) (whether for FDD and TDD) and deployment scenarios are under study in WG1. This would lead to minimum performance requirement in terms of number of cells monitored, synchronisation acquisition time and accuracy. Minimum performance requirement may be moved at a latter stage to a WG4 documentation but this requires some work from WG1 first. WG1 recommends to keep this for the time being in the WG1 documentation until things are more stable.

ii) For the section on Radio link measurements, only the Physical parameter and statistical parameter should be dealt with by WG4 so far, since they covers aspects such as accuracy of measurements.

c) For the access procedure

i) Minimum performance of the protocol should be defined by WG4 but the procedure should be defined by WG2 and WG1 depending on the work split between WG1 and WG2. Minimum performance on the different channels including the PRACH and AICH will be fixed by WG4 on the basis of simulations expected from WG1 and requirements from WG1 and WG2 from the protocol efficiency point of view. This last point will be part of S4.01 and S4.02.