

Agenda item :
Source : 3GPP RAN WG1
Title : **Liaison statement to WG4 on closed loop power control status in WG1**
To : **WG4**

3GPP RAN WG1 would like to inform WG4 of the status of the work carried out on the closed loop power control in the framework of the merging phase between ETSI and ARIB.

The power control step sizes for the uplink closed loop power control are under discussion. The differences between the ETSI and ARIB documentation were identified, indeed ETSI considers different step sizes from 0.25 to 1.5 dB, whereas ARIB considers 1 dB. When setting the step size, we understand that the following aspects should be taken into account :

- 1) Hardware limitations for UE to be available in a short period of time
- 2) The definition of the step sizes must take into account accuracy requirement and measurement methods
- 3) Allowing a certain level of flexibility in order to take advantage of evolution of the technology
- 4) Benefit of multiple step sizes for the system efficiency
- 5) Potential need for bigger sizes in certain case, e.g. slotted mode....

We would welcome thoughts of WG4 concerning the limitation on step sizes taking into account the accuracy issue and future hardware capabilities of mobiles.

The power control step sizes for the downlink closed loop power control are also under discussion in WG1. The level of standardisation required is currently under study as far as the efficiency of the power control procedure and impact on the UE operation are concerned. We anticipate though that step sizes may have to be specified in some way due to its possible relationship with RF aspects. We would welcome thoughts of WG4 on this particular issues.