TSG-RAN Working Group 1 meeting No. 15   *TSGR1-00-1174*
August 22– 25, Berlin, Germany

Source :	**Samsung Electronics Co., Ltd.**
Title:	**LS on Terminal Power Saving Features**
To:	**TSG RAN WG2**
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TSG RAN WG1 would like to inform TSG RAN WG2, WG3, and WG4 that following the last RAN WG1 #15 meeting, a Technical Report was created for the Terminal Power Saving Features work item. Gated DPCCH transmission was approved as part of the aforementioned work item and is included in the technical report. TSG RAN WG2, WG3, and WG4 are kindly requested to review the attached technical report (Tdoc R1-00-1166) and start related works as soon as possible.

The Technical Report will address a number of issues among which TSG RAN WG1 is kindly requesting TSG RAN WG2's advice on:

1. Indication of termination of gating
    Higher layer signaling or TFCI could be used as an indicator for termination of gated DPCCH transmission. The disadvantage of higher layer signaling for that purpose is the additional delay required. If TFCI is used for that purpose, fast termination of gating is feasible but a specific TFCI should be reserved. The problem is TFCI's is that it is already short of resources. One possible solution is to change the TFCI mapping conditionally to gating being applied. That is, TFCI is defined differently during gating for informing that the gating should be terminated. Is such a proposal acceptable by the RAN WG2 members?

2. (Conditional to 1.) Length of TFCI
    If it is possible to change the mapping of TFCI conditionally, then what should be the length of TFCI to indicate termination of gating? Should it be the length of TTI (10ms, 20ms, 40ms, or 80ms) or 10ms frame?

3. Changing requirement of handover measurement during gating
    In Gated DPCCH transmission UE battery saving is accomplished by turning off the transmitter intermittently. In addition to that, there is a proposal (See attached Tdoc R1-00-1079) to get additional UE battery saving by turning off the receiver. The analysis accompanying the proposal clearly shows the benefits of receiver gating as well as transmitter gating. In receiver gating the UE is turning its receiver on every K-th frame for decoding the whole frame. In the frames in between the receiver is turned on only for decoding TPC commands. K is a parameter that network could signal to the UE with other gating parameters. If K=1 then only transmitter gating is used and receiver gating is not activated.   However, the problem of turning off the receiver might be that the UE cannot fulfil the handover measurement requirements. One proposed solution is to loosen the handover measurement requirements and permit the UE to measure only those cells that already included in the Candidate Set, i.e for which initial search has already been done. This is however the first draft proposal how the problem of fulfilling the handover measurement requirements could be solved and further studies are needed whether some other solutions could also exist. RAN WG1 would however like to inform RAN WG2 about this idea and welcomes any comments from RAN WG2 on this issue. E.g. could such a

proposal of doing handover measurement only for cells in the candidate set during gating be found reasonable and acceptable, at least at low mobile speeds?

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