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Agenda item:

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This contribution gives some answers to the questions raised in the discussion on CR 25.214-128r1 about clarification of SSDT (in Tdoc R1-00-1226). There were three questions:

1) Discontinuous downlink switching between cells with independently calculated P1 values,

2) Interference of uplink transmission to non-primary cells, and

3) Interference by unexpected DPDCH transmission from non-primary cells.

Though RAN WG4 is doing several performance evaluations, in which SSDT is included, they are unfortunately link level ones without power control, then their results cannot answer directly the questions above.

At first, it should be mentioned that downlink SIR measurement from the primary cell signal, which is the main issue of the CR, is clearly stated in [1] (Section 2, *(3) Uplink TPC command detection*; where "uplink TPC commands" mean TPC commands from a UE for downlink power control, and "detection" means generation).

1) Discontinuous downlink switching between cells with independently calculated P1 values

Discontinuous downink switching is one of the natures of SSDT. This effect has been considered from the beginning of our evaluation. Although downlink transmission powers, i.e. P1 values, are calculated independently withh each cell, they are expected to be almost the same when the primary cell is switched between those cells . This is because in such a situation the average link qualities are almost the same between those cells in both up and downlinks. Then, calculating uplink TPC commands based only on the downlink quality of the primary cell also gives proper commands in average for the non-primary cell switched to.

2) Interference of uplink transmission to non-primary cells

Uplink transmission power control is carried out in the normal way. Thus, TPC commands from non-primary cells are also considered, and the uplink transmission interference to non-primary cells is controlled as done in the normal way.

3) Interference by unexpected DPDCH transmission from non-primary cells

SSDT ID decoding errors are investigated in [2,3,4,5]. It is shown that there is no sever influence in the actual situations. The influence of ID decoding errors has been considered from the beginning of our evaluation.

Although at present there is no explicit evaluation result to answer some of the questions, some explanations are given here based on the evaluation results currently available. It should be also noted that the background of the CR is clearly stated in [1]. Thus, it is recommended that the CR should be approved.

REFERENCES

[1] "UE complexity analysis for the support of SSDT", NEC and Fujitsu, R1-99376.

[2] "Further SSDT Simulation Results for UE Performance Tests", Fujitsu, R4-000036.

[3] "SSDT Simulation Results for UE Performance Requirements", Fujitsu, R4-000132.

[4] "Implementation Margin in UE Performance Requirements for SSDT", Fujitsu, R4-000133.

[5] "SSDT simulation results for DL performance test", NEC, R4-000189.

R1-99376.zip   R4-000036.ZIP   R4-000132.ZIP   R4-000133.ZIP   R4-000189.ZIP