

Status Report for WI to TSG

Work Item Name: Optimisation of DL channelisation code utilisation

SOURCE: Rapporteur (Sarah Boumendil, Nortel) **TSG:** RAN **WG:** 1

E-mail address rapporteur: boumendi@nortelnetworks.com

Ref. to WI sheet: RAN_Work_Items.doc

Progress Report since the last TSG (for all involved WGs):

RAN1 #38bis/ #39

During RAN#38bis, 2 contributions were discussed

- R1-041173 Way forward on F-DPCH, Nortel Networks

Based on this document, a number assumptions regarding F-DPCH (spreading factor, compressed mode, Tx diversity applicability, beamforming applicability) were taken if the F-DPCH was to be included in the specifications.

During RAN1#39, based on the above assumptions, CRs were presented introducing F-DPCH in RAN1 specifications (R1-041306 to R1-041310)), simulation results justifying the proposed DL power control scheme were also presented (R1-041311). These CRs were consistent with the set of CRs submitted to RAN2, 3 and 4. Other papers were discussed:

R1-041336, Way forward on F-DPCH (Nokia)

R1-041343, Fractional DPCH re-using slot structure 2 (Panasonic)

R1-041405, Low rate DPCH for HSDPA data-only users (Siemens).

RAN1 concluded on a default solution to be adopted based on the Panasonic proposal (i.e. re-using the existing DPCH structure). However the Nokia proposal was felt attractive enough (it allows to double the number of UEs which can be multiplexed on a given OVSF code) to be evaluated until the next RAN1 meeting and ask for a late delivery for the Work Item (as part of release 6 but at RAN#27 instead of RAN#26). In this proposal only TPC bits and no pilot bits are transmitted to each UE.

CRs were updated based on the default solution. They were submitted for information to the RAN1 reflector.

An LS (R1-041479) was sent to the other RAN working groups to inform them and ask them if possible to update their CRs in line with the default solution before RAN#26.

RAN2#44/ #45

During RAN2#44, one contribution was submitted for the meeting as follows:

- R2-042051, SRB(s) mapping on HS-DSCH, Nortel Networks

This paper discussed synchronisation aspects when mapping SRBs to HS-DSCH as configured when using F-DPCH. Following the discussion an LS was sent to RAN1 to indicate the system may work (more probable in low mobility and good coverage). Some optimizations may be needed to improve the performance of the RRC connection failure detection and RRC re-establishments.

During RAN2#45, 1 contribution was submitted but not discussed due to lack of time.

- R2-042340, Introduction of F-DPCH (overview paper + Draft CR to 25.331)

RAN3#44/ #45

During RAN3#44, 3 contributions were discussed:

- R3-041361, Introduction to Fractional DPCH, Nortel Networks
- R3-041362, RAN1 Discussions and Decisions on Fractional DPCH, Nortel Networks
- R3-041363, Analysis of impacts of Fractional DPCH on Iub/Iur, Nortel Networks

It was concluded that CRs should be updated based on RAN1 decisions at RAN1#38bis.

During RAN3#45, a full set of CRs covering RAN3 specifications was submitted. An updated version of these CRs based on the default solution agreed by RAN1 was reviewed and agreed by RAN3 .

RAN4#33

The following documents were discussed:

- R4-040617 Introduction to Fractional DPCH (Nortel)
- R4-040618 Introduction to Fractional DPCH (CR 695 to 25.133 Rel-6) (Nortel)

The 25.133 CR was reviewed and noted as part of the introduction of the F-DPCH. Regarding the testing aspect and the performances, an LS to RAN1 was sent back to indicate (R4-04784) that it is difficult for RAN4 to update the specifications when solutions for the Power Control are still under consideration at the RAN1 level but that the Rel-6 is the target release for a complete package.

List of Completed elements (for complex work items):

- Physical layer aspects (default solution for slot format, physical channel description, modulation, transmit diversity, power control, timing aspects)
- Configuration aspects in UE and node B (RRC, NBAP/RNSAP)
- RRM aspects (soft handover, power control, synchronisation)

List of open issues:

- Possibility to use slot format without any pilot bit (Nokia proposal)

Estimates of the level of completion (when possible):

90%

WI completion date review resulting from the discussion at the working group:

RAN1 asks to move the completion date to RAN#27 (March 05) and to consider the WI as a late delivery of Rel-6.

References to WG's internal documentation and/or TRs: