3GPP TSG RAN Meeting #97-e RP-222086

Electronic Meeting, September 12 - 16, 2022

Views on Network Controlled repeater WI

TDoc Type: Discussion

For: Decision

Agenda item: 9.2.7

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Background

- The completion of Network Controlled Repeater (NCR) is expected at RAN#97-e, and this item will be converted to WI
- RAN WGs prepared their recommendation for WI scope. However, there are some controversy
  - introduction of power control
  - supported frequency range, i.e. “FR2 only” or “both FR1 and FR2”
  - down-selection of 4 solutions for identification/authorization

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Introduction of power control

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- **Discussion**
  - Our position is “Yes: power control is useful”, and it can help operators’ deployment
    - better interference management
    - optimized power consumption
    - avoiding on-site optimization of repeater Tx power
  - However, it is true that there was no consensus
    - It is expected that the same discussion in RAN1 will be iterated
  - Operators are not always active in RAN1. Thus, it is worthwhile confirming their interest in RAN plenary
- **Observation**
  - Introduction of power control in the WID can be decided based on operators’ support

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Supported frequency range

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- **Discussion**
  - From L1/L2 point of view, the introduction of NCR brings no big difference for specifications
  - The band issue is fully up to operators: it is not a good idea to preclude the possibility from L1/L2 level
  - Some impact would be expected for RAN4:
    - Type 1-O repeater has not been defined yet, while one of the most important feature for NCR is beam management

- **Observation**
  - It is not necessary to limit the applicable FR for NCR from L1/L2 perspective
  - Further discussion is necessary to support FR1 NCR from RAN4 perspective

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4 solutions for identification/authorization

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- **Discussion**
  - 4 solutions for identification/authorization are captured in the TR, and down-selection was not performed because the reply LS from SA3 is necessary for the final decision
  - This issue is not urgent because nothing is blocked by this issue

- **Observation**
  - Down-selection of 4 solutions for identification/authorization can be performed during the WI phase, after receiving the reply LS from SA3

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Proposal

- The following aspects should be included in the WID
  - Beam information as side control information
  - ON-OFF information as side control information
  - UL-DL TDD configuration and NCR's behaviour over flexible symbols
  - Down-selection of 4 solutions for repeater identification/authorization
- Both FR1 and FR2 should be specified from L1/L2 perspective
- Consider to introduce power control if operators are interested in it

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Thank you

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