3GPP TSG RAN Meeting #104
Shanghai, China, June 17-20, 2024

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Views on Rel-19 Network Energy Saving

Background

- Overall progress is very well.
- Two topics have check point, i.e., whether on-demand SIB1 and spatial domain adaptation for PRACH
  - Study procedures and signalling method(s) to support on-demand SIB1 for UEs in idle/inactive mode)

2. Study procedures and signaling method(s) to support on-demand SIB1 for UEs in idle/inactive mode, including: [RAN1/2/3]

- Triggering method by uplink wake-up-signal using an existing signal/channel.
- Wake-up-signal configuration provisioning to UE
  - Note: No modification of SSB will be discussed under this objective
- Information exchange between gNBs at least for the configuration of wake-up signal, if necessary.
- Checkpoint for normative work in RAN#105

  - Study adaptation of PRACH in spatial domain in 2Q'2024

- Study adaptation of PRACH in spatial domain, e.g. non-uniform PRACH resources per SSB, and specify if found beneficial
  - This study is to be done in 2Q'2024 only

- For on-demand SIB1 for UEs in idle/inactive mode, overall progress in RAN1 and RAN2 are good.
  - A lot of simulation results were collected from companies to prove NES gain from on-demand SIB1.
  - Applicable scenarios, detail mechanisms were also discussed and proceeded well.
  - No intervention is needed from RAN plenary.
- For adaptation of PRACH in spatial domain, RAN1 focus on feasibility and benefits.
  - A lot of evaluation results were collected which don't show solid gains from adaptation of PRACH in spatial domain.
  - In RAN1#117 meeting, it is concluded that there is no consensus in RAN1 on the support of PRACH adaptation in spatial domain.
  - No intervention is needed from RAN plenary.
- Rel-19 Network Energy saving WID needs to be updated accordingly to reflect the aforementioned progress.

Proposal

- Don’t support spatial domain adaptation for PRACH in Rel-19 NES and modify the WID for enhancements of network energy saving for NR accordingly. The following modification is adopted:

3. Specify adaptation of common signal/channel transmissions. [RAN1/2/3/4]
   - Adaptation of SSB in time domain, e.g. adapting periodicity
   - Adaptation of PRACH in time domain
   - ~~Study adaptation of PRACH in spatial domain, e.g. non-uniform PRACH resources per SSB, and specify if found beneficial~~
     - ~~This study is to be done in 2Q’2024 only~~
   - Adaptation of paging occasions including confining the paging occasions in the time domain
     - Note: there shall be no paging latency increase
   - Note: there shall be no negative impact to legacy UEs, unless significant benefits are shown

Thanks!