



Proposed WI scope for Power Saving in RAN1



Discussion in RAN1(1/2)

✓ In RAN1#96bis, the followings were classified as potential power saving techniques to be investigated in RAN1 perspective

- Power saving technique associated with C-DRX–
 - Essential for UE function for the C-DRX
 - Wakeup –
 - » UE is indicated to transition from outside Active Time to Active Time
 - » UE is indicated to stay at Active Time
 - FFS: The time of receiving the wakeup and go-to-sleep indication inside or outside Active Time.
- Cross-slot scheduling
- Triggering RS transmission
- CSI report
- Single vs. multi-cell operation

Discussion in RAN1(2/2)

- ✓ **In RAN1#96bis, the followings were classified as potential power saving techniques to be investigated in RAN1 perspective, which may have potential dependence on the ongoing SI in RAN2**
 - Power saving technique associated with C-DRX–
 - Essential for UE function for the C-DRX
 - Go to sleep–
 - » UE is indicated to transition from Active Time to outside Active Time
 - » UE is indicated to stay outside Active Time
 - FFS: The time of receiving the wakeup and go-to-sleep indication inside or outside Active Time.
 - BWP /SCell
 - BWP & SCell together
 - BWP and SCell have separated fields
 - MIMO layer adaptation/number of Antenna adaptation
 - Indication of CORESET/search space/candidate of subsequent PDCCH decoding
 - PDCCH monitoring periodicity
 - PDCCH skipping (skipping duration)-
 - PDCCH skipping – UE is indicated to skip number of the PDCCH monitoring occasions and stays in the Active Time
 - Skipping number of DRX monitoring
 - SPS activation
 - DRX configuration

Observation

- ✓ **According to the ongoing discussion in RAN1 up to now, at least the following power saving techniques seem stable to be specified in Rel-16**
 - Wake up functionality with C-DRX
 - Cross-slot scheduling
- ✓ **During the SI, power saving gain on L1-signaling based UE adaptation of PDCCH monitoring was verified. However, discussion on this technique is put on hold due to potential dependence with RAN2 study work**
- ✓ **L1-signaling based UE PDCCH monitoring adaptation can be designed in a MAC-transparent way**

Proposals for Power Saving WI scope update in RAN1 perspective

- ✓ **L1-signaling based PDCCH monitoring adaption (e.g. CORESET/search space/periodicity) in RRC CONNECTED should be confirmed to be within RAN1 scope**
 - Independently from a UE's C-DRX configuration status
 - No/marginal impact to RAN2 work