

Views on Release 19

Panasonic

Proposals for Release 19

- AI/ML: One feasible work item and one further study item.
 - Release 18 Study may not be enough for model deliver/transfer. Two-sided models may be also not enough.
- WI: UE-side trained AI/ML model
 - UE-side trained AI/ML model.
 - CSI compression and/or CSI prediction
- SI: NW-side trained AI/ML model and Two-sided models
 - NW-side trained AI/ML model to be transferred to UE
 - Without disclosing NW deployment information but to enable site specific operation
 - Beam management and/or positioning accuracy enhancement
 - CSI compression may be categorized depending on the progress.

Proposals for Release 19

- Work Item: XDD
 - Based on the study outcome of Rel.18:
 - Single carrier
 - UE is half duplex

- Possible Study Item: XDD
 - Depending on the time availability with other WI/SI
 - UE side full duplex
 - Study "DL and UL overlap among different UEs" and "simultaneous DL and UL from a UE" in a carrier/cell
 - Multiple carriers
 - Similar enhancement to single carrier operation

Proposals for Release 19

- Work Item: LP-WUS
 - Following aspects to be specified.
 - Waveform discussion with the consideration of SI outcome
 - Full coverage depending on the feasibility of SI outcome
 - Serving cell tracking offloading to LP-WUR/WUS
 - » FFS: neighbor cells measurement
 - Synchronization enhancement for LP-WUR/WUS

Proposals for Release 19

- Work Item: RedCap UE
 - URLLC (safety-related device)
 - Unlicensed band (with 20 MHz limitation)
 - Sidelink (with 20 MHz limitation)
 - Fast retuning of BWP

- Work Item: URLLC/Industrial IoT WI
 - Sidelink
 - This would be useful for industrial usage.

- Work Item: Sidelink
 - CA, FR2

Proposals for Release 19

- Coverage Enhancement: Some more enhancements are needed to be discussed for further coverage enhancements because connectivity is a key aspect in cellular network. On the other hand, TU limitation should be taken into account.
- Study Item: DL Coverage
 - PDCCH
 - PDSCH-dynamic repetition indication to increase the coverage
 - The waveform discussion in order to reduce PAPR/CM of DL
- Work Item: Coverage
 - Enable joint channel estimation for multiple TBs scheduled by a single DCI
 - DMRS-less PUCCH
 - Waveform switching for Msg.3
 - Multi-PRACH transmission with different beams

Proposals for Release 19

- Work Item: Network power saving
 - Cell DRX/DTX is informed from adjustment cells. These cells can be another frequency or neighbor cells
 - On demand SSB, CSI-RS and/or SIBs while considering backward compatibility
 - Interaction with LTM (L1L2-triggered mobility) enhancement

Proposals for Release 19

- Work Item: NCR
 - Customer deployed NCR instead of NW deployed NCR
 - The characteristics of beam configurations to the gNB and the gNB can configure the beam configuration of the UE via RRC
 - Power control
 - This can be first step toward customer deployed network.

Proposals for Release 19

- Work Item: NTN
 - DL Coverage enhancement
 - If regulatory limitation of DL power flux density is applied, DL coverage enhancement is needed as discussed in Rel.18 study.
 - Enhanced usage of circular polarization
 - More flexible polarization indication (e.g. per beam, per UE, per layer) for interference mitigation and/or MIMO.
 - Regenerative satellite including inter-satellite link

Proposals for Release 19

- Study Item : Ambient IoT
 - Working group level study on the feasibility
 - Evaluation methodology including traffic models, power models, and device types.
 - Waveform for ambient IoT and its coexistence with NR waveform
 - Time and frequency domain resource management and multiplexing for different behavior/function

Proposals for Release 19

- Study Item: Integrating Sensing and Communication
 - At first, some prioritization and/or feasibility discussion would be required in RAN level. The merit to use radio frequency (licensed or unlicensed) should be evaluated.
 - Humidity, air particulate matter (PM) concentration, respiration rate estimation, breathing depth estimation, apnoea detection, elders' vital sign monitoring....
 - Positioning related topics can be enhancement of current work.