



Agenda Item : 4.3

Source : InterDigital

Title : Positioning Enhancements for R18

Document for : Discussion and Decision

Rel-18 Positioning

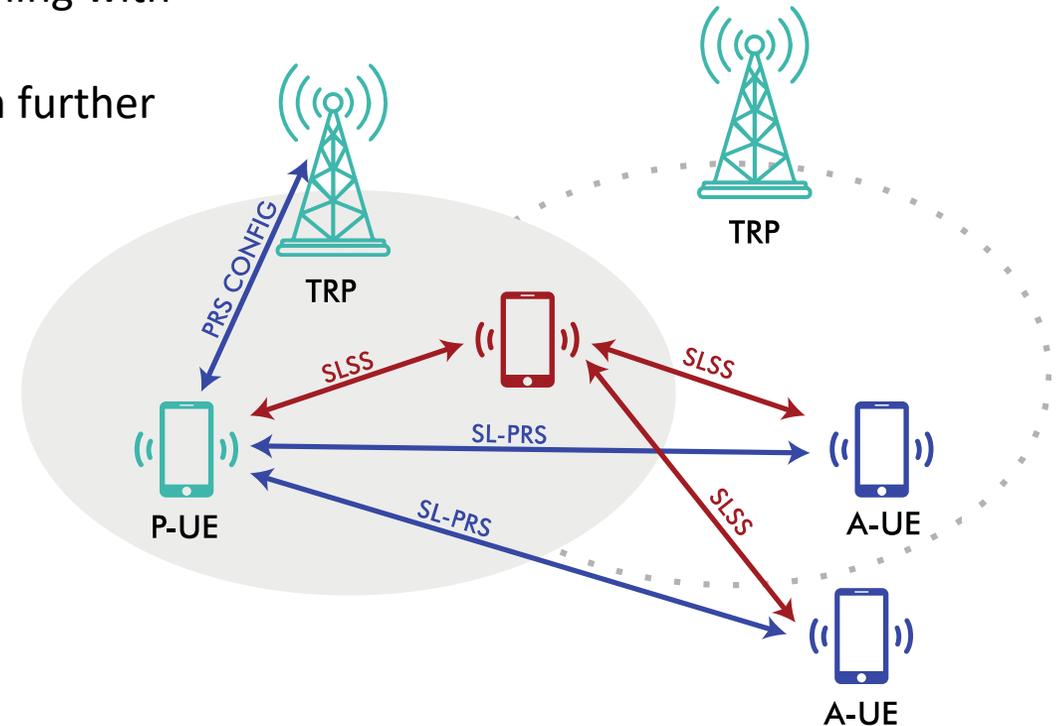


- **Justification**

- Higher accuracy and lower latency absolute/relative positioning with integrity is required for XR, V2X and Industrial IoT devices
- Leveraging wider bandwidths in higher frequency bands can further improve the positioning accuracy
- Reliable positioning for high mobility UEs
- Seamless handover between outdoor to indoor is desirable

- **Objective**

- Support higher frequency (e.g., >52.6 GHz)
- Integrity for RAT dependent positioning
- Positioning during handover
- Unlicensed band assisted positioning
- Positioning for RedCap UEs



An example of Sidelink positioning:
P-UE: Positioning UE, A-UE: Assistant UE,
SL-PRS: Sidelink PRS, SL-SS : Sidelink synchronization signal

Potential Rel-18 WI Scope



- Support SL Positioning procedure:
 - Study resource allocation, synchronization, SL-PRS allocation aspects
 - Consider vehicular scenarios, relative/assisted positioning, in/out of coverage, and public safety cases
 - Study relative positioning with respect other SL UEs vs. absolute positioning.
 - Set requirements per use case: 3m accuracy for data positioning or lane-level accuracy, cm level accuracy for driving
- Support positioning in new frequency bands and wider bandwidths:
 - Positioning above 52.6 GHz
 - Unlicensed band assisted positioning
- Support positioning during mobility and handover
- Support integrity for RAT dependent positioning
- Support positioning for different UE device types:
 - Positioning for reduced capability (RedCap) devices