3GPP TSG RAN Meeting #93-e
Electronic Meeting, September 13 - 17, 2021

RP-211797

Agenda Item: 9.0.2

Source: Samsung

Title: On Expanded and Improved Positioning for Rel-18

Document for: Discussion and Decision

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Motivation

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- “Expanded and Improved Positioning" was identified as the outcome of the RAN Rel-18 workshop [RWS-210659] with following example areas:
  - Sidelink positioning/ranging
  - Improved accuracy, integrity, and power efficiency
  - RedCap positioning

- However, it would be difficult to cover above all example areas in a single study/work item.

- Therefore, the Rel-18 work on “Expanded and Improved Positioning” should be restricted for the prioritized areas with a reasonable scope.

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Discussion for prioritization

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- Sidelink positioning: High priority
  - This is the most important example area to be supported in Rel-18 considering public safety scenario and the availability of positioning in the absence of GNSS and/or network.

- Improved accuracy, integrity, and power efficiency: Medium priority
  - This is the continuous positioning improvement on the top of Rel-16 and Rel-17 NR positioning.
  - However, the target requirements for the improvement should be clarified at first.
  - Only identified essential issues should be specified for manageable work load.

- RedCap positioning: Low priority
  - At this stage, target requirements and specification impacts for RedCap positioning are not clear.
  - If only RAN4 requirement is considered (for reduced BW UE, 1Rx), we can include it in the eRedCap WI.

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Study/Work Scope

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- Sidelink positioning
  - Evaluate performance based on target scenario and requirement identified in TR 38.854 [RAN1 lead]
  - Study/specify sidelink positioning architecture and protocol [RAN2 lead]
  - Study/specify sidelink positioning reference signal & positioning schemes [RAN1 lead]
  - Study/specify sidelink positioning procedure [RAN1 lead]

- Improved accuracy, integrity, and power efficiency
  - Study/specify solutions for integrity for RAT dependent positioning techniques [RAN2 lead]
  - Study/specify solutions for accuracy enhancement [RAN1 lead]
  - Study the requirements on LPHAP as developed by SA1 and identify potential enhancements [RAN1 lead]

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