3GPP TSG-RAN Meeting #90-eRP-20xxxx

Electronic Meeting, 7-11 December 2020

Agenda Item: 9.11

Source: Email discussion moderator (Intel)

Title: Report from Email Discussion [90E][06][Positioning\_WI\_scoping]

Document for: Discussion and decision

# 1 Introduction

This documents reports on the following email discussion during RAN#90-e:

**[90E][06][Positioning\_WI\_scoping]**

Goal: Generate an agreeable WID

Input contributions covered: 2214, 2266, 2305, 2325, 2558, 2586, 2639, 2653, 2664, 2754, 2351, 2709, 2710.

During the 'early items' webinar session on Monday the chair stated that the further discussion should focus on items where RAN1 can work unobstructed in Q1 2021 and that the WID can be updated at RAN#91 when the study item is completed in all WGs. Consequently, this email discussion is structured to focus on RAN1-centric objectives.

The rapporteur's proposal for the WID is contained in RP-202710. The discussion below is structured to collect company opinion on the proposed objectives. Finally, there is an opportunity to give opinion on RAN1 centric objectives that were not proposed to be included by the rapporteur, and also an opportunity to provide any other comments on the proposed WID. In providing feedback companies should keep mind what is a reasonable amount of work to include in the WI given the time that will be available, in particular considering that additional RAN1 work may be added as a result of the SI conclusion in other WGs.

## 2 Discussion

### 2.1 Mitigating UE Rx/Tx and/or gNB Rx/Tx timing errors

The rapporteur's proposed WID contains the following WID

* Specify the methods, measurements, signalling, and procedures of mitigating UE Rx/Tx and/or gNB Rx/Tx timing errors for improving positioning accuracy of NR RAT dependent positioning [RAN1]

Companies are invited to give feedback related to above objective. For the "Support [Yes/No]" column, companies are invited to indicate whether they generally support an objective on this topic; a company may indicate "Yes" in this column and still have more detailed comments on the wording, etc.

|  |  |  |
| --- | --- | --- |
| **Company** | **Support**  **[Yes/No]** | **Comments** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### 2.2 UL AoA and DL-AoD

The rapporteur's proposed WID contains the following objective:

* Specify the procedure, measurements, reporting, and signalling for improving the accuracy of [RAN1]
  + UL AoA for network-based positioning solutions.
  + DL-AoD for UE-based and network-based (including UE-assisted) positioning solutions.

Note: RAN1 will discuss the candidate solutions and provide updates for this objective in RAN#91e.

Companies are invited to give feedback related to above objective. For the "Support [Yes/No]" column, companies are invited to indicate whether they generally support an objective on this topic; a company may indicate "Yes" in this column and still have more detailed comments on the wording, etc.

|  |  |  |
| --- | --- | --- |
| **Company** | **Support**  **[Yes/No]** | **Comments** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### 2.3 Multipath/NLOS mitigation

The rapporteur's proposed WID contains the following objective:

* Study and specify, if supported, the enhancements of information reporting from UE and gNB for multipath/NLOS mitigation [RAN1]

Companies are invited to give feedback related to above objective. For the "Support [Yes/No]" column, companies are invited to indicate whether they generally support an objective on this topic; a company may indicate "Yes" in this column and still have more detailed comments on the wording, etc.

|  |  |  |
| --- | --- | --- |
| **Company** | **Support**  **[Yes/No]** | **Comments** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### 2.4 Aggregation of PRS

The rapporteur's proposed WID contains the following objective:

* Study and specify, if supported, the enhancements to simultaneous transmission by the gNB and aggregated reception by the UE of DL PRS for positioning for one or more contiguous carriers in one or more contiguous PFLs [RAN1/RAN4]
  + The applicability and feasibility of this enhancement need to be further studied from both gNB and UE perspectives for different scenarios, configurations, particular bands and RF architectures.

Note that the rapporteurs proposal in RP-202710 placed this objective in []. These have been removed from the text above as this discussion should make a firm conclusion whether the objective is supported, and hence the WID approved at this meeting should not contain any objective in [].

Companies are invited to give feedback related to above objective. For the "Support [Yes/No]" column, companies are invited to indicate whether they generally support an objective on this topic; a company may indicate "Yes" in this column and still have more detailed comments on the wording, etc.

|  |  |  |
| --- | --- | --- |
| **Company** | **Support**  **[Yes/No]** | **Comments** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### 2.5 Aggregation of SRS

The rapporteur's proposed WID contains the following objective:

* Study and specify, if supported, the enhancements to simultaneous transmission by the UE and aggregated reception by the gNB of the SRS for positioning in multiple contiguous intra-band carriers [RAN1/RAN4]
  + The applicability and feasibility of this enhancement need to be further studied from both gNB and UE perspectives for different scenarios, configurations, particular bands and RF architectures.

Note that the rapporteurs proposal in RP-202710 placed this objective in []. These have been removed from the text above as this discussion should make a firm conclusion whether the objective is supported, and hence the WID approved at this meeting should not contain any objective in [].

Companies are invited to give feedback related to above objective. For the "Support [Yes/No]" column, companies are invited to indicate whether they generally support an objective on this topic; a company may indicate "Yes" in this column and still have more detailed comments on the wording, etc.

|  |  |  |
| --- | --- | --- |
| **Company** | **Support**  **[Yes/No]** | **Comments** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### 2.6 Additional RAN1 centric objectives

Companies are invited to indicate if they propose to include any RAN1 centric objectives that were not already covered by the proposals from the rapporteur.

|  |  |
| --- | --- |
| **Company** | **Comments** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

### 2.7 Other comments on the WID

Companies are invited to provide any other comments, for example comments on TUs, comments on other sections of the WID, etc

|  |  |
| --- | --- |
| **Company** | **Comments** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Annex: Contacts

Please provide a company contact that the email discussion moderator can contact if required.

|  |  |
| --- | --- |
| **Company** | **Contact name and email** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |