**3GPP TSG RAN WG1 #112bis-e R1-230xxxx**

**e-Meeting, April 17th – 26th, 2023**

Title: Draft Reply LS to RAN2 on error source distributions

Response to: R1-2302282/ R2-2302271

**Release:** **Rel-18**

Work Item: NR\_pos\_enh2

Source: InterDigital, [RAN1]

To: RAN2

Cc: -

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

Attachments: None

**1. Overall Description:**

RAN1 would like to thank RAN2 for the LS R1-2302282/ R2-2302271 on error source distributions.

RAN1 would like to provide the answers to the following questions:

**Q1: RAN2 would like to confirm with RAN1 on the agreement “RAN2 anticipate that the error sources are overbounded by a Gaussian distribution.” regarding the distribution of error sources**

**Reply to Question 1:**

From RAN1’s perspective, the RAN2 agreement “the error sources are overbounded by a Gaussian distribution” can be confirmed for the error sources listed in Table 6.1.1-2 in TR 38.859 if the error source follows a Gaussian distribution.

**Q2: RAN2 respectfully ask RAN1 to provide the parameters (e.g. mean and standard deviation) for the overbound Gaussian distribution.**

**Reply to Question 2:**

Parameters for the overbound Gaussian distribution can be mean and standard deviation.

From RAN1’s perspective, zero is a valid possible option for the mean value for the overbound Gaussian distribution for the error sources listed in Table 6.1.1-2 in TR 38.859.

From RAN1 perspective, the value ranges of existing fields corresponding to quality information (e.g., nr-TimingQuality, rtd-Quality-r16) and uncertainty information (e.g., LocationUncertainty-r16) can be reused as a reference to derive the value ranges for the parameters (e.g., standard deviation) for the overbound Gaussian distribution for the error sources listed in Table 6.1.1-2 in TR 38.859.

**2. Actions:**

**To RAN2:**

**ACTION:** RAN1 respectfully asks RAN2 to take the above information into account.

**3. Date of Next RAN1 Meetings:**

TSG RAN WG1 Meeting #113 22 May – 26 May, 2023 Incheon, Korea

TSG RAN WG1 Meeting #114 21 August – 25 August, 2023 Toulouse, France

**Rapporteur question**

Please check the draft LS on page 1. If you see any issues, please comment below. Please note that the agreements made during the online discussion on Apr. 21st are copied and pasted above.

Companies views

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