**3GPP TSG RAN WG1 #101-e R1-200xxxx**

**e-Meeting, May 25th – June 5th, 2020**

**Title:** [Draft] LS to RAN4 on Phase noise and other RF Impairment modelling

**Release:** Rel-17

**Work Item:** FS\_NR\_52\_to\_71GHz

**Source:** Ericsson [3GPP TSG-RAN WG1]

**To:** 3GPP TSG-RAN WG4

**Contact Person:**

#### Name: Stephen Grant

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**Attachments:** None

**1. Overall Description:**

During the discussions in RAN1 on Evaluation Methodology for the Study on supporting NR from 52.6 GHz to 71 GHz, it was agreed that:

* Phase noise (PN) modelling is necessary in the RAN1 evaluation of applicable numerology including subcarrier spacing and channel BW. Two PN models developed during the Rel-15 NR study item are provided in TR 38.803 (Ex-1 and Ex-2).
* Modelling of the power amplifier (PA), either directly or approximately via EVM injection, and other RF impairments, such as I/Q imbalance and frequency offset, will be optionally considered in the RAN1 evaluation.

**2. Actions:**

**To RAN4 groups:**

**ACTION:** RAN WG1 respectfully requests timely feedbackfrom RAN WG4 on the applicability of the above modelling to NR in the 52.6 to 71 GHz frequency range.

**3. Date of Next TSG-RAN WG1 Meetings:**

TSG-WG1 Meeting #102-e 17th – 28th August 2020 e-Meeting

TSG-WG1 Meeting #102bis 12th – 16th October 2020 e-Meeting