**3GPP TSG RAN WG1 Meeting #92 R1-1801323**

**Athens, Greece, February 26th – March 2nd, 2018**

**3GPP TSG-RAN WG2 NR AH-1801 R2-1801664**

**Vancouver, Canada, 22nd–26th January, 2018**

**Title: LS to RAN1 on RRC Configuration for Sync Raster and Channel Raster**

**Response to:**

**Release:** Rel-15

**Study Item:** NR\_newRAT-Core

**Source:** RAN2

**To:** RAN1

**CC:** RAN4

**Contact Person:**

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**1. Overall Description:**

RAN2 have discussed the required signalling to provide frequency related information for the purpose of RRM measurement (definition of Measurement Object - MO), reconfiguration with sync, SCell configuration as well as for cell reselection in IDLE/Inactive mode and have reached the following agreements:

Agreements

1: Within an MO, the SSB location is always indicated with GSCN with no additional offset.

FFS Whether the subcarrier offset is also required. To be checked with RAN1

2: For MO with CSI-RS, an NR-ARFCN is used to indicate a frequency reference. Location of CSI-RS is relative to this reference

FFS Whether this reference is the same as point A in agreement 3i.

3: For reconfiguration with sync (e.g. for inter-frequency HO and SCG change) and for configuration of SCells the SSB location is indicated with GSCN.

3i In addition the reconfiguration provides an NR-ARFCN to identify point A.

FFS Whether the subcarrier offset is also required. To be checked with RAN1

4: For idle/inactive reselection and reselection from LTE to NR, the SSB location is always indicated with GSCN with no additional offset.

RAN2 is aware that RAN1 intended to use an offset to identify the PointA from the lower edge of the SSB. It is a preferable option in system information for UE in IDLE, since UE needs to be made aware of the carrier edge after SSB detection. However, an absolute value is more appropriate in dedicated signalling for UE in CONNECTED considering the case of carrier without its own SSB. RAN2 would like to confirm with RAN1 on the following questions:

**Question 1: Are the above agreements 1, 2, 3, 3i and 4 aligned with RAN1 design and agreements?**

**Question 2: Is the subcarrier offset also required within an MO if the SSB frequency location is indicated using a GSCN value?**

**Question 3: Is the subcarrier offset also required in the RRC message for reconfiguration with sync (PCell change) and SCell configuration in addition to the GSCN value which indicates the SSB frequency location?**

**Question 4: Is the NR-ARFCN value indicating the frequency reference for CSI-RS in a MO the same as the NR-ARFCN value indicating point A in the RRC message for reconfiguration with sync?**

**2. Actions:**

**To RAN1:**

**ACTION:**  RAN2 respectfully ask RAN1 to take above agreements into consideration and provide answers to the questions as requested above.

**3. Date of Next TSG-RAN WG2 Meetings:**

TSG-RAN WG2 Meeting #101 26 Feb-2 Mar 2018 Athens, Greece

TSG-RAN WG2 Meeting #101bis 16-20 April 2018 Sanya, China