**3GPP TSG-RAN WG3 Meeting #120R3-233380**

**May 22 – 26, 2023**

**Title:** LS on SHR and SPR

**Release:** Rel-18

**Work Item:** NR\_ENDC\_SON\_MDT\_enh2-Core

**Source:** RAN3

**To:** RAN2

**Cc:** -

**Contact Person:**

**Name:**  Lixiang Xu

**E-mail Address:** lx.xu@samsung.com

**Attachments:** -

**1. Overall description:**

RAN3 discussed how to retrieve mobility information related to a UE in the nodes involved in the mobility procedure when Successful Handover Report (SHR) and Successful PSCell Change Report (SPR) related optimizations are to be performed in the network nodes involved in the mobility procedure. One solution discussed was whether UE can report the source C-RNTI and time since receiving HO/PSCell change/addition command and retrieving SHR/SPR to assist in the network node receiving the SHR/SPR identifying information related to a UE (e.g. UE related configuration of interest, mobility strategies).

But since the possibility to retrieve information related to a specific UE depends on gNB's implementation. e.g. whether it can store the UE related configuration of interest during the wanted time (up to 48 hours) after a successful HO or PSCell change/addition, RAN3 discussed an alternative solution to enable the retrieval of UE related information without requiring this to be stored on a per UE basis.

RAN3 is therefore studying whether another solution can be defined for newly defined scenarios since Rel-18 as well as intra-RAT SHR, whenever the configuration used by the UE needs to be retrieved in order to perform SON optimizations.

One potential solution RAN3 discussed is as follows:

* The node involved in mobility procedure (via implementation) create references to a configuration or a set of parameters used by one or a group of UEs and can send this “Configuration Information” to the UE in order to assist in the analysis of SHR or SPR or other SON reports (if needed).
* this “Configuration Information” can be optionally sent to the UE in dedicated signaling (e.g., together with the SHR/SPR configuration or in any other RRCReconfiguration). If received, UE should then store this “Configuration Information” together with the SON report(s) and UE should report it back to the gNB along with the SON report(s) (e.g., SHR/SPR).
* How to encode this “Configuration Information” is up to RAN2, taking into account RAN3 guidance related to the size of this information. One example to do this would be to encode this as an OCTET STRING (e.g., 32 bits) as is done for Mobility Information in XnAP (i.e., TS 38.423).
* This solution shall cover all existing mobility scenarios, including dual-connectivity scenarios.

RAN3 therefore have the following questions to RAN2:

**Q1:** Whether RAN2 sees any issues in defining a solution for “Configuration Information” as described above?

**Q2:** For SHR/SPR, is there any issue to include this “Configuration Information” in the RRC Reconfiguration message with sync containing Handover Command or PSCell change command?

**Q3:** In cases when this “Configuration Information” is not configured by the network to the UE, RAN3 discussed whether UE can include the source cell C-RNTI and the time between the event that triggered the report and the sending of the report to the network. RAN3 wants to check with RAN2 if it’s feasible in the above scenario?

Further, RAN3 discussed the following information to be reported in the SPR to assist in the forwarding of SPR over network interfaces:

* CGI of the PCell which sent the SPR configuration (already agreed in RAN3);
* Indication whether the PSCell change was MN-initiated or SN-initiated (WA but not agreed in RAN3). Explicit or implicit indicator can be decided by RAN2.

**Q4:** RAN3 kindly asks RAN2 to confirm RAN3’s understanding on CGI of the PCell and update their specifications if feasible, and also take the above information for indication on whether the PSCell change was MN-initiated or SN-initiated into account and provide feedback.

2. Actions:

RAN3 respectfully asks RAN2 to take the above information into account, provide feedback to the above questions and update their specification if needed.

**3. Date of next TSG RAN WG3 meetings:**

RAN3#121 21th - 25th Aug. 2023 France