**3GPP TSG-RAN WG3 Meeting #120R3-23xxxx**

**May 22 – 26, 2023**

**Title:** LS on inter-RAT SHR and SPR

**Release:** Rel-18

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

**Source:** RAN3

**To:** RAN2

**Cc:** -

**Contact Person:**

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**Attachments:** -

**1. Overall description:**

RAN3 discussed how to identify the UE context (and/or mobility strategies) in the source node when Successful Handover Report (SHR) and Successful PSCell Change Report (SPR) related optimizations are to be performed in the source node (e.g., in case of T310/T312 related trigger). One solution discussed was whether UE can report the source C-RNTI and time since receiving HO command and retrieving SHR/SPR to assist the source gNB in identifying the UE context (and/or mobility strategies). But this depends on source gNB's implementation e.g., whether it can store the UE context (or a part of it) in the source node up to a maximum of 48 hours after a successful HO or PSCell change/addition.

RAN3 realized that we have been discussing similar issues on UE context retrieval and identifying configuration used by the UE for multiple SON reports (e.g., RLF Report, RA Report) and even in old releases. RAN3 is therefore looking whether a common solution can be defined for scenarios (starting from Rel-18), whenever UE context retrieval or configuration used by the UE needs to be identified while performing SON optimizations.

One potential solution RAN3 discussed is as follows:

* The source node (via implementation) can design some strategies and/or create references to a configuration used by the UE 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).
* RAN3 thinks that 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 reports and UE should report it back to the gNB along with the SON reports (e.g., SHR/SPR)
* How to encode this “Configuration Information” is up to RAN2. One example to do this would be to encode this as an OCTET STRING (e.g., 32 bits) as is done for MobilityInformation in XnAP (i.e., TS 38.423).

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: Further, RAN3 discussed whether there are benefits in reporting the source C-RNTI and time since receiving HO command and retrieving SHR/SPR in case the network doesn’t provide this “Configuration Information”. Is it feasible for UE to report the above information in such a scenario?

Further, RAN3 agreed that the following information are useful 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;
* Indication whether the PSCell change was MN-initiated or SN-initiated. Explicit or implicit indicator (e.g., based on Configuration Information) can be decided by RAN2.
  + It is RAN3’s understanding that the UE can know whether the PSCell change was MN-initiated or SN-initiated based on the current RRC signaling design.

Q4: RAN3 kindly asks RAN2 to confirm RAN3’s understanding on the above and update their specifications if feasible.

2. Actions:

RAN3 respectfully asks RAN2 to provide feedback to the above questions and update their specifications as needed.

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

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