**3GPP TSG- Meeting #8R4-2103674**

**Online, 25 Jan. – 5 Feb., 2021**

**Title:** LS on handover with PSCell

**Release:** Rel-17

**Work Item:** NR\_RRM\_enh2-Core

**Source:** RAN WG 4

**To:** RAN WG 2

**Contact Person:**

**Name: Jie Cui**

**E-mail Address: jie\_cui@apple.com**

**Attachments:** N.A.

**1. Overall Description:**

In RAN4 #98e meeting, RAN4 discussed the RRM requirements for handover with PSCell and RAN4 has identified questions about RRC processing delay and failure case for HO with PSCell. RAN4 sincerely requests RAN2 to provide answers of following questions for RAN4 future work.

* Question 1: what is the RRC processing delay for following cases of handover with PSCell?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scenario | Source PCell | Target PCell | Target PSCell | RRC procedure delay for HO with PSCell |
| NR SA to EN-DC | NR (incl. FR1 and FR2) | LTE | NR (incl. FR1 and FR2) | ?  |
| EN-DC to EN-DC | LTE | LTE | NR (incl. FR1 and FR2) | ? |
| NE-DC to NE-DC | NR FR1 | NR FR1 | LTE | ? |
| NR-DC to NR-DC | NR FR1 | NR FR1 | NR FR2 | ? |

* Question 2: Regarding HO with PSCell triggered by single RRC HO command, which of following options is in line with RAN2 definition when UE fails to synchronize to the expected PSCell?
	+ Option 1: UE performs conventional Rel-15 HO procedure and PSCell addition separately, i.e., UE can handover to the new PCell without PSCell addition
	+ Option 2: UE tries to synchronize another SCG which is the most likely to connect successfully (assumes that the target PCell configures multiple SCGs), i.e., UE can handover to the new PCell with a different PSCell addition
	+ Option 3: UE won’t handover to new PCell upon PSCell addition failure, i.e., UE will treat it as conventional Rel-15 HO failure
	+ Option 4: RAN2 is welcomed to share additional failure cases if any.

**2. Actions:**

**To RAN WG2 group.**

**ACTION:** RAN4 sincerely requests RAN2 to provide answers of above questions for RAN4 future work.

**3. Date of Next TSG-RAN WG4 Meetings:**

TSG-RAN4 #98bis-e Apr 12-Apr 20, 2021 Online

TSG-RAN4 #99-e May 19-May 27, 2021 Online