

Views on Rel-19 Mobility enhancements

Agenda Item: 9.1.2.1
Source: Fujitsu
Document for: Discussion



RAN chair's guidance in RP-232745

Mobility Enhancements WI

📡 References: [RWS-230488](#), [RP-231540](#), [RP-232618](#)

📡 Potential objectives:

- Specify support for inter-CU Layer 2 Mobility (LTM)
 - **Prioritize the case when CU is acting as MN when DC is not configured**
 - **Whether to additionally support e.g. when CU is acting SN? (focus on practical deployments)**
 - **In this case, whether it is supported for EN-DC and/or NR-DC only?**
- Measurements related enhancements for purpose of supporting LTM:
 - Specify event triggered L1 measurement reporting for triggering LTM → **depending on the detailed discussion in RAN#102, resolve how to avoid overlapping with similar objective in MIMO WI**
 - Specify support for CSI-RS measurements for LTM procedures and enable CSI-RS based beam management and/or other physical layer operations on candidate cells before LTM
- Support of conditional mobility (including set of candidate cells, UE evaluated mobility conditions, ability for UE to perform subsequent mobility procedures without need for RRC configuration) along with short mobility interruption time (**similar to that achievable with LTM**).
 - **Next Step question to consider the most appropriate approach to achieve this aim. For example, by specifying conditional triggering of LTM, or specifying support of Early TA or RACHless (as defined for LTM) to be used as part of layer 3 CHO, or possibly other approaches. If this questions cannot be concluded during the Rel-19 scoping discussion then it may be possible to start with a RAN2 study phase.**
- **Anything else (e.g., RAN4 related)?**

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- Thanks to the good discussion in RAN#101, the proposed WID became almost stable
- In this contribution, we share our views on the remaining issues, i.e. the yellow part above

Issue 1.

- Specify support for inter-CU Layer 2 Mobility (LTM)
 - Prioritize the case when CU is acting as MN when DC is not configured
 - Whether to additionally support e.g. when CU is acting SN? (focus on practical deployments)
 - In this case, whether it is supported for EN-DC and/or NR-DC only?
- In the practical network, “CU is acting SN” means the operation of FR1(MN) + FR2(SN), which is also an important scenario
 - Only NR-DC can be considered, i.e. other scenario is not important/typical deployment scenario for LTM
- However, the scenario without DC is obviously more important. Hence, the final decision should be made depending on operators’ request
 - Otherwise, clear de-prioritization would be helpful for more focused discussion

Proposal 1. Support of CU acting SN with NR-DC can be considered based on the operators’ request. Otherwise, this scope can be deprioritized in Rel-19

Issue 2.

- Specify event triggered L1 measurement reporting for triggering LTM → depending on the detailed discussion in RAN#102, resolve how to avoid overlapping with similar objective in MIMO WI
- According to the latest WID proposal for Rel-19 MIMO, it will include event-triggered L1 measurement reporting in its scope for intra- and inter-cell beam management
- However, it is not clear from the MIMO WID which kind of event(s) will be defined for beam management
 - It may or may not be helpful for mobility purpose
- In this sense, it is not clear yet if there is really an overlapping with MIMO WI, and hence the final decision should be postponed

Proposal 2. Ask MIMO WI to proceed the objective of event triggered L1 measurement reporting at the beginning of Rel-19 timeline especially on the definition of event, and check at e.g. RAN#104 how/whether to update the objective in mobility WI

Issue 3.

- Support of conditional mobility ...
 - Next Step question to consider the most appropriate approach to achieve this aim. For example, by specifying conditional triggering of LTM, or specifying support of Early TA or RACHless (as defined for LTM) to be used as part of layer 3 CHO, or possibly other approaches. If this questions cannot be concluded during the Rel-19 scoping discussion then it may be possible to start with a RAN2 study phase.
- Our preference is specifying conditional triggering of LTM
 - We have already specified so many useful techniques for legacy L3 handover. Meanwhile, LTM is a brand-new technology, which still have a lot of things to discuss
 - Conditional LTM can contribute to further reduce of latency, by skipping frequent L1 measurement reporting
- It would be acceptable to start with a RAN2 study phase to achieve common understanding among companies, if TU restriction is not so stringent

Proposal 3. For conditional mobility, specify conditional triggering of LTM. If the number of allocated TUs are sufficient, we can start with a RAN2 study phase

On top of RAN chair's guidance in RP-232745, the following is proposed

- **Proposal 1. Support of CU acting SN with NR-DC can be considered based on the operators' request. Otherwise, this scope can be deprioritized in Rel-19**
- **Proposal 2. Ask MIMO WI to proceed the objective of event triggered L1 measurement reporting at the beginning of Rel-19 timeline especially on the definition of event, and check at e.g. RAN#104 how/whether to update the objective in mobility WI**
- **Proposal 3. For conditional mobility, specify conditional triggering of LTM. If the number of allocated TUs are sufficient, we can start with a RAN2 study phase**

Thank you

