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| Technical Report |
| 3rd Generation Partnership Project;Technical Specification Group Radio Access Network;Study on self-evaluation towards the IMT-2020 submission of the 3GPP Satellite Radio Interface Technology(Release 18) |
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# 4 Self-evaluation of eMBB-s technical performance

## 4.10 Mobility interruption time

As defined in Report ITU-R M.2410 [4], mobility interruption time is the shortest time duration supported by the system during which a user terminal cannot exchange user plane packets with any base station during mobility transitions.

The mobility interruption time includes the time required to execute any radio access network procedure, radio resource control signalling protocol, or other message exchanges between the user terminal and base station, as applicable to the candidate RIT/SRIT.

For NR NTN, the mobility interruption time is evaluated without cell and satellite change for the beam mobility scenario.

When moving within the same cell, the transmitting/receiving beam pair of the UE may need to be changed.

For DL data transmission during UE mobility, gNB can configure different beams for this UE at different slots. It ensures appropriate transmit beam allocation to the UE for continuous DL transmission. Therefore, DL data packet transmission is kept during beam pair switching at different slots.

For UL data transmission, PUSCH is sent using the beam configured by SRI (SRS resource indicator) by gNB. Accordingly, an appropriate gNB-side beam is selected for UL data reception. gNB may select different beams at different slots depending on the UE mobility. Therefore, UL data packet transmission is kept during beam pair switching at different slots.

Based on the above analysis, the UE can keep exchanging user plane packets with gNB during the mobility transitions without cell and satellite change. Therefore, 0ms mobility interruption time is achieved by NR NTN for this scenario.