3GPP TSG RAN #101
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Views on Further XR evolution

NTT DOCOMO, INC.

Mobility for XR

- Background (Justification)
  - In Release-18, XR WI was discussed under limited mobility.
    - » In TS 22.261(Service requirements for the 5G system; Stage-1) , the performance requirement for AR/VR is described. Here, the UE speed is defined as "**Stationary or Pedestrian**".
  - On the other hand, there are use cases where XR services should be available everywhere.
    - » These are use cases where XR is used while moving
      - – [VR] Meeting or Entertainment use when traveling long time (e.g. High speed train).
      - – [AR] The network provides extra information through smart glasses or display anytime, anywhere. (e.g., smart car, cyber physical)
    - » For operator, Mobility is an important feature for effective use of cellular networks.
- In SA1, XR Mobility (S1-230593) is captured for Release-19
  - support the service continuity for XR services and support the connectivity for XR services under high UE mobility

Mobility for XR (Contd.)

- Proposal (Objective)
  - Study and (if feasible/necessary) specify XR-mobility [RAN3, RAN2]
    - » Study HO enhancement under high UE mobility
      - – Study XR-specific considerations for Mobility functionality.
        If it can be identified that it is only a lower interrupt time/latency issue, then it is appropriate to be addressed in the Mobility WI as a general issue.
    - » Study XR-awareness under high UE mobility
      - – PDU set was introduced in Release-18, and it would be possible to be enhanced for packet processing between network nodes considering high UE mobility in following aspects;
        - ✓ PDU discarding
        - ✓ PSDB, PSER
          - » Information transfer
          - » Pre-discarding packets according to remaining time
          - » Optimization of retransmission

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