
**3GPP TSG RAN Rel-18 workshop
Electronic Meeting, June 28 - July 2, 2021**

RWS-210272

**Agenda Item: 4.3
Document for: Discussion**

Views on XR for Rel-18

NTT DOCOMO, INC.

■ High interests on XR over 5G

- XR is attracting attentions from consumer and business including VR/AR/Cloud gaming

	VR	AR	Cloud gaming
Device type	 	 	
Requirements at RAN1 (Data rate/latency)	DL: 30 Mbps/10ms UL: 200 Kbps/10ms	DL: 30 Mbps/15ms UL: 200 Kbps/10ms	DL: 30 Mbps/10ms UL: 10 Mbps/30ms

■ Capacity

- Very limited UEs can be accommodated in a cell with the XR requirements
 - » **Only 5-6 UEs meet the requirement for DL of VR**, i.e. 10 ms latency and data rate 30 Mbps, in one cell with 100 MHz bandwidth in dense urban scenario according to the initial evaluation results in RAN1#105-e
 - » It is expected that **more UEs need to satisfy the requirements** in a cell in actual deployments

■ Power saving

- **Not aligned between XR traffic arrival interval and DRX cycle**
 - » Non-interger value for XR traffic arrival interval, e.g. 16.67 ms, 8.33 ms
 - » Interger value for DRX cycle, e.g. 10 ms, 20 ms
- Discrete DL/UL transmission disturbs UE sleeps and increases UE power consumption
 - » **DL and UL transmission timing alignment** so that UE can sleep as much as possible

- Potential enhancements area: Capacity/Power saving/Mobility/Coverage
 - Depending on the simulation outcome in Rel-17 XR, the followings can be considered to study:
 - » Capacity
 - Dynamic reconfiguration of CG/SPS parameters, non-integer periodicity for CG/SPS
 - » Power saving
 - CDRX enhancements, DL/UL transmission timing alignment
 - » Mobility
 - Inter-cell mobility enhancements. Other enhancements can be included if necessary.
 - ✓ Details of inter-cell mobility enhancements can be found in RWS-210268
 - » Coverage
 - Any enhancements if necessity is found in Rel-17 XR study