**3GPP TSG RAN meeting #99 RP-230276**

**Rotterdam, Netherlands, March 20-23, 2023**

## Status Report to TSG

**Agenda item:** 9.2.8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **WI / SI Name** | Study on XR Enhancements for NR | | | | |
| included in this status report | Study Item:  Yes | Core part:  No | Performance part:  No | | Testing part:  No |
| **Acronym** | FS\_NR\_XR\_enh | | | | |
| **Unique ID** | 940087 | | | | |
| **TSG Tdoc of latest approved WI/SI description (if any)** | [RP-220285](http://3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_95e/Docs/RP-220285.zip) | | | | |
| **Target Completion Date**  **(indicate if changed)** | Study Item: 03/2023 | Core part: N/A | Performance part: N/A | Testing part: N/A | |
| **Overall Completion level** | Study Item:  100% | Core part: N/A | Performance Part: N/A | Testing part: N/A | |

**Source:**

|  |  |  |
| --- | --- | --- |
| **Leading WG** | | RAN2 |
| **Rapporteur** | **Name** | Benoist Sébire |
| **Company** | Nokia |
| **Email** | benoist.sebire@nokia.com |

## 1 Work plan related evaluation

|  |  |
| --- | --- |
| **Do you want to modify the time budget for this WI/SI compared to what was endorsed at the last RAN meeting?** | No |

RAN2 has completed the study and the TR is submitted for approval at this meeting (RP-230307).

## 2. Detailed progress in RAN WGs since last TSG meeting (for all involved WGs)

## 2.1 RAN1

RAN1 had already completed the study at RAN#98.

## 2.2 RAN2

#### 2.2.1 Agreements

New agreements from **RAN2#121** meeting:

- RAN2 thinks that how PSER is enforced is up to network implementation.

- Introduce UL PDU Set Importance. How UE derives this will be handled in UE implementation.

- Can indicate that in RAN2 considers PDU set concept applicable to both UL and DL in LS to SA2.

- RAN2 thinks UL jitter may be present for XR (e.g. for tethering use cases). It is unclear how network would use UL jitter information (depends on what would be signalled and would anyway be up to network implementation).

- RAN2 intends to support tethering use case for XR. This may require signalling of some UL traffic arrival information from UE to network.

- Since we already agreed to not support delay-aware LCP, RAN2 aims not to introduce changes to LCP due to PDU prioritization.

- RAN2 thinks PSI can be useful for PDU set-based discard. RAN2 aims to introduce a mechanism to allow UE to handle discarding of packets with different PSI in case of congestion. FFS for other cases.

- Support of RLC bearer splitting should be limited to existing cases (e.g. PDCP duplication), no new XR-specific functionality.

#### 2.2.2 Open Issues

None.

## 3. Detailed progress in SA WGs since last TSG meeting (for all involved WGs)

## 4. References

New references since the last status report.

**RAN2#121**

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3. R2-2300036, Reply LS on XR and Media Services (R3-226885; contact: Ericsson), RAN3
4. R2-2300071, Reply LS on PDU Set Handling (S2-2301378; contact: Tencent), SA2
5. R2-2300072, LS reply on reply LS on XR and Media Services (S2-2301384; contact: vivo), SA2
6. R2-2300086, Reply LS on Pose Information for XR (S4-221626; contact: Qualcomm), SA4
7. R2-2300087, Reply LS on PDU Set Handling (S4aR230035; contact: Ericsson), SA4
8. R2-2300118, Discussion on XR power saving, Huawei, HiSilicon
9. R2-2300149, Work Plan for Rel-18 SI and WI on XR Enhancements for NR, Nokia, Qualcomm (Rapporteurs), Ericsson (RAN1 FL)
10. R2-2300150, SA2 Status for XR, Nokia, Qualcomm (Rapporteurs)
11. R2-2300151, SA4 Status for XR, Nokia, Qualcomm (Rapporteurs)
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14. R2-2300154, PDU Set prioritization, Nokia, Nokia Shanghai Bell
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17. R2-2300185, Discussion on PDU Sets and data bursts, Qualcomm Incorporated
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25. R2-2300225, Protocol stack impacts from serving an XR QoS flow, CATT
26. R2-2300226, DRX enhancements for XR Power Saving, CATT
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