**3GPP TSG RAN meeting #100 RP-231056**

**Taipei, Taiwan, 12 – 14 June 2023**

## Status Report to TSG

**Agenda item:** 9.3.2.9

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **WI / SI Name** | XR Enhancements for NR | | | | |
| included in this status report | Study Item:  No | Core part:  Yes | Performance part:  No | | Testing part:  No |
| **Acronym** | NR\_XR\_enh-Core | | | | |
| **Unique ID** | 981039 | | | | |
| **TSG Tdoc of latest approved WI/SI description (if any)** | [RP-223502](http://3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-223502.zip) | | | | |
| **Target Completion Date**  **(indicate if changed)** | Study Item: N/A | Core part:  2023/12 | Performance part: N/A | Testing part: N/A | |
| **Overall Completion level** | Study Item: N/A | Core part: 45% | 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.

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

## 2.1 RAN1

**RAN1 #112bis-e (April 2023)**

PDCCH monitoring resume after UL NACK

**Outcome of discussion on PDCCH monitoring resume after UL NACK**

In RAN1#112bis-e, text proposal alternatives to implement *PDCCH monitoring resumption after UL NACK after PDCCH skipping is started* were provided in R1-2304042 (by the moderator based on email discussions). The text proposal alternatives were to be discussed and finalized so that RAN1 can submit a converged text proposal to RAN. However, during the review process, CATT and Intel expressed sustained objections on the candidate TPs. They also expressed sustained objections on the support of this feature.

XR-specific capacity enhancements

**Agreement**

For TDRA design for multi-CG PUSCH, prioritize Alt-A1, Alt-B, and Alt-C2 for further downscoping and/or modification from corresponding agreement in RAN1#112.

* FFS: How to address TDD configuration issue

**Agreement**

For CG PUSCHs in a multi-PUSCHs CG configuration, MCS of the CG PUSCHs in the CG configuration are the same between different PUSCH occasions

**Agreement**

For CG PUSCHs in a multi-PUSCHs CG configuration, FDRA of the CG PUSCHs in the CG configuration are the same between different PUSCH occassions

**Agreement**

For dynamic indication of unused CG PUSCH transmission occasion(s) based on a UCI, the indicated “unused” CG PUSCH TO(s), if any, by the UCI in a CG PUSCH for a CG configuration

* can be consecutive or non-consecutive CG PUSCH TO(s) in time domain [in one CG period]
* FFS whether/how the unused TO(s) can be associated to multiple CG configuration.

Note: FFSs and further details in corresponding agreement in RAN1#112 for the selected option are remained for further discussion

Note: Above corresponds to Option 2 (w.r.t. agreement in RAN1#112)

**Agreement**

* **Option 1**: For a CG PUSCH configuration, the UTO-UCI is included in every CG PUSCH that is transmitted (that is Option 1 in corresponding agreement in RAN1#112)
  + FFS details
* Note: The term “UTO-UCI” refers to the “UCI that provides information about unused CG PUSCH transmission occasions” for convenience.

**Agreement**

The UCI that provides information about unused CG PUSCH transmission occasions is defined as a “new UCI” (i.e. Alt. 1 of previous agreement).

**Agreement**

* With respect to PHY two-level priority, for a configured grant PUSCH configuration, the “UTO-UCI” has the same priority level as the configured grant PUSCH.
* Note: The term “UTO-UCI” refers to the “UCI that provides information about unused CG PUSCH transmission occasions” for convenience.

**Agreement**

The existing CG-UCI encoding and multiplexing procedures are reused for encoding the “UTO-UCI” in a configured grant PUSCH in absence or presence of other UCIs being multiplexed in the PUSCH, by applying the following adjustments:

* The “UTO-UCI” is used instead of CG-UCI in the corresponding procedures for encoding of CG-UCI and/or HARQ-ACK ~~and/or CSI~~, whichever is present.
* For determining the beta-offset,
  + Beta offset is configured for the “UTO-UCI” ~~and applied when applicable.~~
    - If UTO-UCI and HARQ-ACK is not jointly encoded, the beta offset for the “UTO-UCI” is used in the procedures instead of CG-UCI beta offset~~, when applicable.~~
    - If UTO-UCI and HARQ-ACK is jointly encoded, HARQ-ACK beta offset is used in the procedures instead of CG-UCI beta offset
* FFS on sequence generation order between UTO-UCI and HARQ-ACK
* FFS on dropping rule between UTO-UCI and HARQ-ACK when joint encoding is not configured
* Note: The term “UTO-UCI” refers to the “UCI that provides information about unused CG PUSCH transmission occasions” for convenience.

**Agreement**

From RAN1 perspective, for determination of HARQ process Ids associated to PUSCHs in multi-PUSCHs CG assuming one TB per PUSCH:

* The HARQ process ID for the first configured/valid PUSCH in a period is determined based on the legacy CG procedure when *cg-RetransmissionTimer* is not configured, and applying the following formula, whichever is applicable
  + HARQ Process ID = [floor(X\*(CURRENT\_symbol – offset1) / *periodicity*) + offset2] modulo *nrofHARQ-Processes*
  + HARQ Process ID = [floor(X\*(CURRENT\_symbol – offset1) / *periodicity*) + offset2] modulo *nrofHARQ-Processes* + *harq-ProcID-Offset2*
    - FFS whether in formulas above X is outside or inside floor operation, i.e.
      * HARQ Process ID = [X\*floor( (CURRENT\_symbol – offset1) / *periodicity*) + offset2] modulo *nrofHARQ-Processes*
      * HARQ Process ID = [X\*floor((CURRENT\_symbol – offset1) / *periodicity*) + offset2] modulo *nrofHARQ-Processes* + *harq-ProcID-Offset2*
    - (**Working Assumption**) The HARQ process ID of the remaining configured/valid CG PUSCHs in the period is determined by incrementing the HARQ process ID of the preceding PUSCH in the period by Y with module operation with *nrofHARQ-Processes* or module operation with (*nrofHARQ-Processes* + *harq-ProcID-Offset2*), whichever applicable.
      * FFS whether X=1 or X= the number of configured PUSCHs in the CG period
      * FFS whether Y =1 or a value larger than 1, e.g. Y=2.
        + FFS: If Y>1, Y is determined based on RRC
      * FFS whether Offset 1= 0 or can be a non-zero value.
        + FFS: If offset1 is non-zero, how offset1 is determined (i.e., based on RRC)
      * FFS whether Offset 2= 0 or can be a non-zero value.
        + FFS: If offset2 is non-zero, how offset2 is determined (i.e., based on RRC or dynamically)
* Note1: The equations will be updated accordingly when FFSs are clarified, e.g., if X=1, remove X; if Y=1, remove Y; if non-zero offset1 or Offset 2 is not supported, remove offset 1 or Offset 2.
* Note2: A configured CG PUSCH is invalid if the CG PUSCH is dropped due to collision with DL symbol(s) indicated by *tdd-UL-DL-ConfigurationCommon* or *tdd-UL-DL-ConfigurationDedicated* or SSB.

**Agreement**

The UTO-UCI provides a bitmap where a bit corresponds to a TO within a time duration/range. The bit indicates whether the TO is “unused”.

* FFS: Details including time duration/range

Note: The term “UTO-UCI” refers to the “UCI that provides information about unused CG PUSCH transmission occasions” for convenience.

**RAN1 #113 (May 2023)**

PDCCH monitoring resume after UL NACK

RAN1 reviewed two TP proposals but was not able to converge.

XR-specific capacity enhancements

**Agreement**

For time domain resource allocation for multi-PUSCH CGs, support

* For TDRA determination (based on NR-U framework)
  + For Type-1, follow the rules for DCI format 0\_0 on UE specific search space, as defined in Clause 6.1.2.1.1 of TS 38.214.
    - Note: To determine the configuration of TDRA, PUSCH repetition type A is assumed according to description in 6.1.2.3 in 38.214 for Type-1.
      * It is still an open issue whether repetition is supported. If it is decided repetition is not supported, it implies the corresponding repetition factor for is one.
  + For Type-2, the TDRA table is determined by the TDRA table associated with activation DCI, as defined in Clause 6.1.2.1 of TS 38.214.
    - Note: The DCI format for activation DCI with pusch-RepTypeA is applicable.
      * It is still an open issue whether repetition is supported. If it is decided repetition is not supported, it implies the corresponding repetition factor for is one.
* N is configured by higher layers
* A single SLIV is determined from TDRA.
  + The SLIV used for 1st PUSCH per CG period.
* PUSCH is used in each of N consecutive slots per CG period
* Note: N is configured independently from *cg-nrofSlots-r16* and *cg-nrofPUSCH-InSlot-r16,* respectively*.* N configuration is independent from *cgRetransmissionTimer* configuration.
* To determine corresponding slots for CG PUSCHs in a period of a multi-PUSCH CG configuration:
  + For the first PUSCH in the period, follow the legacy procedures.
  + For remaining PUSCHs in the period
    - ForType-1 and Type-2, reuse the corresponding procedures for NR-U by applying the RRC parameters N ~~and M~~, instead of *cg-nrofSlots-r16* and *cg-nrofPUSCH-InSlot-r16*, respectively.

**Conclusion**

For time domain resource allocation for multi-PUSCH CGs, there is no consensus for further enhancement for operation on TDD

**Agreement**

With respect to the agreement on HARQ process ID determination for multi-PUSCH Cg in RAN1#112bis-e, support the following:

* Y=1
* Offset 1=0 (i.e., remove Offset 1)
* Offset 2=0 (i.e., remove Offset 2)

**Agreement**

* When a CG PUSCH occasion is indicated as “unused”, the UE is not allowed to transmit CG PUSCH on that CG PUSCH occasion.
* For any other CG PUSCH occasion that is NOT indicated as “unused”, the UE is allowed to transmit or not to transmit CG PUSCH on that CG PUSCH occasion as per legacy specification.
  + No RAN1 specification impact

**Agreement**

For determination of HARQ process Ids associated to PUSCHs in multi-PUSCHs CG assuming one TB per PUSCH:

* X is outside the floor operation
* X= the number of configured PUSCHs in the CG period

Send an LS to RAN2 to inform this agreement.

**Agreement**

The following working assumption is confirmed

(Working Assumption) The HARQ process ID of the remaining configured/valid CG PUSCHs in the period is determined by incrementing the HARQ process ID of the preceding PUSCH in the period by one with module operation with *nrofHARQ-Processes* or module operation with (*nrofHARQ-Processes* + *harq-ProcID-Offset2*), whichever applicable.

**Agreement**

* A CG PUSCH occasion indicated as “unused” earlier, is not allowed to be indicated as “NOT unused later”.
* A CG PUSCH occasion indicated as “NOT unused” earlier, can be indicated as “unused” later.
  + FFS: Whether there is specification impact

**Agreement**

The UTO-UCI indication for a CG configuration is applicable to only valid CG PUSCH TOs, if any.

* Note: A configured CG PUSCH is invalid if the CG PUSCH is dropped due to collision with DL symbol(s) indicated by *tdd-UL-DL-ConfigurationCommon* or *tdd-UL-DL-ConfigurationDedicated or SSB*. Otherwise, it is valid.

**Agreement**

From RAN1 perspective, for determination of HARQ process IDs associated to PUSCHs in multi-PUSCHs CG assuming one TB per PUSCH:

* The HARQ process ID for the first configured~~/valid~~ PUSCH in a period is determined based on the legacy CG procedure when cg-RetransmissionTimer is not configured, and applying the following formula, whichever is applicable
  + HARQ Process ID = [X\*floor( (CURRENT\_symbol ) / *periodicity*)] modulo *nrofHARQ-Processes*
  + HARQ Process ID = [X\*floor((CURRENT\_symbol ) / *periodicity*)] modulo *nrofHARQ-Processes* + *harq-ProcID-Offset2*
    - X= the number of configured PUSCHs in the CG period
* The HARQ process ID of the remaining configured~~/~~ and valid CG PUSCHs in the period is determined by incrementing the HARQ process ID of the preceding PUSCH in the period by one with module operation with *nrofHARQ-Processes* or module operation with (*nrofHARQ-Processes* + *harq-ProcID-Offset2*), whichever applicable.
* Note: A configured CG PUSCH is invalid if the CG PUSCH is dropped due to collision with DL symbol(s) indicated by *tdd-UL-DL-ConfigurationCommon* or *tdd-UL-DL-ConfigurationDedicated or SSB*.

Send an LS to RAN2 to convey the above RAN1 agreement. Final LS is in R1-2306233.

**Agreement**

Indication of UTO-UCI by CG PUSCHs associated to a CG configuration, is enabled by configuration of an RRC parameter.

* FFS on whether/how to extend to multiple CG configurations

**Agreement**

For a CG configuration with UTO-UCI indication enabled, to determine the indicated CG PUSCH by a UTO-UCI indication, consider the following options for further down-selection:

**Option A-1a:**

* + Configure the RRC parameter UTO\_period.
    - FFS range value of UTO\_period
      * Alt-1: values in time unit (e.g., XR traffic periodicity)
      * Alt-2: one or multiple of CG periodicity given by integer values (n=1, 2, ..)
  + The starting time of the first period of UTO periodicity starts at the same as starting time of the first period of the CG configuration and ends after UTO\_period. The next UTO period(s) are followed after the first UTO period.
  + A transmitted CG PUSCH that is confined within a UTO period, carries UTO-UCI that is applicable to the CG PUSCH TOs within the UTO period.

**Option A-2a:**

* + Configure the RRC parameter UTO\_period.
    - FFS range value of UTO\_period
      * Alt-1: values in time unit (e.g., XR traffic periodicity)
      * Alt -2: one or multiple of CG periodicity given by integer values (n=1, 2, ..)
* Configure the RRC parameter UTO\_offset.
  + FFS range value of UTO\_offset
* The starting time of the first period of UTO periodicity starts at the same as starting time of the first period of the CG configuration and ends after UTO\_period. The next UTO period(s) are followed after the first UTO period.
* A transmitted CG PUSCH that is confined within a UTO period, carries UTO-UCI that is applicable to the CG PUSCH TOs within the UTO period and after UTO\_offset from the end of the transmitted CG PUSCH.

**Option B-a:**

* Configure the RRC parameter UTO\_period.
  + FFS range value of UTO\_period
    - Alt-1: values in time unit (e.g., XR traffic periodicity)
    - Alt -2: one or multiple of CG periodicity given by integer value (n=1, 2, ..)
* UTO\_offset is the offset value.
  + Alt-1: UTO\_Offset is provided by configuration.
    - FFS range value of UTO\_offset
  + Alt-2: UTO\_Offset = 0
* A transmitted CG PUSCH carries UTO-UCI that is applicable to the valid CG PUSCH TOs that are confined within UTO\_period starting with UTO\_offset from the end of the transmitted CG PUSCH.

**Option B-b2:**

* Configure the RRC parameter Nu (Nu is the size of bit-map)
  + FFS range value of Nu
* UTO\_offset is the offset value.
  + Alt-1: UTO\_Offset is provided by configuration.
    - FFS range value of UTO\_offset
  + Alt-2: UTO\_Offset = 0
* A transmitted CG PUSCH, carries UTO-UCI that is applicable to the Nu consecutive and valid CG PUSCH TOs, starting with UTO\_offset from the end of the transmitted CG PUSCH.

FFS on whether/how to extend to multiple CG configurations

#### 2.1.2 Remaining Open issues

All objectives of the work item remain open as per the agreed work plan.

## 2.2 RAN2

#### 2.2.1 Agreements

New agreements from **RAN2#121bis-e** meeting:

- Regarding power saving:

- Companies should evaluate the RAN2 specification impacts and any other RAN2 aspects of their proposals for XR DRX.

- Companies should evaluate the (high-level) impacts to RAN1/4 specification from their proposals for XR DRX.

- Companies should try to coordinate with each other offline and bring joint proposals to next meeting. RAN2 aims to exclude proposals with least support in the next meeting.

- Companies should evaluate the RAN2 specification impacts and any other RAN2 aspects of their proposals for SFN wrap-around.

- Same as for DRX solutions, companies should try to coordinate with each other offline and bring joint proposals to next meeting. RAN2 aims to exclude proposals with least support in the next meeting.

- Whether the issue of retransmission-less CG for UL pose transmission is addressed in the WI needs to be discussed in RAN

- Regarding capacity enhancements:

- New BSR tables are fixed (=specified) or semi-static (RRC-based).

- FFS how many BSR tables are defined.

New agreements from **RAN2#122** meeting:

- Regarding Awareness:

- UE reports to RAN the range of jitter in its UL traffic, defined in the similar way as the one for N6 jitter.

- Reference time is defined in similar way as BAT (Burst Arrival Time) at UE side.

- UL assistance information (burst arrival time, UL jitter, FFS on periodicity) is reported per QoS flow. Network can configure for which QoS flow UE should report assistance information.

- RRC UAI framework is updated for Rel-18 to support signalling UL assistance information agreed so far for XR (Jitter, burst arrival time, FFS on periodicity).

- Reuse existing mechanisms (e.g. (Padding) BSR with BS value equal to zero) as implicit End of Data Burst (EoDB) indicator for the RAN.

- On the UL, the identification of PDU sets, data bursts and PSI is left to UE implementation. This doesn’t mean UE cannot use information provided by upper layers, but RAN2 does not intend to specify how.

- Regarding power saving:

- Define DRX cycle based on rational numbers. Inform RAN1/4 about this and ask them to indicate if this causes issues in their specifications.

- Not use broadcast signalling for counter and reference SFN in XR

- Regarding capacity enhancements:

- UE calculates the remaining time based on the PDCP discard timer value. FFS if UE reports one or multiple values. FFS how this is modelled in PDCP specification. FFS which UEs support this.

- When/if UE reports remaining time, the reference time for the remaining time is determined from the point of the first transmission of the information. FFS if intra-UE prioritization can impact this.

- Support one static BSR table with 8 bits BS field for Rel-18 XR (for all cases).

- We do not support additional piecewise linear BSR table in Rel-18. Can consider piecewise linearity when discussing how the BSR table values are defined.

- PDU-set discard indication for UL is configured using RRC to handle the PDU Set based discard functionality (i.e. whether UE discards all packets in PDU set when one PDU is discarded). The configuration is per PDCP entity.

- Network indicates UE to apply PSI-based XR discard mechanism via dedicated signalling.

- FFS how/whether to minimize additional UL signalling after this indication.

- FFS if the NW indication is a one-shot or also subsequent packets.

- For retransmission less CG enhancement in XR, adapt the NTN solution by disabling the HARQ RTT timer per CG configuration. Specifically, the following modifications shall be introduced:

- A new RRC parameter for disabling drx-HARQ-RTT-TimerUL for a CG configuration;

- Changes in the procedural text of DRX operations for CG in the MAC specification;

- A new UE capability for supporting disabling drx-HARQ-RTT-TimerUL for a CG configuration.

#### 2.2.2 Open Issues

All objectives of the work item remain open as per the agreed work plan.

## 2.3 RAN3

RAN3 work is scheduled to start in August.

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

## 4. References

New references from the last RAN WG meetings.

**RAN2#121bis-e**

1. R2-2300019, Reply LS on XR and Media Services (R1-2212994; contact: vivo), RAN1
2. R2-2300022, LS to capture Text Proposal for TR 38.835 (R1-2213016; contact: Nokia), RAN1
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)
12. R2-2300152, Update of TR 38.835, Nokia (Rapporteur)
13. R2-2300153, PDU Set and Data Burst Information, Nokia, Nokia Shanghai Bell
14. R2-2300154, PDU Set prioritization, Nokia, Nokia Shanghai Bell
15. R2-2300155, PDU Set Discard, Nokia, Nokia Shanghai Bell
16. R2-2300156, PDU set protocol stack impacts, Nokia, Nokia Shanghai Bell
17. R2-2300185, Discussion on PDU Sets and data bursts, Qualcomm Incorporated
18. R2-2300186, Discussion on PDU discard, Qualcomm Incorporated
19. R2-2300187, Discussion on impacts of PDU Sets on protocol stacks, Qualcomm Incorporated
20. R2-2300188, DRX enhancements for XR, Qualcomm Incorporated
21. R2-2300189, Enhancements for capacity improvements, Qualcomm Incorporated
22. R2-2300222, PDU set and data burst information, CATT
23. R2-2300223, Discussion on the PDU Prioritization, CATT
24. R2-2300224, On PDU Discarding, CATT
25. R2-2300225, Protocol stack impacts from serving an XR QoS flow, CATT
26. R2-2300226, DRX enhancements for XR Power Saving, CATT
27. R2-2300227, The Issues of XR-specific Capacity Improvements, CATT
28. R2-2300256, Dynamic BSR formulation and reporting for XR, Dell Technologies
29. R2-2300320, Discussion on PDU set and data burst information, vivo
30. R2-2300321, Discussion on PDU prioritization for XR awareness, vivo
31. R2-2300322, Discussion on PDU discard for XR awareness, vivo
32. R2-2300323, Discussion on protocol stack impacts and in-sequence delivery, vivo
33. R2-2300324, Discussion on DRX Enhancements for XR Power Saving, vivo
34. R2-2300325, Discussion on Feedback Enhancements for XR, vivo
35. R2-2300340, Discussion on PDU discard, Futurewei
36. R2-2300341, Discussion on PDU prioritization, Futurewei
37. R2-2300397, Discussion on BSR enhancement for XR capacity improvements, TCL Communication Ltd.
38. R2-2300422, Discussing on UE feedback enhancements for XR capacity, Xiaomi Communications
39. R2-2300423, Discussing on XR-specific C-DRX enhancement, Xiaomi Communications
40. R2-2300425, Discussion on the impact of DRB mapping alternatives, Xiaomi Communications
41. R2-2300426, Discussing on PDU discarding of XR traffic, Xiaomi Communications
42. R2-2300427, Discussion on traffic prioritization of XR traffic, Xiaomi Communications
43. R2-2300428, RAN2 implications on PDU Set and Data Burst based on SA2 inputs, Intel Corporation
44. R2-2300429, Differentiated handling of PDU sets with different importance in a QoS flow, Intel Corporation
45. R2-2300430, Criteria and Mechanism of PDU Discard for XR traffic, Intel Corporation
46. R2-2300431, DRB mapping to the RLC bearers for XR traffic, Intel Corporation
47. R2-2300432, C-DRX enhancements for XR traffic, Intel Corporation
48. R2-2300433, Enhancements to Buffer Status Reporting for XR Traffic, Intel Corporation
49. R2-2300459, Discussion on PDU Set, OPPO
50. R2-2300460, Discussion on PDU prioritization, OPPO
51. R2-2300461, Discussion on PDU discard, OPPO
52. R2-2300462, Discussion on protocol stack impacts, OPPO
53. R2-2300463, Discussion on capacity improvement, OPPO
54. R2-2300500, Discussion on Protocol Stack impacts, Lenovo
55. R2-2300502, Discussion on PDU prioritization, Lenovo
56. R2-2300518, PDU Set and PDCP Discard Handling, Samsung R&D Institute India
57. R2-2300560, BSR enhancements for XR, ZTE Corporation, Sanechips
58. R2-2300561, Protocol stack impacts for XR, ZTE Corporation, Sanechips
59. R2-2300562, PDU discard for XR, ZTE Corporation, Sanechips
60. R2-2300563, PDU prioritization for XR, ZTE Corporation, Sanechips
61. R2-2300564, PDU set and data burst information, ZTE Corporation, Sanechips
62. R2-2300565, XR-Specific power saving, ZTE Corporation, Sanechips
63. R2-2300587, Discussion on PDU Set and Data Burst Information, Google Inc.
64. R2-2300588, Discussion on PDU prioritization, Google Inc.
65. R2-2300589, Discussion on PDU Discard, Google Inc.
66. R2-2300590, Discussion on protocol Stack impact, Google Inc.
67. R2-2300591, XR-specific power saving enhancement, Google Inc.
68. R2-2300592, XR-Specific capacity improvements, Google Inc.
69. R2-2300596, Discussion on PDU set and data burst information, Huawei, HiSilicon
70. R2-2300597, Discussion on PDU prioritization at RAN, Huawei, HiSilicon
71. R2-2300598, Discussion on PDU set discarding for XR traffic, Huawei, HiSilicon
72. R2-2300599, Discussion on L2 protocol stack for differentiated PDU set handling at RAN, Huawei, HiSilicon
73. R2-2300640, Discussion on PDU Prioritization, Meta USA
74. R2-2300641, Considerations on XR capacity improvements, KDDI Corporation
75. R2-2300656, Discussion on PDU set and data burst information, Spreadtrum Communications
76. R2-2300657, Discussion on PDU prioritization, Spreadtrum Communications
77. R2-2300658, Discussion on PDU discard, Spreadtrum Communications
78. R2-2300659, Discussion on protocol stack impacts, Spreadtrum Communications
79. R2-2300665, BSR enhancements for XR, Spreadtrum Communications
80. R2-2300684, Discussion on capacity improvements for XR, Google Inc.
81. R2-2300691, PDU set and data burst information, InterDigital
82. R2-2300692, PDU prioritization, InterDigital
83. R2-2300693, PDU discard, InterDigital
84. R2-2300694, Protocol stack impacts, InterDigital
85. R2-2300695, XR-specific power saving, InterDigital
86. R2-2300696, XR-specific capacity improvements, InterDigital
87. R2-2300699, Discussion on XR data periodicity mismatch, FGI
88. R2-2300723, PDU Set Information and Uplink Jitter, Apple
89. R2-2300724, Views on XR-awareness and PDU Prioritization, Apple
90. R2-2300725, Views on Packet Discarding and Reordering, Apple
91. R2-2300726, Views on QoS Mapping and PS Impacts, Apple
92. R2-2300727, Views on BSR Enhancements for XR, Apple
93. R2-2300728, Views on Configured Grant Enhancements for XR, Apple
94. R2-2300774, DRX enhancement for power saving in XR, LG Electronics Inc.
95. R2-2300826, Discussion on BSR enhancement for XR, NEC Corporation
96. R2-2300842, Discussion on LCP enhancement for XR, NEC Corporation
97. R2-2300843, Discussion on C-DRX enhancement for XR, NEC Corporation
98. R2-2300908, Discussion on PDU discarding, Lenovo
99. R2-2300909, C-DRX enhancements for XR-specific power saving, DENSO CORPORATION
100. R2-2300918, Discussion on XR-specific capacity improvements, DENSO CORPORATION
101. R2-2300939, Discussion on the PDU prioritization for XR, ITRI
102. R2-2300944, Discussion on PDU sets awareness in RAN, Lenovo
103. R2-2300945, Discussion of DRX enhancement, Lenovo
104. R2-2300946, Discussion on UE Feedback enhancements, Lenovo
105. R2-2300987, Discussion on mapping the PDU set into DRB/LCH, NEC
106. R2-2301009, PDU set and data burst information, NEC
107. R2-2301010, PDU discard, NEC
108. R2-2301028, Discussions on PDU discard, Fujitsu
109. R2-2301029, Discussions on protocol stack impacts of XR, Fujitsu
110. R2-2301030, Discussions on XR-specific capacity improvements, Fujitsu
111. R2-2301089, Considerations on XR PDU prioritization, Sony
112. R2-2301091, Proposals on XR specific C-DRX power saving enhancements, Sony
113. R2-2301092, Considerations on XR specific capacity improvements, Sony
114. R2-2301168, Discussion on PDU set information, Samsung
115. R2-2301237, Discussion on DRX enhancements, CMCC
116. R2-2301248, Discussion on XR-specific capacity improvement, CMCC
117. R2-2301266, Further Considerations on PDU Discard, CMCC
118. R2-2301267, RAN2 Impact Analysis on PDU Prioritization, CMCC
119. R2-2301268, L2 Protocol Stack for PDU Set, CMCC
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121. R2-2301369, PDU set characteristics and their usage in RAN, MediaTek Inc.
122. R2-2301370, On the need for modifications to LCP, MediaTek Inc.
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124. R2-2301372, C-DRX enhancements for XR, MediaTek Inc.
125. R2-2301386, Discussion on protocol stack impact, Samsung
126. R2-2301413, Considerations on XR UL PDU discard, Sony
127. R2-2301416, Discussion on PDU Discard, Meta USA
128. R2-2301423, Capacity enhancement for XR, MediaTek Inc.
129. R2-2301435, Discussion on protocol stack impacts, Futurewei
130. R2-2301506, Discussion on Protocol stack impacts, Ericsson
131. R2-2301507, Discussion on XR-specific capacity improvements, Ericsson
132. R2-2301508, Discussion on XR-specific power saving, Ericsson
133. R2-2301509, Discussion on PDU Discard, Ericsson
134. R2-2301510, Discussion on PDU Sets and Data Burst, Ericsson
135. R2-2301511, Discussion on PDU Prioritization, Ericsson
136. R2-2301516, Power saving enhancements for XR, Nokia, Nokia Shanghai Bell
137. R2-2301517, Capacity improvements, Nokia, Nokia Shanghai Bell
138. R2-2301533, Discussion on PDU set information and remaining time for PSDB, ASUSTeK
139. R2-2301534, Discussion on PDU set discard operation, ASUSTeK
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150. R2-2301797, Discussion on PDU set and data burst information, III
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154. R2-2301849, Discussions on PDU Set information, TCL Communication
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161. R2-2300118, Discussion on XR power saving, Huawei, HiSilicon
162. R2-2300188, DRX enhancements for XR, Qualcomm Incorporated
163. R2-2300226, DRX enhancements for XR Power Saving, CATT
164. R2-2300324, Discussion on DRX Enhancements for XR Power Saving, vivo
165. R2-2300423, Discussing on XR-specific C-DRX enhancement, Xiaomi Communications
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168. R2-2300591, XR-specific power saving enhancement, Google Inc.
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170. R2-2300699, Discussion on XR data periodicity mismatch, FGI
171. R2-2300774, DRX enhancement for power saving in XR, LG Electronics Inc.
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175. R2-2301091, Proposals on XR specific C-DRX power saving enhancements, Sony
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180. R2-2301516, Power saving enhancements for XR, Nokia, Nokia Shanghai Bell
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182. R2-2300189, Enhancements for capacity improvements, Qualcomm Incorporated
183. R2-2300227, The Issues of XR-specific Capacity Improvements, CATT
184. R2-2300256, Dynamic BSR formulation and reporting for XR, Dell Technologies
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189. R2-2300463, Discussion on capacity improvement, OPPO
190. R2-2300560, BSR enhancements for XR, ZTE Corporation, Sanechips
191. R2-2300592, XR-Specific capacity improvements, Google Inc.
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197. R2-2300728, Views on Configured Grant Enhancements for XR, Apple
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4. R2-2304710, Discussion on SFN wrap around problem for XR, Qualcomm Incorporated, Huawei, HiSilicon, Meta
5. R2-2304711, BSR and delay status report for XR, Qualcomm Incorporated
6. R2-2304712, Discussion on discard operation, Qualcomm Incorporated
7. R2-2304713, Configured grant enhancements for XR, Qualcomm Incorporated
8. R2-2304808, Discussion on C-DRX enhancements for XR, Huawei, HiSilicon
9. R2-2304809, Discussion on retransmission-less CG for XR, Huawei, Apple, Futurewei, Google, HiSilicon, Intel, Lenovo, MediaTek, Meta, Qualcomm
10. R2-2304826, Discussion on BSR and DSR for XR, TCL Communication Ltd.
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13. R2-2304864, Further discussions on BSR enhancements for XR, Futurewei
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15. R2-2304915, Discussion on XR awareness, vivo
16. R2-2304916, Analysis on introducing H-SFN for DRX formulas, vivo
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18. R2-2304918, Discussion on discard operation for XR, vivo
19. R2-2304919, Discussion on CG enhancements for XR, vivo
20. R2-2304954, Discussions on DRX enhancements for XR, Fujitsu
21. R2-2304955, Discussions on delay information reporting, Fujitsu
22. R2-2304956, Discussions on PDU discard based on PDU Set Importance, Fujitsu
23. R2-2304967, Enhancements for XR awareness, CATT, Dell Technologies
24. R2-2304968, Enhancements for SFN wrap-around, CATT
25. R2-2304969, On BSR Enhancements, CATT
26. R2-2304970, Discard Operation for XR, CATT
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29. R2-2305002, Discussing on BSR enhancements for XR capacity, Xiaomi Communications
30. R2-2305005, Discussion on XR awareness, Xiaomi Communications
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36. R2-2305018, BSR enhancements for XR, ZTE Corporation, Sanechips
37. R2-2305019, PDU discard for XR, ZTE Corporation, Sanechips
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39. R2-2305071, Views on XR-Awareness, Apple
40. R2-2305072, C-DRX enhancements for XR, Apple
41. R2-2305073, Views on BSR Enhancements for XR, Apple
42. R2-2305074, Views on PDU Discard Operation for XR, Apple
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44. R2-2305149, New BS table(s) and BSR trigger(s), NEC
45. R2-2305150, PDU discard, NEC
46. R2-2305158, XR awareness, InterDigital
47. R2-2305159, XR-specific power saving, InterDigital
48. R2-2305160, Discard operation for XR, InterDigital
49. R2-2305161, Configured Grant enhancements for XR, InterDigital
50. R2-2305186, Work Plan for Rel-18 WI on XR Enhancements for NR, Nokia, Qualcomm (Rapporteurs); Ericsson (RAN1 FL)
51. R2-2305187, SA2 Status for XR, Nokia, Qualcomm (Rapporteurs)
52. R2-2305188, SA4 Status for XR, Nokia, Qualcomm (Rapporteurs)
53. R2-2305189, Stage 2 Overview of XR Enhancements, Nokia, Qualcomm (Rapporteurs)
54. R2-2305190, Jitter and End of Data Burst Signalling, Nokia, Nokia Shanghai Bell
55. R2-2305191, Discard operation for XR, Nokia, Nokia Shanghai Bell
56. R2-2305301, Discussion on periodicity, jitter, and end of burst indication, KDDI Corporation
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60. R2-2305388, Discussion on BSR enhancements for XR, Honor
61. R2-2305454, Discussion on BSR enhancement for delay information report, NEC Corporation
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64. R2-2305458, Discussion on DRX cycle alignment for XR, ITRI
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66. R2-2305493, XR Awareness in UE and RAN, Intel Corporation
67. R2-2305494, C-DRX Enhancements for XR Traffic, Intel Corporation
68. R2-2305495, BSR Enhancements for XR Traffic, Intel Corporation
69. R2-2305496, Discard Enhancements for XR Traffic, Intel Corporation
70. R2-2305513, Considerations on XR PDU prioritization, Sony
71. R2-2305514, Considerations on XR UL PDU set information, Sony
72. R2-2305515, Some considerations on BSR enhancements for XR, Sony
73. R2-2305516, Configured Grant enhancements for XR, Sony
74. R2-2305517, Options for Retransmission-less CG for XR traffic, Sony
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76. R2-2305533, Discussion on BSR enhancement for XR, OPPO
77. R2-2305534, Discussion on discard operation for XR, OPPO
78. R2-2305535, Discussion on configured grant enhancement for XR, OPPO
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80. R2-2305538, On Configured Grant enhancements for XR, Google Inc.
81. R2-2305543, XR-specific power saving enhancement, Google Inc.
82. R2-2305565, Discussion on XR awareness, Spreadtrum Communications
83. R2-2305566, Discussion on XR discard, Spreadtrum Communications
84. R2-2305571, Consideration on BSR enhancements for XR, Spreadtrum Communications
85. R2-2305593, Discussion on power saving aspects for XR, Continental Automotive
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88. R2-2305626, Discussion on the DRX enhancement, CMCC
89. R2-2305634, Remaining Issues on UL Traffic assistance information for XR, CMCC
90. R2-2305635, PDU-Set Discard operation for XR, CMCC
91. R2-2305652, DRX enhancements for XR, Nokia, Nokia Shanghai Bell, Continental Automotive
92. R2-2305653, BSR enhancements for XR, Nokia, Nokia Shanghai Bell
93. R2-2305654, Retransmission-less operation, Nokia, Nokia Shanghai Bell
94. R2-2305684, Discussion on PDU sets and data burst awareness in RAN, Lenovo
95. R2-2305685, Discussion of DRX enhancement, Lenovo
96. R2-2305723, Discussion on BSR enhancements for XR, Lenovo
97. R2-2305724, Discard operation for XR communications, Lenovo
98. R2-2305725, Details of CG enhancements for XR communications, Lenovo
99. R2-2305740, Discussion on UL jitter information, Samsung
100. R2-2305741, Discussion on retransmission-less CG, Samsung
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102. R2-2305808, Discussion on PDU set and data burst information, Huawei, HiSilicon
103. R2-2305816, BSR enhancements for XR, Interdigital Inc.
104. R2-2305827, Discussion on XR-awareness, Ericsson
105. R2-2305828, Discussion on BSR enhancements for XR, Ericsson
106. R2-2305829, Discussion on PDU Discard, Ericsson
107. R2-2305830, Discussion on XR-specific power saving, Ericsson
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110. R2-2305899, Further aspects of PDU discard, MediaTek Inc.
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112. R2-2306121, Discussion on PDU Set discard in PDCP layer for DL and UL, ASUSTeK
113. R2-2306130, Discussion on MAC enhancements for XR-specific capacity improvement, Huawei, HiSilicon
114. R2-2306137, Discussion on PDU set discarding for XR traffic, Huawei, HiSilicon
115. R2-2306143, DRX enhancement for power saving in XR, LG Electronics Inc.
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117. R2-2306185, HARQ ID determination formula for CG, MediaTek Inc.
118. R2-2306203, Discussion on various frame rates supported for XR-specific power, III
119. R2-2306205, Further discussion on XR awareness, TCL Communication
120. R2-2306206, Discussion on multiple-PUSCHs CG for XR, TCL Communication
121. R2-2306242, Discussion on delay information for XR, Google Inc.
122. R2-2306243, Discussion on BSR enhancements for XR, Google Inc.
123. R2-2306252, Discussion on residual resource allocation for XR, Google Inc.
124. R2-2306266, Configured Grant enhancements for XR, Ericsson
125. R2-2306272, Discussion on Configured Grant enhancements for XR, III
126. R2-2306275, Discussion on BSR enhancements for XR, III
127. R2-2306331, Discussion on the discard for XR, LG Electronics Inc.
128. R2-2306333, Discussion on XR awareness, LG Electronics Inc.
129. R2-2306346, Discussion on new BSR table and delay information report, LG Electronics Inc.
130. R2-2306347, Discussion on CG enhancement for XR, LG Electronics Inc.
131. R2-2306353, Discussion on BSR enhancements for XR, Samsung
132. R2-2306393, XR BSR and Delay Information Enhancements, Meta USA
133. R2-2306402, Discussion on PDU Discard Operation for XR, Meta USA
134. R2-2306463, Discussion on XR-awareness, NTT DOCOMO, INC.
135. R2-2306481, Discussion on XR awareness, China Unicom
136. R2-2306564, LS on on new DRX cycles in rational numbers, RAN2
137. R2-2306565, Offline 204 on XR Discard, Nokia (Rapporteur)
138. R2-2306568, LS response to N6 PDU Set Identification, RAN2
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8. R1-2304042 Moderator Summary#2 - PDCCH monitoring resume after UL NACK Moderator (Ericsson)
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18. [R1-2302811](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2302811.zip) Discussion on XR specific capacity enhancement techniques Intel Corporation
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28. [R1-2303249](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303249.zip) Discussion on XR-specific capacity enhancements CMCC
29. [R1-2303311](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303311.zip) XR-specific capacity enhancements Nokia, Nokia Shanghai Bell
30. [R1-2303356](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303356.zip) On XR capacity enhancements MediaTek Inc.
31. [R1-2303409](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303409.zip) Discussion on XR-specific capacity enhancements FGI
32. [R1-2303428](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303428.zip) Discussion on XR-specific capacity enhancements LG Electronics
33. [R1-2303460](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303460.zip) Remaining issues on XR-specific capacity enhancements Sharp
34. [R1-2303498](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303498.zip) XR-specific capacity enhancements Apple
35. [R1-2303533](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303533.zip) XR-related CG Enhancements Lenovo
36. [R1-2303605](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303605.zip) Capacity Enhancement Techniques for XR Qualcomm Incorporated
37. [R1-2303672](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303672.zip) Discussion on XR-specific capacity enhancements NEC
38. [R1-2303724](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303724.zip) Discussion on XR-specific capacity enhancements NTT DOCOMO, INC.
39. [R1-2303827](file:///C:\youns\OneDrive\Documents\3GPP\RAN1%20tdocs\TSGR1_112b-e\Docs\R1-2303827.zip) Discussion on XR-specific capacity enhancements DENSO CORPORATION
40. R1-2304044 Moderator Summary#1 – XR Specific Capacity Improvements Moderator (Ericsson)
41. R1-2304045 Moderator Summary#2 - XR Specific Capacity Improvements Moderator (Ericsson)
42. R1-2304046 Moderator Summary#3 - XR Specific Capacity Improvements Moderator (Ericsson)
43. R1-2304047 Moderator Summary#4 - XR Specific Capacity Improvements Moderator (Ericsson)
44. R1-2304048 Moderator Summary#5 - XR Specific Capacity Improvements Moderator (Ericsson)

**RAN1#113**

1. [R1-2304494](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304494.zip) Draft CR on PDCCH monitoring resumption after NACK vivo, MediaTek, Ericsson, Xiaomi, ZTE, Sanechips, China Telecom, China Unicom, Qualcomm, LGE, Huawei, HiSilicon, Google, Meta, Apple
2. [R1-2305257](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305257.zip) Discussion on PDCCH monitoring resumption after UL NACK Apple
3. [R1-2305864](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305864.zip) Draft CR for Introducing PDCCH monitoring resumption after UL NACK Nokia, Nokia Shanghai Bell
4. [R1-2305865](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305865.zip) Work Plan for Rel-18 WI on XR Enhancements for NR Nokia, Qualcomm (Rapporteurs), Ericsson (RAN1 FL)
5. [R1-2304354](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304354.zip) XR-specific capacity enhancements FUTUREWEI
6. [R1-2304384](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304384.zip) Discussions on XR-specific capacity enhancements New H3C Technologies Co., Ltd.
7. [R1-2304413](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304413.zip) Capacity Enhancements for XR Ericsson
8. [R1-2304495](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304495.zip) Discussion on XR specific capacity enhancements vivo
9. [R1-2304529](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304529.zip) Discussion on XR specific capacity enhancements ZTE, Sanechips
10. [R1-2304572](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304572.zip) Discussion on XR-specific capacity enhancements Spreadtrum Communications
11. [R1-2304617](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304617.zip) Discussion on XR capacity enhancement techniques Panasonic
12. [R1-2304665](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304665.zip) Discussion on CG enhancements for XR capacity Huawei, HiSilicon
13. [R1-2304745](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304745.zip) Design of Multiple CG Occasions and unused CG occasion feedback CATT
14. [R1-2304915](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304915.zip) Discussion on XR-specific capacity enhancements xiaomi
15. [R1-2304980](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304980.zip) Discussion on XR-specific capacity enhancements Honor
16. [R1-2304981](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304981.zip) Discussion on XR-specific capacity enhancements DENSO CORPORATION
17. [R1-2304993](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2304993.zip) Discussion on XR-specific capacity enhancements NEC
18. [R1-2305022](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305022.zip) Discussion on XR specific capacity enhancements CAICT
19. [R1-2305047](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305047.zip) On XR-specific capacity enhancements techniques Sony
20. [R1-2305074](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305074.zip) On XR-specific capacity enhancements techniques Google Inc.
21. [R1-2305108](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305108.zip) Discussion on XR-specific capacity enhancements CMCC
22. [R1-2305135](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305135.zip) XR-specific capacity enhancements techniques TCL Communication Ltd.
23. [R1-2305145](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305145.zip) Discussion on XR-specific capacity enhancements LG Electronics
24. [R1-2305175](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305175.zip) Discussion on XR-specific capacity enhancements InterDigital, Inc.
25. [R1-2305196](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305196.zip) Remaining issues on XR-specific capacity enhancements Sharp
26. [R1-2305211](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305211.zip) XR-related CG Enhancements Lenovo
27. [R1-2305258](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305258.zip) XR-specific capacity enhancements Apple
28. [R1-2305351](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305351.zip) Capacity Enhancement Techniques for XR Qualcomm Incorporated
29. [R1-2305468](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305468.zip) Discussion on XR specific capacity enhancements OPPO
30. [R1-2305528](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305528.zip) Capacity  enhancements for XR Samsung
31. [R1-2305554](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305554.zip) On XR-specific capacity enhancements KT Corp.
32. [R1-2305610](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305610.zip) Discussion on XR-specific capacity enhancements NTT DOCOMO, INC.
33. [R1-2305663](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305663.zip) On XR capacity enhancements MediaTek Inc.
34. [R1-2305781](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305781.zip) Discussion on XR-specific capacity enhancements FGI
35. [R1-2305863](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2305863.zip) XR-specific capacity enhancements Nokia, Nokia Shanghai Bell
36. [R1-2306086](file:///C:\Users\gapeyenk\AppData\Local\Temp\Docs\R1-2306086.zip) Moderator Summary#1 - XR Specific Enhancements Moderator (Ericsson)
37. R1-2306087 Moderator Summary#2 - XR Specific Enhancements Moderator (Ericsson)
38. R1-2306088 Moderator Summary#3 - XR Specific Enhancements Moderator (Ericsson)
39. R1-2306089 Moderator Summary#4 - XR Specific Enhancements Moderator (Ericsson)
40. R1-2306232 [Draft] LS on XR capacity enhancements Moderator (Ericsson)
41. R1-2306233 LS on XR capacity enhancements RAN1, Ericsson