**3GPP TSG RAN meeting #93-e RP-xxxxxx**

**Electronic Meeting, September 13-17, 2021**

## Status Report to TSG

**Agenda item:** 9.2.3

|  |  |
| --- | --- |
| **WI / SI Name** | Study on XR (Extended Reality) evaluations for NR |
| included in this status report | Study Item: Yes | Core part: No | Performance part:No | Testing part:No |
| **Acronym** | FS\_NR\_XR\_eval |
| **Unique ID** | 860062 |
| **TSG Tdoc of latest approved WI/SI description (if any)** | RP-210460 |
| **Target Completion Date****(indicate if changed)** | Study Item: 12/2021  | Core part: N/A | Performance part: N/A | Testing part: N/A |
| **Overall Completion level** | Study Item: 70 % | Core part: N/A | Performance Part: N/A | Testing part: N/A |

Note: Overall completion level percentage numbers should use one of the colors below:

* xx%: Normal progress, no RAN plenary action needed
* xx%: Progress behind schedule, may need RAN plenary intervention. If so, SR should clearly define requested action
* xx%: Progress critically behind, RAN plenary shall intervene. SR should define requested action

**Source:**

|  |  |
| --- | --- |
| **Leading WG** | RAN1 |
| **Rapporteur** | **Name** | Eddy (Hwan-Joon) Kwon |
| **Company** | Qualcomm |
| **Email** | eddykwon@qti.qualcomm.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 |

*If you answered No: Then please remove the Excel file from the zip file of this status report.*

*If you answered Yes: Then please fill out the attached Excel template to request a modification of the time budgets for your WI /SI. The Excel table has to be filled out for all affected RAN WGs and up to the target date of the WI/SI. The basis are the endorsed time budgets of the last RAN meeting. Please highlight all changes of the values.
 One time unit (TU) corresponds to ~ 2 hours in the meeting.
 If this status report covers a WI with Core and Performance part, then please have one line for each in the attached Excel table.
 Note: If no Excel table is attached, then this means no time budget change.*

**Additional explanations/motivations for the time budget changes in the attached Excel table:**

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

 NOTE: Agreements and Open issues impacted cross-TSG aspects shall be explicitly highlighted

## 2.1 RAN1

#### 2.1.1 Agreements on traffic model and other evaluation assumptions

**Agreement**

* For DL multi-stream evaluations, a UE is declared as a satisfied UE if each stream meets the PER and PDB requirements of that stream, i.e., more than a certain percentage of packets are successfully transmitted within a given air interface PDB.

**Agreement**

For Option 2 (video + audio/data) of evaluation of DL two streams that is an optional evaluation scenario, the audio/data flow is modelled as follows:

* A stream aggregating streams of audio and data
	+ Periodicity: 10ms
	+ Data rate: 0.756 Mbps/s or 1.12 Mbps
	+ Packet size: determined by periodicity and data rate
	+ PDB: 30ms (baseline). Other values can be optionally evaluated.
	+ PER: 1% (baseline). Other values, e.g., 0.1%, can be optionally evaluated.

**Agreement**

For evaluation of separate streams of I-frame and P-frame that is an optional evaluation scenario,

* The main objective of evaluating this option is to study the impact on capacity from different PDB and PER values for I-frame and P-frame.
	+ FFS: Whether to directly compare capacity results (i.e., capacity numbers) for cases with two-stream modelling and those for cases with single-stream modelling.

**Agreement**

For evaluation of separate streams of I-frame and P-frame that is an optional evaluation scenario,

* Alpha value: 2.0 and 1.5, Other values, e.g., 3.0 can be optionally evaluated
	+ This alpha value assumption applies to both Option 1A (slice-based) and Option 1B (GOP-based) evaluations

**Agreement**

For evaluation of separate streams of I-frame and P-frame that is an optional evaluation scenario,

* RAN1 agree upon the below reference case, while leaving other study cases up to companies.
	+ Reference case
		- For DL
			* [PER\_I, PER\_P, PDB\_I, PDB\_P] = [1 %, 1 %, 10ms, 10ms] for AR/VR
			* [PER\_I, PER\_P, PDB\_I, PDB\_P] = [1 %, 1 %, 15ms, 15ms] for CG
		- For UL AR video streams
			* [PER\_I, PER\_P, PDB\_I, PDB\_P] = [1 %, 1 %, 30ms, 30ms]

**Agreement**

Optional methodology 1 for XR coverage evaluation

* For XR/CG in DL or UL, coverage is defined to be the A-percentile point in CDF of coupling gain for the “satisfied” UEs, with #UEs per cell = B, for a given XR application (AR/VR/CG) in a given deployment scenario (DU/InH/UMa)
	+ A = 5
	+ B = 1 and/or capacity
* Coupling gain for coverage evaluation is defined as the ratio of received and transmitted power measured in dB, and includes antenna gains, path loss, shadowing, indoor- or body loss, etc. Example of coupling gain can refer to TR 37.910.
* Note: The evaluation of coupling gain will be impacted by e.g., interference and scheduler mechanism, etc.

Optional methodology 2 for XR coverage evaluation

* For each drop,
	+ Randomly drop only one UE in the entire network (or in all the cells) that is associated with one of the 3 center cells (or gNBs), i.e., only one of the center gNBs is activated.
	+ Coupling gain for coverage evaluation is defined as the ratio of received and transmitted power measured in dB, and includes antenna gains, path loss, shadowing, indoor- or body loss, etc. Example of coupling gain can refer to TR 37.910.
	+ Run SLS according to capacity evaluation methodology and determine whether the UE is satisfied or not.
* Definition of the XR coverage
	+ X %-tile point in the CDF curve of coupling gain for all the satisfied UEs, where X = 5.

Note: It will be further discussed how to capture the result in the TR.

#### 2.1.2 Initial Evaluation Results

**Agreement**

* For capturing the observations for capacity for XR, following aspects are considered.
	+ Baseline capacity performance
	+ Various parameters/modeling on capacity performance, including the capacity performance with different assumptions, capacity performance with multi-stream traffic model, etc.
	+ FFS: Potential enhancement on capacity performance
* For capturing the observations for various parameters/modeling on capacity performance, the following could be considered
	+ Data-rate on capacity
	+ PDB/PER on capacity
	+ Multi-stream traffic on capacity
	+ Jitter impact on capacity
	+ Etc.
* FFS: For capturing the observations from the evaluation results for potential enhancement on capacity performance

#### 2.1.3 Remaining Open issues

In accordance to the SID:

* There are some open issues on evaluation methodology, e.g., for mobility performance evaluation. RAN1#106-e will continue to discuss them.
* RAN1#106 will continue to discuss observations and conclusions from evaluation results.

## 2.2 RAN2

#### 2.2.1 Agreements

#### 2.2.2 Remaining Open issues

## 2.3 RAN3

#### 2.3.1 Agreements

#### 2.3.2 Remaining Open issues

## 2.4 RAN4

#### 2.4.1 Agreements

#### 2.4.2 Remaining Open issues

## 2.5 RAN5

#### 2.5.1 Agreements

#### 2.5.2 Remaining Open issues

#### 2.5.3 Remaining Open issues with cross-WG dependencies

## 2.6 RAN6

#### 2.6.1 Agreements

#### 2.6.2 Remaining Open issues

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

NOTE: This section only needs to be filled in for WI/SIs where there is a corresponding relevant WI/SI in SA/CT.

## 3.1 SAx/CTs

#### 3.1.1 Agreements with cross-TSG impacts

#### 3.1.2 Remaining Open issues with cross-TSG impacts

NOTE: This section should also flag any critical dependencies that need TSG attention.

## 4. References

NOTE: This can be e.g. a list of all related Tdocs in the affected WGs since last TSG, references to LSs, produced TRs/TSs, the work/study item description or status reports of previous TSGs.

**RAN1#106-e tdoc list**

**Traffic Model**

[R1-2106456](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106456.zip) Traffic model for XR and Cloud Gaming Huawei, HiSilicon

[R1-2106526](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106526.zip) Remaining Issues of XR Traffic Model ZTE, Sanechips

[R1-2106629](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106629.zip) Remaining issues on traffic models of XR vivo

[R1-2106917](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106917.zip) Traffic Models for XR Samsung

[R1-2106949](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106949.zip) XR traffic model CATT

[R1-2107131](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107131.zip) Discussion on Traffic Model for XR/CG China Telecom

[R1-2107279](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107279.zip) Discussion on the XR traffic models for evaluation OPPO

[R1-2107374](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107374.zip) Remaining Issues on XR Traffic Models Qualcomm Incorporated

[R1-2107461](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107461.zip) Discussion on traffic models for XR evaluation LG Electronics

[R1-2107500](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107500.zip) Traffic Model for XR and CG MediaTek Inc.

[R1-2107534](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107534.zip) Discussion on UL traffic models for AR InterDigital, Inc.

[R1-2107616](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107616.zip) Traffic model for XR Intel Corporation

[R1-2107629](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107629.zip) Traffic model for XR Ericsson

[R1-2107768](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107768.zip) Remaining issues in XR traffic model Apple

[R1-2107886](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107886.zip) Discussion on traffic model for XR NTT DOCOMO, INC.

[R1-2107905](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107905.zip) Discussion on remaining issues of traffic Model for XR services Xiaomi

**Evaluation Methodology**

[R1-2106457](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106457.zip) Evaluation methodology for XR and Cloud Gaming Huawei, HiSilicon

[R1-2106527](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106527.zip) Remaining Issues of XR Evaluation Methodology ZTE, Sanechips

[R1-2106630](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106630.zip) Remaining issues on evaluation methodologies for XR vivo

[R1-2106918](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106918.zip) Evaluation methodology and KPIs for XR Samsung

[R1-2106950](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106950.zip) Evaluation methodology and performance index for XR CATT

[R1-2107087](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107087.zip) XR evaluation methodology FUTUREWEI

[R1-2107280](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107280.zip) Discussion on the XR evaluation methodology OPPO

[R1-2107375](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107375.zip) Remaining Issues on Evaluation Methodology for XR Qualcomm Incorporated

[R1-2107462](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107462.zip) Discussion on evaluation methodologies for XR LG Electronics

[R1-2107501](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107501.zip) On Evaluation Methodology for XR and CG MediaTek Inc.

[R1-2107535](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107535.zip) Remaining Issues on XR Evaluation Methodologies InterDigital, Inc.

[R1-2107617](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107617.zip) Evaluation Methodology for XR Intel Corporation

[R1-2107630](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107630.zip) Evaluation methodology for XR Ericsson

[R1-2107656](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107656.zip) Development of the Evaluation Methodology for XR Study Nokia, Nokia Shanghai Bell

[R1-2107769](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107769.zip) Considerations on XR evaluation methodology Apple

[R1-2107887](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107887.zip) Discussion on evaluation methodology for XR NTT DOCOMO, INC.

[R1-2107906](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107906.zip) Discussion on remaining issues of evaluation methodology for XR services Xiaomi

**Initial Performance Evaluation Results**

[R1-2106528](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106528.zip) Performance Evaluation Results for XR ZTE, Sanechips

[R1-2108209](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2108209.zip) Performance Evaluation Results for XR ZTE, Sanechips

[R1-2106631](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106631.zip) Performance evaluation results for XR vivo

[R1-2106951](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106951.zip) Evaluation results of XR performance CATT

[R1-2107088](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107088.zip) XR initial evaluations FUTUREWEI

[R1-2107281](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107281.zip) Evaluation results for XR evaluation OPPO

[R1-2107376](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107376.zip) Evaluation Results for XR Capacity and Power Qualcomm Incorporated

[R1-2107429](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107429.zip) Initial XR Evaluation Results CMCC

[R1-2107502](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107502.zip) Initial Performance and Evaluation Results for XR and CG MediaTek Inc.

[R1-2107536](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107536.zip) Performance Evaluation Results for XR InterDigital, Inc.

[R1-2107618](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107618.zip) Initial results for XR Intel Corporation

R1- 2108239   Initial results for XR         Intel

[R1-2107657](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107657.zip) Performance results in indoor hotspot and dense urban deployments of CG and VR/AR applications Nokia, Nokia Shanghai Bell

[R1-2107666](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107666.zip) Initial evaluation results for XR and Cloud Gaming Huawei, HiSilicon

[R1-2107694](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107694.zip) XR Initial Performance Results AT&T

[R1-2107770](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107770.zip) Performance evaluation on XR Apple

[R1-2107907](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107907.zip) Initial performance evaluation result for XR Xiaomi

[R1-2108007](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2108007.zip) XR performance evaluation results Ericsson

[R1-2108100](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2108100.zip) Initial evaluation results for XR China Unicom

[R1-2107376](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107376.zip) Evaluation Results for XR Capacity and Power Qualcomm Incorporated

**Others**

[R1-2106529](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106529.zip) On Capacity and Power Working Areas for XR ZTE, Sanechips

[R1-2106632](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106632.zip) Challenges and potential enhancements for XR vivo

[R1-2106822](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106822.zip) Considerations on potential enhancements for XR Sony

[R1-2106919](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106919.zip) Potential enhancements for XR Samsung

[R1-2106952](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2106952.zip) Potential area of NR enhancement for the support of XR services CATT

[R1-2107158](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107158.zip) Potential enhancements of NR to support XR services NEC

[R1-2107282](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107282.zip) Discussion on the support of XR/CG service OPPO

[R1-2107377](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107377.zip) Potential Enhancements for XR Qualcomm Incorporated

[R1-2107537](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107537.zip) Discussion on potential enhancements for XR InterDigital, Inc.

[R1-2107631](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107631.zip) Discussion on enhancements for XR Ericsson

[R1-2107658](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107658.zip) Enhancements for better XR support over NR Nokia, Nokia Shanghai Bell

[R1-2107667](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107667.zip) Challenges and potential enhancements for XR and Cloud Gaming Huawei, HiSilicon

[R1-2107771](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107771.zip) Potential enhancements for XR Apple

[R1-2107908](file:///C%3A%5C3gpp%5CMeetings%5CTSGR1%5CTSGR1_106-e%5CDocs%5CR1-2107908.zip) Discussion on potential enhancement for supporting XR Xiaomi

**RAN1#105-e tdoc list**

Traffic Model

[R1-2104207](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104207.zip) XR traffic model FUTUREWEI

[R1-2104238](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104238.zip) Traffic model for XR and Cloud Gaming Huawei, HiSilicon

[R1-2104395](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104395.zip) Remaining issues on traffic models of XR vivo

[R1-2104502](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104502.zip) XR traffic model CATT

[R1-2104555](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104555.zip) On Traffic Model for XR study Nokia, Nokia Shanghai Bell

[R1-2104701](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104701.zip) Remaining Issues on XR Traffic Models Qualcomm Incorporated

[R1-2104745](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104745.zip) Discussion on the XR traffic models for evaluation OPPO

[R1-2104934](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104934.zip) Traffic Model for XR Intel Corporation

[R1-2105134](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105134.zip) Considerartions on XR traffic model Apple

[R1-2105181](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105181.zip) Considerations on XR traffic model Sony

[R1-2105342](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105342.zip) Traffic Models for XR Samsung

[R1-2105376](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105376.zip) Traffic Model for XR and CG MediaTek Inc.

[R1-2105443](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105443.zip) Discussion on traffic models for XR evaluation LG Electronics

[R1-2105499](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105499.zip) Discussion on UL traffic models InterDigital, Inc.

[R1-2105547](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105547.zip) Discussion on remaining issues of traffic Model for XR services Xiaomi

[R1-2105603](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105603.zip) Remaining Issues of XR Traffic Model ZTE, Sanechips

[R1-2105726](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105726.zip) Discussion on traffic model for XR NTT DOCOMO, INC.

[R1-2105829](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105829.zip) Traffic model for XR Ericsson

Evaluation Methodology

[R1-2104208](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104208.zip) XR evaluation methodology FUTUREWEI

[R1-2104239](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104239.zip) Evaluation methodology for XR and Cloud Gaming Huawei, HiSilicon

[R1-2104396](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104396.zip) Discussion on evaluation methodologies for XR vivo

[R1-2104499](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104499.zip) Evaluation methodology and performance index for XR CATT

[R1-2104556](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104556.zip) Development of the Evaluation Methodology for XR Study Nokia, Nokia Shanghai Bell

[R1-2104702](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104702.zip) Remaining Issues on Evaluation Methodology for XR Qualcomm Incorporated

[R1-2104746](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104746.zip) Discussion on the XR evaluation methodology OPPO

[R1-2104935](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104935.zip) Evaluation Methodology for XR Intel Corporation

[R1-2105135](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105135.zip) Remaining issues in XR evaluation methodology Apple

[R1-2105343](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105343.zip) Evaluation methodology and KPIs for XR Samsung

[R1-2105377](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105377.zip) On Evaluation Methodology for XR and CG MediaTek Inc.

[R1-2105444](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105444.zip) Discussion on evaluation methodologies for XR LG Electronics

[R1-2105500](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105500.zip) Discussion on additional issues on XR Evaluations Methodology and KPI InterDigital, Inc.

[R1-2105548](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105548.zip) Discussion on remaining issues of evaluation methodology for XR services Xiaomi

[R1-2105604](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105604.zip) Further Discussion on XR Evaluation Methodology ZTE, Sanechips

[R1-2105727](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105727.zip) Discussion on evaluation methodology for XR NTT DOCOMO, INC.

[R1-2105830](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105830.zip) Evaluation methodology for XR Ericsson

Initial Performance Evaluation Results

[R1-2104209](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104209.zip) XR initial evaluations FUTUREWEI

[R1-2104397](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104397.zip) Initial performance evaluation results on XR vivo

[R1-2104500](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104500.zip) Evaluation results of XR performance CATT

[R1-2104557](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104557.zip) Performance results in indoor hotspot and dense urban deployments of CG and VR applications Nokia, Nokia Shanghai Bell

[R1-2104703](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104703.zip) Initial Evaluation Results for XR Capacity and UE Power Consumption Qualcomm Incorporated

[R1-2104747](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104747.zip) Evaluation results for XR evaluation OPPO

[R1-2104936](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104936.zip) Initial results for XR Intel Corporation

[R1-2105136](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105136.zip) Performance evaluation on XR Apple

[R1-2105392](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105392.zip) Initial Performance and Evaluation Results for XR and CG MediaTek Inc.

[R1-2105501](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105501.zip) Initial Performance Evaluation Results on XR InterDigital, Inc.

[R1-2105521](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105521.zip) Initial evaluation results for XR and Cloud Gaming Huawei, HiSilicon

[R1-2105605](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105605.zip) Performance Evaluation Results for XR ZTE, Sanechips

[R1-2105664](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105664.zip) XR Initial Performance Results AT&T

[R1-2105831](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105831.zip) Initial XR performance evaluation results Ericsson

[R1-2105963](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105831.zip) Initial results for XR Intel Corporation

Others

[R1-2104398](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104398.zip) Challenges and potential enhancements of XR vivo

[R1-2104501](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104501.zip) Potential area of NR enhancement for the support of XR services CATT

[R1-2104558](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104558.zip) Enhancements for better XR support over NR Nokia, Nokia Shanghai Bell

[R1-2104704](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104704.zip) Potential Enhancements for XR Qualcomm Incorporated

[R1-2104748](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2104748.zip) Discussion on the support of XR/CG service in sidelink-unlicensed OPPO

[R1-2105137](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105137.zip) Considerations on potential enhancements for XR Apple

[R1-2105344](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105344.zip) Potential enhancements for better XR support in NR Samsung

[R1-2105502](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105502.zip) Discussion on potential enhancements for XR InterDigital, Inc.

[R1-2105522](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105522.zip) Challenges and potential enhancements for XR and Cloud Gaming Huawei, HiSilicon

[R1-2105549](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105549.zip) Discussion on potential enhancement for supporting XR Xiaomi

[R1-2105606](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105606.zip) Further Discussion on Capacity and Power Working Areas for XR ZTE, Sanechips

[R1-2105832](file:///C%3A%5CUsers%5Cyounsun%5CAppData%5CLocal%5CDocs%5CR1-2105832.zip) Discussion on enhancements for XR Ericsson

**RAN1#104-e tdoc list**

Traffic Model

[R1-2100207](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100207.zip) Discussion on applications and traffic model for XR and Cloud Gaming Huawei, HiSilicon

[R1-2101137](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101137.zip) Traffic Model for XR and CG MediaTek Inc.

[R1-2100055](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100055.zip) XR traffic model FUTUREWEI

[R1-2100132](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100132.zip) Discussion on the XR traffic models for evaluation OPPO

[R1-2100361](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100361.zip) XR traffic model CATT

[R1-2100476](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100476.zip) Discussion on traffic models of XR vivo

[R1-2100528](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100528.zip) Discussion on Traffic Model for XR evaluations ZTE , Sanechips

[R1-2100555](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100555.zip) Discussion on traffic model for XR study LG Electronics

[R1-2100571](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100571.zip) Discussion on XR applications and traffic models InterDigital, Inc.

[R1-2100680](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100680.zip) On traffic model for XR Intel Corporation

[R1-2100724](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100724.zip) On Traffic Model for XR study Nokia, Nokia Shanghai Bell

[R1-2100775](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100775.zip) XR Traffic Model Considerations AT&T

[R1-2100879](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100879.zip) Discussion on XR Applications and Evaluation Assumptions Sony

[R1-2101101](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101101.zip) Discussion on Traffic model for XR evaluation Xiaomi

[R1-2101240](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101240.zip) XR Applications and Traffic Models Samsung

[R1-2101314](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101314.zip) Traffic model for XR Ericsson

[R1-2101365](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101365.zip) Views on XR traffic models Apple

[R1-2101493](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101493.zip) XR Traffic Models Qualcomm Incorporated

[R1-2101635](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101635.zip) Discussion on traffic model for XR NTT DOCOMO, INC.

Evaluation Methodology

[R1-2100477](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100477.zip) Discussion on evaluation methodologies of XR vivo

[R1-2100056](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100056.zip) XR evaluation methodology FUTUREWEI

[R1-2100133](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100133.zip) Discussion on the XR evaluation methodology OPPO

[R1-2100242](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100242.zip) Discussion on evaluation methodology for XR and Cloud Gaming Huawei, HiSilicon

[R1-2100362](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100362.zip) Evaluation methodology and performance index for XR CATT

[R1-2100529](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100529.zip) On XR Evaluation Methodology ZTE , Sanechips

[R1-2100556](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100556.zip) Discussion on evaluation assumption for XR study LG Electronics

[R1-2100572](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100572.zip) Discussion on Evaluation Methodology for XR InterDigital, Inc.

[R1-2100586](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100586.zip) On Evaluation Methodology for XR and CG MediaTek Inc.

[R1-2100681](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100681.zip) On evaluation methodology for XR Intel Corporation

[R1-2100725](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100725.zip) Development of the Evaluation Methodology for XR Study Nokia, Nokia Shanghai Bell

[R1-2100776](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100776.zip) XR Evaluation Assumptions AT&T

[R1-2101102](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101102.zip) Discussion on evaluation methodology for XR services Xiaomi

[R1-2101241](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101241.zip) XR Evaluation Methodology and KPIs Samsung

[R1-2101315](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101315.zip) Evaluation methodology for XR Ericsson

[R1-2101366](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101366.zip) Views on XR evaluation methodology Apple

[R1-2101494](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101494.zip) Evaluation Methodology for XR Qualcomm Incorporated

[R1-2101636](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101636.zip) Discussion on evaluation methodology for XR NTT DOCOMO, INC.

Initial Performance Evaluation Results

*Placeholder only – no email/GTW discussion*

[R1-2100363](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100363.zip) Evaluation results of XR performance CATT

[R1-2100478](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100478.zip) Initial performance evaluation results of XR vivo

[R1-2100530](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100530.zip) Preliminary Performance Evaluation Results for XR ZTE , Sanechips

[R1-2100587](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100587.zip) Initial Performance and Evaluation Results for XR and CG MediaTek Inc.

[R1-2100682](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100682.zip) Initial results for XR Intel Corporation

[R1-2100726](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100726.zip) Initial Performance Evaluation Results Nokia, Nokia Shanghai Bell

[R1-2101068](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101068.zip) Discussion on XR evaluation CMCC

[R1-2101255](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101255.zip) Initial evaluation results for XR and Cloud Gaming Huawei, HiSilicon

[R1-2101316](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101316.zip) Initial XR performance evaluation results Ericsson

[R1-2101495](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101495.zip) Initial XR Performance Evaluation Results Qualcomm Incorporated

Others

[R1-2100134](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100134.zip) Discussion on the support of XR/CG service in sidelink-unlicensed OPPO

[R1-2100364](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100364.zip) Potential area of NR enhancement for the support of XR services CATT

[R1-2100479](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100479.zip) Challenges and potential enhancements of XR vivo

[R1-2100531](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100531.zip) Considerations on XR specific enhancements ZTE , Sanechips

[R1-2100573](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2100573.zip) Discussion on potential enhancements for supporting XR InterDigital, Inc.

[R1-2101103](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101103.zip) Discussion on potential enhancement for supporting XR Xiaomi

[R1-2101269](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101269.zip) Other aspects for XR and Cloud Gaming Huawei, HiSilicon

[R1-2101317](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101317.zip) Mobility and XR applications Ericsson

[R1-2101367](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_104%5CDocs%5CR1-2101367.zip) Views on potential enhancements for XR Apple

**RAN1#103-e tdoc list**

Applications, Traffic Model and Evaluation Methogology

[R1-2007698](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007698.zip) Discussion on XR applications, traffic model and evaluation methodologies vivo

[R1-2007843](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007843.zip) XR use cases, evaluation methodologies and traffic model CATT

[R1-2007976](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007976.zip) Discussion on applications, traffic model and evaluation methodology for XR ZTE

[R1-2008037](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008037.zip) Discussion on XR evaluation and Challenges for NR CMCC

[R1-2008198](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008198.zip) Applications, Evaluation Methodology, and KPIs for XR Samsung

[R1-2008311](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008311.zip) XR evaluations for NR: Applications and Evaluation Methodology AT&T

[R1-2008454](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008454.zip) XR Applications, Traffic Model and Evaluation Methodology Apple

[R1-2008818](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008818.zip) Discussion on traffic models and evaluation assumptions for XR InterDigital, Inc.

[R1-2008896](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008896.zip) Applications, Traffic Model and Evaluation Methodology for XR evaluations for NR Nokia, Nokia Shanghai Bell

[R1-2008939](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008939.zip) Discussion for study in XR evaluation for NR LG Electronics

[R1-2008967](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008967.zip) On Applications, Traffic Model, and Evaluation Methodology for XR and CG MediaTek Inc.

[R1-2009006](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2009006.zip) Scenarios, Traffic Model and EVM for XR Intel Corporation

[R1-2009041](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2009041.zip) Discussion on XR application and evaluation methodology Xiaomi

[R1-2009087](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2009087.zip) XR use cases, traffic modelling and performance measure Ericsson

[R1-2009198](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2009198.zip) Discussion on study on XR evaluations for NR NTT DOCOMO, INC.

[R1-2009280](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2009280.zip) Evaluation Methodology for XR Qualcomm Incorporated

Others

[R1-2007699](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007699.zip) Performance evaluation of XR traffic vivo

[R1-2007842](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007842.zip) Potential area of NR enhancement for the support of XR services CATT

[R1-2008316](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008316.zip) Initial evaluation results for XR and Cloud Gaming Huawei, HiSilicon

[R1-2008455](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008455.zip) Views on enhancements for XR Apple

[R1-2008819](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008819.zip) Discussion on potential enhancements for XR InterDigital, Inc.

[R1-2009289](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2009289.zip) Initial XR performance evaluations Ericsson

 20.04.2020 minor adaptations for RAN #88e

 18.02.2020 minor adaptations for RAN #87e

 14.11.2019 minor adaptations for RAN #86

 18.08.2019 minor adaptations for RAN #85

 12.05.2019 minor adaptations for RAN #84

 27.02.2019 minor adaptations for RAN #83

 21.11.2018 completion levels with colours added (for RAN #82)

v04.81 31.07.2018 simplification of template and addition of cross-TSG aspects (for RAN #81)

v04.80 21.05.2018 minor adaptations for RAN #80

v04.79 26.02.2018 minor adaptations for RAN #79

v04.78 18.11.2017 minor adaptations for RAN #78

v04.77 06.08.2017 minor adaptations for RAN #77

v04.76 15.05.2017 minor adaptations for RAN #76

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v04.73 01.09.2016 adaptations for RAN #73 (time units in extra Excel table, RAN6 reporting included)

v04.72 26.05.2016 adaptations for RAN #72 (introduction of NR & GERAN TUs)

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v04.69 12.08.2015 minor adaptations for RAN #69

v04.68 21.05.2015 minor adaptations for RAN #68

v04.67 01.02.2015 minor adaptations for RAN #67

v04.66 16.11.2014 minor adaptations for RAN #66

v04.65 16.08.2014 minor adaptations for RAN #65

v04.64 22.05.2014 minor adaptations for RAN #64

v04.63 24.01.2014 restructuring for RAN #63 to cover Core & Perf. in one doc file

v03.62 11.11.2013 section 1.2.3 adapted for RAN #62

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