**3GPP TSG RAN Meeting #106 RP-24xxxx**

**Madrid, Spain, December 9-12, 2024**

**Title:** DRAFT LTI Response to ITU-R LS on Minimum requirements related to technical performance for IMT-2030 radio interface(s)

**Response to:**  RP-243202 = ITU-R WP5D/TEMP/167 LS on Minimum requirements related to technical performance for IMT-2030 radio interface(s)

**To:**  ITU-R WP5D

**Cc:**

**Source:**

**Contact Person:**

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**This ITU input will become part of ITU deliverable(s): no**

**Responsible 3GPP group for final output to ITU: 3GPP PCG**

**deadline for the final output to ITU: January 23rd, 2025 (16:00 hours UTC)**

**way to make this document available for ITU (see Art.51 of 3GPP working procedures):**

**[√] a. via OPs as a deliverable from their organizations (for PCG review only)**

**[ ] b. via Individual Members (for PCG or TSG review) coordinated by ITU sector convener**

**[.] c. via 3GPP LS coordinator (for TSG or WG review)**

**Attachments:** no

*------------ [remove upper part before submission to ITU in case a. and b. (Art.51)] -----------------*

**For 3GPP review:**

**in:** 3GPP TSG RAN **feedback LS before:** December 12, 2024 **to:** 3GPP SA

**in:** 3GPP TSG SA **feedback LS before:** December 13, 2024 **to:** 3GPP PCG

**Overall description:**

With the LS in RP-243202 = ITU-R WP5D/TEMP/167 “LS on Minimum requirements related to technical performance for IMT-2030 radio interface(s)”, Working Party 5D invites External Organizations to provide their inputs on the minimum technical performance requirements for IMT-2030 radio interface technologies, including but not limited to,

– Proposed candidate items for minimum technical performance requirements based on M.2160 Usage Scenarios and Capabilities, including necessary background information and justification, which are requested to be provided preferably by WP 5D #48 (4-13 February 2025).

– Proposed associated target values for the above candidate items for the minimum technical performance requirements which are requested to be provided preferably by WP 5D #49 (24 June – 3 July 2025, TBC)

Based on this information and the discussion in 3GPP TSG RAN#106 meeting, this contribution presents the initial reply from 3GPP on the proposed candidate items for IMT-2030 minimum technical performance requirements, as well as related workplan for potential further replies to ITU.

*----------------- [remove 3GPP review part before submission to ITU] -----------------*

**[Alliance for Telecommunications Industry Solutions][[1]](#footnote-1)**

Reply Liason Statement on Minimum requirements related to technical performance for IMT-2030 radio interface(s)

3GPP TSG RAN has received the LS (5D/TEMP/167) on Minimum requirements related to technical performance (TPR) for IMT-2030 radio interface(s) and would like to thank for the opportunity to provide input. 3GPP TSG RAN#106 in October 2024 initiated a Study on 6G scenarios and requirements. One important aspect of the study is to investigate a candidate set of items for minimum TPRs based on the Recommendation ITU-R M.2160, and the associated target values for the identified minimum TPRs.

Based on Candidate IMT-2030 TPRs under discussion in WP 5D [1] and the inputs from 3GPP members, 3GPP TSG RAN has made initial considerations of possible TPR and proposes the following for consideration. The items indicated as “FFS” would require further discussion. 3GPP TSG RAN may provide further inputs to WP5D in the future. The list below should be seen as an initial view and does not preclude additional candidates to be considered.

*Moderator note: Table below will be filled/updated based on outcome of offline session*

|  |  |  |  |
| --- | --- | --- | --- |
| **Candidate IMT-2030 TPRs under discussion in WP 5D [1]** | | **Proposed to be defined as ITU IMT-2030 TPR** | **Proposed not to be defined as ITU IMT-2030 TPR** |
| 1 | Peak data rate |  |  |
| 2 | User experienced data rate |  |  |
| 3 | Sustainable data rate |  |  |
| 4 | Peak spectral efficiency |  |  |
| 5 | Average spectral efficiency |  |  |
| 6 | 5th percentile user spectral efficiency |  |  |
| 7 | Area traffic capacity |  |  |
| 8 | Connection density |  |  |
| 9 | XR connection density/connection capacity |  |  |
| 10 | XR area capacity |  |  |
| 11 | XR area efficiency |  |  |
| 12 | Mobility |  |  |
| 13 | Mobility interruption time |  |  |
| 14 | User plane latency |  |  |
| 15 | Control plane latency |  |  |
| 16 | Reliability |  |  |
| 17 | Joint requirement on data rate, latency, and reliability |  |  |
| 18 | Joint requirement of data rate, latency, reliability and capacity |  |  |
| 19 | Coverage |  |  |
| 20 | Positioning |  |  |
| 21 | Bandwidth |  |  |
| 22 | Sensing-related capabilities |  |  |
| 23 | AI-related capabilities |  |  |
| 24 | Sustainability/Energy efficiency |  |  |
| 25 | Security |  |  |
| 26 | Resilience |  |  |
| 27 | Interoperability |  |  |

Furthermore, 3GPP TSG RAN adopted the study plan as below and may provide further inputs to WP5D accordingly. 3GPP TSG RAN looks forward to future co-operation with ITU-R WP5D on the minimum requirements related to technical performance for IMT-2030.

* RAN#106 (October 2024)
* Initial discussion on the possible TPRs
* RAN#107 (March 2025)
* Aim to finalize the candidate set of TPRs
* Initial discussion on the associated values of the identified TPRs
* RAN#108 (June 2025)
* Aim to finalize the associated values of the identified TPRs.
* After RAN#108
* Any remaining issues on 6G focusing on ITU-R may continue, if needed

Reference:

1. “Working document towards a Preliminary Draft New Report ITU-R M.[IMT-2030.TECH PERF REQ]: Minimum requirements related to technical performance for IMT-2030 radio interface(s)”, Annex 5.7 to [5D/413](https://www.itu.int/md/R23-WP5D-C-0413/en) Report on the 47th meeting of Working Party 5D.

1. Submitted on behalf of the 3GPP. [↑](#footnote-ref-1)