|  |  |
| --- | --- |
| **Radiocommunication Study Groups** |  |
|  |  |
|  |  |
| Received: 17 June 2019 | **Document 5D/1216-E** |
| **20 June 2019** |
| **English only**  **TECHNOLOGY ASPECTS** |
| Alliance for Telecommunications Industry Solutions[[1]](#footnote-1) | |
| 3GPP 5G[[2]](#footnote-2) CANDIDATE FOR INCLUSION IN IMT-2020: SUBMISSION 1 (*SRIT)* | |
|  | |

In response to the ITU-R Circular Letter [5/LCCE/59](https://www.itu.int/md/R00-SG05-CIR-0059/en) which invites proposals for candidate radio interface technologies for the terrestrial component of IMT-2020, the **3GPP PROPONENT** joins with the Third Generation Partnership Project (3GPP) in providing a technology submission under Step 3 of the IMT-2020 process.

In this final view, intended to assist WP 5D and the evaluation groups in its preparation work on IMT-2020, the Proponent[[3]](#footnote-3)of the 3GPP submissions (hereafter known as the 3GPP Proponent) is providing at this time all the required components of the complete submissions, including the Description Template, Compliance Templates, and Self Evaluation Report, of its 5G solution:

3GPP 5G Candidate Submission 1 consists of the following:

**Submission 1: *SRIT* [[4]](#footnote-4)**

* Component RIT: NR
* Component RIT: E-UTRA/LTE

Each submission is self-contained and complete unto itself, consisting of *Releases 15 & 16.*

Statement of compliance with the provisions in Doc. [IMT-2020/2(Rev.1)](https://www.itu.int/md/R15-IMT.2020-C-0002/en), Step 2

* ITU-R Criteria: An SRIT consists of a number of component RITs complementing each other, with each component RIT fulfilling the minimum requirements of at least two test environments and together as an SRIT fulfilling the minimum requirements of at least four test environments comprising the three usage scenarios.
* 3GPP Proponent Statement: The individual RIT Components as well as the Complete SRIT fulfils this ITU-R Criteria as indicated below:

**For Component RIT: NR** (ITU-R criteria: Fulfils at least 2 test environments)

TABLE 4

(Source Report ITU-R M.2412)

Mapping of test environments and usage scenarios

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Usage Scenarios** | **eMBB** | | | **mMTC** | **URLLC** |
| **Test Environments** | **Indoor Hotspot – eMBB** | **Dense Urban – eMBB** | **Rural – eMBB** | **Urban Macro – mMTC** | **Urban Macro – URLLC** |
| ***COMPONENT RIT: NR*** | *fulfils* | *fulfils* | *fulfils* | *fulfils* | *fulfils* |

**For Component RIT: E-UTRA/LTE** (ITU-R Criteria: Fulfils at least 2 test environments)

TABLE 4

(Source Report ITU-R M.2412)

Mapping of test environments and usage scenarios

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Usage Scenarios** | **eMBB** | | | **mMTC** | **URLLC** |
| **Test Environments** | **Indoor Hotspot – eMBB** | **Dense Urban – eMBB** | **Rural – eMBB** | **Urban Macro – mMTC** | **Urban Macro – URLLC** |
| ***COMPONENT RIT:***  ***E-UTRA/LTE*** | *fulfils* | *fulfils* | *fulfils* | *fulfils* | *User plane latency: fulfils (\*)*  *Reliability : not assessed (\*)* |

(\*) Specific requirements for URLLC. The other technical performance requirements for URLLC in LTE (control plane latency and mobility interruption) are fulfilled.

**For Complete SRIT** (ITU-R Criteria: fulfils at least four test environments comprising the three usage scenarios)

TABLE 4

(Source Report ITU-R M.2412)

Mapping of test environments and usage scenarios

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Usage Scenarios** | **eMBB** | | | **mMTC** | **URLLC** |
| **Test Environments** | **Indoor Hotspot – eMBB** | **Dense Urban – eMBB** | **Rural – eMBB** | **Urban Macro – mMTC** | **Urban Macro – URLLC** |
| ***COMPLETE SRIT*** | *fulfils* | *fulfils* | *fulfils* | *fulfils* | *fulfils* |

This 3GPP Proponent submission for IMT-2020 is based upon the following currently in force ITU‑R Reports, and the minimum technical requirements, evaluation criteria, and other information contained therein:

|  |  |  |
| --- | --- | --- |
| **ITU-R Report Number & Date** | **Title** | **Status** |
| [**M.2410-0 (11/2017)**](https://www.itu.int/pub/publications.aspx?lang=en&parent=R-REP-M.2410-2017) | Minimum requirements related to technical performance for IMT‑2020 radio interface(s) | In force (Main) |
| [**M.2411-0 (11/2017)**](https://www.itu.int/pub/publications.aspx?lang=en&parent=R-REP-M.2411-2017) | Requirements, evaluation criteria and submission templates for the development of IMT-2020 | In force (Main) |
| [**M.2412-0 (11/2017)**](https://www.itu.int/pub/publications.aspx?lang=en&parent=R-REP-M.2412-2017) | Guidelines for evaluation of radio interface technologies for IMT‑2020 | In force (Main) |

The 3GPP Submission 1 meets or exceeds the specific requirements, evaluation criteria, and/or other information specified in the ITU-R Reports.

**Attachments:**

Part 1: RP-191525: Characteristics Template – SRIT



Part 2: RP-191526: Compliance Template – SRIT



Part 3: RP-191527: Link Budget Template – SRIT



Part 4: RP-191521: TR 37.910 Study on self-evaluation towards IMT-2020 submission



\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. This contribution was developed in 3GPP TSG RAN, approved by the Organizational Partners of the 3GPP PCG, and it is being submitted by ATIS on behalf of the 3GPP Proponent. Source: PCG43(19)07; (RP-191533, SP190576). [↑](#footnote-ref-1)
2. Developed by 3GPP as 5G, Release 15 and beyond. [↑](#footnote-ref-2)
3. The 3GPP Proponent of the 3GPP submission is collectively the 3GPP Organizational Partners (OPs). The Organizational Partners of 3GPP are ARIB, ATIS, CCSA, ETSI, TSDSI, TTA and TTC (<http://www.3gpp.org/partners>). [↑](#footnote-ref-3)
4. Source: RP-191524 for the 3GPP Submission 1 SRIT to ITU-R. [↑](#footnote-ref-4)