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| **Radiocommunication Study Groups** |  |
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| Received: 10 September 2019 | **Document 5D/1301-E** |
| **10 September 2019** |
| **English only  TECHNOLOGY ASPECTS** |
| Telecommunications Standards Development Society, India (TSDSI) | |
| Updated submission of the candidate  Imt-2020 technology | |
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This submission is being made by TSDSI to ITU-R WP 5D in continuation of the TSDSI RIT submission made to the WP 5D Meeting#32 (held from 9th to 17th July 2019) *vide* Document number [5D/1231](https://www.itu.int/md/R15-WP5D-C-1231/en).

During detailed deliberations in WP 5D Meeting#32, TSDSI had provided clarifications to the queries raised by various participants. At the end of deliberations, the following two issues had remained outstanding as mentioned in the report of the SWG Evaluation *vide* Document [IMT2020/28](https://www.itu.int/md/R15-IMT.2020-C-0028/en).

*1 “LMLC Link budget uses different assumptions than 3GPP/M.2412 e.g., Max UE TX Pwr=26 dBm.”*

*2 “Release issue of NB-IOT”*

Subsequently, TSDSI and other two proponents, namely Nufront and ETSI were allowed to provide additional information by 10th September 2019 in accordance with the way forward Document [IMT-2020/22](https://www.itu.int/md/R15-IMT.2020-C-0022/en).

TSDSI has reviewed it submission and provided following clarifications and changes w.r.t. the issues mentioned at 2(1) and 2(2) above in addition to improving the presentation of the self‑evaluation results.

– TSDSI RIT has capability to transmit 26 dBm UE power with pi/2 BPSK. However, to be complaint with the M.2412 evaluation criterion, this power boost feature is not used, and the UE will work at 23 dBm power. Accordingly, changes have been made in characteristic and compliance templates. Evaluation results have been provided for 23 dBm power. Additional results for 26 dBm have been provided as supplementary information.

– We have now used 3GPP NB-IoT release 15 as the basis for MMTC submission in TSDSI RIT. Accordingly, compliance template has been amended and new evaluation results have been provided. The reference TSDSI specifications folder now contain an updated set of specifications.

Wherever required, additional information has been provided/corrections done in the current RIT submission in accordance with the clarifications provided during the meeting or incidental thereto.

The current submission has an updated self-evaluation report, compliance template and link-budget sheets and the same is embedded with this document.

# Submission Templates

The updated Characteristics template, the link budget templates, the compliance template and the self-evaluation report for the proposed RIT are provided in the attachments. TSDSI requests WP 5D to consider this submission and to update the Document [IMT-2020/7](https://www.itu.int/md/R15-IMT.2020-C-0007/en).

Characteristics template



Link budget templates

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| Channel Model B | Channel Model A |
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Compliance templates



Self-evaluation Report

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