|  |  |
| --- | --- |
| **Radiocommunication Study Groups** |  |
|  |  |
|  |  |
| Received: 12 February 2020 | **Document 5D/122-E** |
| **13 February 2020** |
| **English onlyTECHNOLOGY ASPECTS** |
| Telecom Centre of Excellence Group (TCOE) India, Independent Evaluation Group |
| evaluation report of the RIT submitted by tsdsi |
|  |

PART I – Administrative Aspects of the Independent Evaluation Group

A. Name of the Independent Evaluation Group

 TCOE India Independent Evaluation Group.

B. Introduction and Background

 TCOE India has been created as a public private partnership initiative by the Department of Telecommunications, Government of India in 2007, to strengthen the R&D ecosystem in ICT where Government works as a facilitator, Industry as the ultimate user, and academia as the research unit. Its mission is to create synergy amongst academia, telecom industry and government for creation of new services/applications, generation of IPR, development of manufacturing capability, global telecom standardization activities, and promotion of entrepreneurship. Address technological and managerial challenges faced by Indian Industry in reaching all sections of society through affordable solutions, providing world class services, and having global presence.

C. Method of work

 TCOE India IEG conducted its evaluation work through multiple face-to-face meetings and telecon meetings and were supported by TCOE India.

 The main contributors for this effort are:

• Centre of Excellence in Wireless Technologies (CEWiT);

• IIT Madras;

• IIT Hyderabad;

• IIT Kharagpur;

• Indian Institute of Science (IISc);

• WiSig;

• Huawei (3GPP RIT).

 After an initial phase of training in understanding the ITU usage scenarios and test environments and calibration of the simulators, the KPIs were divided among the different partners. Each KPI was evaluated by one or more partners and checked for consistency. The partial set of evaluation results were submitted in WP 5D meeting #33 in Dec. 2019. The complete set of all KPI evaluations is included in this report. The progress of the evaluation was checked at multiple stages via phone conferences and face-to-face meetings arranged by TCOE. Several volunteers helped TCOE in editing and putting the report together.

D. Contact Details

 *Technical Coordinator*

 Name: Prof. R. David Koilpillai

 Email: koilpillai@ee.iitm.ac.in

 *Administrative Coordinator*

 Name: Mr. Anurag Vibhuti

 Email: anurag.cc@tcoe.in

PART II – Technical Aspects of the Independent Evaluation Group

A. What candidate technologies or portions of the candidate technologies this IEG is or might anticipate evaluating?

 *RIT Submission from TSDSI (Doc.* [*IMT-2020/19*](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0019)*) along with the update (Doc.* [*5D/1301*](https://www.itu.int/md/R15-WP5D-C-1301/en)*).*

B. Confirmation of utilization of the ITU-R evaluation guidelines in Report ITU R M.2412.

 *Confirmed. We have utilized the required procedures from [A], [B] and [C].*

C. Documentation of any additional evaluation methodologies that are or might be developed by the Independent Evaluation Group to complement the evaluation guidelines

 *Please refer to the report attached in Annexure 1.*

D. Verification as per Report ITU-R M.2411 of the compliance templates and the self-evaluation for each candidate technology as indicated in A).

a. Identify gaps/deficiencies in submitted material and/or self-evaluation;

b. Identify areas requiring clarifications;

c. General questions.

 *The compliance template and the self-evaluation reports submitted by TSDSI have been verified and are found to be in line with the required submission methodologies.*

E. Assessment as per Reports ITU-R M.2410, ITU-R M.2411 and ITU-R M.2412 for each candidate technology as indicated in (A).

a. Detailed analysis/assessment and evaluation by the IEGs of the compliance templates submitted by the proponents per the Report ITU-R M.2411 section 5.2.4;

b. Provide any additional comments in the templates along with supporting documentation for such comments;

c. Analysis of the proponent’s self-evaluation by the IEG;

 *Please refer to the report attached in Annexure 1 for the detailed assessment.*

F. Questions and feedback to WP 5D and/or the proponents or other IEGs;

 *None.*

PART III

A. Conclusion

 Based on the careful evaluation of the TSDSI RIT, TCOE India observes that the RIT fulfils all the required KPI’s for IMT-2020 as set by Report ITU-R M.2410. The detailed technical report along with the compliance template is provided in Annexure 1.

**Annex: 1**



References

[A] Report [ITU-R M.2410](https://www.itu.int/en/publications/ITU-R/pages/publications.aspx?parent=R-REP-M.2410), “Minimum requirements related to technical performance for IMT-2020 radio interface(s)”, 2017.

[B] Report [ITU-R M.2411](https://www.itu.int/en/publications/ITU-R/pages/publications.aspx?parent=R-REP-M.2411), “Requirements, evaluation criteria and submission template for the development of IMT-2020”, 2017.

[C] Report [ITU-R M.2412](https://www.itu.int/en/publications/ITU-R/pages/publications.aspx?parent=R-REP-M.2412), “Guidelines for evaluation of radio interface technologies for IMT-2020”, 2017.

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