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| **Radiocommunication Study Groups** |  |
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| Received: 7 February 2020 | **Document 5D/57-E** |
| **11 February 2020** |
| **English onlyTECHNOLOGY ASPECTS** |
| Alliance for Telecommunications Industry Solutions |
| FINAL EVALUATION REPORT FOR RIT SUBMISSION FROM 3GPP PROPONENT ([IMT-2020/14](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0014)) |
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# Part I Administrative aspects of the Independent Evaluation Group

1 Name of the Independent Evaluation Group

 ATIS WTSC IMT-2020 Independent Evaluation Group (IEG)

2 Introduction and background of the Independent Evaluation Group

 The Wireless Technologies and Systems Committee (WTSC) is a technical standards committee chartered under the sponsorship of the Alliance for Telecommunications Industry Solutions (ATIS). ATIS is made up of more than 150 member companies contributing to more than 30 committees and strategic initiatives. ATIS is a Standards Development Organization (SDO) accredited by the American National Standards Institute (ANSI).

 WTSC develops standards for the 3GPP family of technologies (GERAN, UMTS, HSPA, LTE, LTE-Advanced, 5G, etc.). As of November 2019, there were over 40 voting member companies of WTSC.

 The ATIS WTSC IMT-2020 IEG was formed under the auspices of WTSC, and was given the responsibility of conducting the IMT-2020 submission evaluations.

3 Method of Work

 IEGs are kindly requested to share the process and method of working employed in the development and preparation of their evaluation reports. Please indicate to WP 5D aspects such as:

a the manner in which the evaluation group conducted its work: e.g. through meetings, evaluation discussion area, etc.;

 The ATIS WTSC IMT-2020 IEG conducted its work mostly through face-to-face and virtual meetings, supported by the ATIS Workspace tool.

 whether interaction with proponents and other evaluation groups occurred; ATIS WTSC IMT-2020 IEG conducted its work through:

• Physical meetings where contributions are presented by the members and baseline text is adopted

• Email reflectors are utilized to communicate with the members

• A contribution database is maintained by ATIS

• Participation in the ITU-R Evaluation Group discussion area

• Participation in the relevant workshops

b the manner in which it performed the evaluation - analysis, inspection, simulations or by combinations of these, or other, means;

 The following TPRs were evaluated using Simulation:

• Indoor Hotspot, Dense Urban, and Rural eMBB: Cell/User Spectral Efficiency and Mobility

• Urban Macro: Connection Density (full buffer), Connection Density (non-full buffer), and Reliability

 The following TPRs were evaluated using Analysis:

• eMBB: Peak spectral efficiency and Peak data rate

• eMBB and URLLC: Peak spectral efficiency, Peak data rate, Mobility interruption time, Control Plane Latency, User Plane Latency

 The following TPRs were evaluated using Inspection:

• Bandwidth

• Energy efficiency

• Support of wide range of services

• Supported spectrum band(s)/range(s)

 Link Budgets (Characteristics Template)

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# Part II Technical aspects of the work of the Independent Evaluation Group

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

3GPP RIT ([IMT-2020/14](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0014))[[1]](#footnote-1).

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

Confirmed.

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 Final Report - FINAL EVALUATION REPORT FROM ATIS WTSC IMT-2020 INDEPENDENT EVALUATION GROUP FOR 3GPP PROPONENT SUBMISSIONS OF SRIT ([*IMT-2020/13*](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0013)*)* & RIT ([*IMT-2020/14*](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0014)*)*

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).

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

• Identify areas requiring clarifications;

• General questions.

 Please refer to the Final Report - FINAL EVALUATION REPORT FROM ATIS WTSC IMT-2020 INDEPENDENT EVALUATION GROUP FOR 3GPP PROPONENT SUBMISSIONS OF SRIT ([*IMT-2020/13*](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0013)*)* & RIT ([*IMT-2020/14*](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0014)*)*

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).

• 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;

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

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

 Please refer to the Final Report - FINAL EVALUATION REPORT FROM ATIS WTSC IMT-2020 INDEPENDENT EVALUATION GROUP FOR 3GPP PROPONENT SUBMISSIONS OF SRIT ([*IMT-2020/13*](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0013)*)* & RIT ([*IMT-2020/14*](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0014)*)*

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

ATIS WTSC IMT-2020 IEG has posted a number of questions and feedback on the IMT-2020 Evaluation Groups discussion area.

G) In the interim report, kindly provide the proposed next steps towards the final report to be sent to WP 5D for the February 2020 meeting.

 ATIS WTSC IMT-2020 IEG will continue to analyse the submission and update its report accordingly.

# Part III Conclusion

ATIS WTSC IMT-2020 IEG has reviewed the 3GPP Proponent submissions in Documents 5D/[1215](https://www.itu.int/md/R15-WP5D-C-1215/en) and 5D/[1217](https://www.itu.int/md/R15-WP5D-C-1217/en).

ATIS WTSC IMT-2020 IEG has not identified any deficiencies or technology issues which impact the submission, and the ability of WP 5D to have the submission move forward in the IMT-2020 process.

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1. Document 5D/[1215](https://www.itu.int/md/R15-WP5D-C-1215/en) “3GPP final technology submission – Overview of 3GPP 5G Solutions for IMT-2020” and Document 5D/[1217](https://www.itu.int/md/R15-WP5D-C-1217/en) “3GPP 5G candidate for inclusion in IMT-2020: Submission 2 for IMT-2020 (RIT)”. [↑](#footnote-ref-1)