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| **Radiocommunication Study Groups** |  |
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| Source: Document [5D/746](https://www.itu.int/md/R19-WP5D-C-0746/en) (Annex 16) | **Document IMT-2020/69-E** |
| **9 November 2021** |
| **English only** |
| ITU-R Working Party 5D | |
| Working document towards a template of IMT-2020/ZZZ-Opt 2 | |
| Evaluation by the Canadian Evaluation Group (CEG) of IMT-2020 candidate technology submissions in Documents IMT-2020/17(Rev.1)  and IMT-2020/18(Rev.1) | |

This document summarizes the evaluation results and activities *from Option 2 in the re-evaluation Process,* identified for the IMT-2020 candidate technology submissions in Documents [IMT‑2020/17(Rev.1)](https://www.itu.int/md/R15-IMT.2020-C-0017/en) and [IMT-2020/18(Rev.1)](https://www.itu.int/md/R15-IMT.2020-C-0018/en) from the Canadian Evaluation Group.

*[Editor’s note: Document IMT-2020/ZZZ is created per re-engaged IEG, which will be created for a specific IEG at WP 5D #38 upon its final evaluation report(s). An independent evaluation group may perform complete or partial evaluation of one or two technology proposals. Evaluations may cover several technology proposals which will be included in the same IMT-2020/ZZZ per IEG.]*

# 1 Background

The period from November 2020 (the 36th*bis* meeting of Working Party 5D) to June 2021 (the 38thmeeting of Working Party 5D) has been designated for re-evaluation of the IMT-2020 candidate technology submissions by Independent Evaluation Groups.

The Canadian Evaluation Groupis a registered Independent Evaluation Group. At the WG Technology Aspects (Option 2) meeting of Working Party 5D, a Re-Evaluation Report on IMT-2020 candidate technology submissions in Documents IMT-2020/17(Rev.1) and IMT‑2020/18(Rev.1) was submitted by Canadian Evaluation Group] (Doc. [5D/738](https://www.itu.int/md/R19-WP5D-C-0738/en)).

The previous report Document [5D/90](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5D-C-0090), captured in Document [IMT-2020/30(Rev.1)](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030), contains the details of all the evaluations carried out by the CEG on Documents [IMT-2020/13](https://www.itu.int/md/R15-IMT.2020-C-0013/en), [IMT-2020/14](https://www.itu.int/md/R15-IMT.2020-C-0014/en), [IMT-2020/17(Rev.1)](https://www.itu.int/md/R15-IMT.2020-C-0017/en), [IMT-2020/18(Rev.1)](https://www.itu.int/md/R15-IMT.2020-C-0018/en) and [IMT-2020/19(Rev.1)](https://www.itu.int/md/R15-IMT.2020-C-0019/en) and submitted to the ITU in time for the 34th meeting of WP 5D in Geneva, Switzerland. The next (re-evaluation) report Document [5D/624](https://www.itu.int/md/R19-WP5D-C-0624/en), captured in Document [IMT-2020/61](https://www.itu.int/md/R15-IMT.2020-C-0061/en), contains the details of the re-evaluation carried out by the CEG under *‘Way Forward’* Option 2 Step 4 and Step 5 of the IMT-2020 process as defined in Documents [IMT-2020/2(Rev.2)](https://www.itu.int/md/R15-IMT.2020-C-0002/en), [IMT‑2020/52](https://www.itu.int/md/R15-IMT.2020-C-0052/en) and [IMT-2020/53](https://www.itu.int/md/R15-IMT.2020-C-0053/en).

Working Party 5D has reviewed the Evaluation Report (Doc. [5D/738](https://www.itu.int/md/R19-WP5D-C-0738/en)) and will consider it further in the IMT-2020 development re-evaluation process.

# 2 Evaluation summary of the component RIT (DECT-2020 NR) for IMT-2020 candidate technology in Document IMT-2020/17(Rev.1)

*[Editor’s note: Each section in this template is for one RIT; the section will be extended when there is SRIT with more than one component RITs. And for each component RIT, the same format for RIT is applied.]*

*[Editor’s note: One section for one RIT or one component RIT in case of SRIT per candidate technology, even if there are more than one Documents IMT-2020/YYY]*

## 2.1 Use of information in Report [ITU-R M.2412](https://www.itu.int/pub/R-REP-M.2412-2017)

Does Independent Evaluation Group confirm use of Report ITU-R M.2412 in their work?

🗷 Yes 🞎 No

## 2.2 Provision of compliance templates

Provision of compliance template for services (section 5.2.4.1 of Report ITU-R M.2411)

🞎 Yes 🗷 No This is available in Document [IMT-2020/30(Rev.1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030)).

Provision of compliance template for spectrum (section 5.2.4.2 of Report ITU-R M.2411)

🞎 Yes 🗷 No This is available in Document [IMT-2020/30(Rev.1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030)).

Provision of compliance template for technical performance (section 5.2.4.3 of Report ITU‑R M.2411).

🗷 Yes 🞎 No

## 2.3 Summary of conclusions of the evaluation report

Does the Evaluation Report indicate that the candidate technology meet minimum service and spectrum requirements?

Service requirements: 🗷 Yes 🞎 No

Spectrum requirements: 🗷 Yes 🞎 No See Document [IMT-2020/30(Rev.1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030)).

Which test environments have been considered in the evaluation report? What is outcome of the evaluation?

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| **Test environment** | **Does the evaluation report indicate that the minimum technical performance requirements are met in the test environment?** |
| 🞎 Indoor Hotspot – eMBB | 🞎 Yes 🞎 No N/A to the DECT-2020 NR component RIT. |
| 🞎 Dense Urban – eMBB | 🞎 Yes 🞎 No N/A to the DECT-2020 NR component RIT. |
| 🞎 Rural – eMBB | 🞎 Yes 🞎 No N/A to the DECT-2020 NR component RIT. |
| 🗷 Urban Macro – mMTC | 🗷 Yes 🞎 No See Document [5D/738](https://www.itu.int/md/R19-WP5D-C-0738/en) |
| 🗷 Urban Macro – URLLC | 🗷 Yes 🞎 No See Document [IMT.2020/30Rev1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030). |

## 2.4 Additional evaluation methodologies and assumptions

Have any additional evaluation methodologies or assumptions that had not been included in the Report ITU-R M.2412 been used in evaluation?

🗷 Yes 🞎 No This is mainly related to the simulation of mesh-network topology (device-to-device communications).

# 3 Evaluation summary of the RIT (EUHT) for IMT-2020 candidate technology in Document IMT-2020/18(Rev.1)

## 3.1 Use of information in Report ITU-R M.2412

Does Independent Evaluation Group confirm use of Report ITU-R M.2412 in their work?

🗷 Yes 🞎 No

## 3.2 Provision of compliance templates

Provision of compliance template for services (section 5.2.4.1 of Report ITU-R M.2411)

🞎 Yes 🗷 No This is available in Document [IMT-2020/30(Rev.1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030)).

Provision of compliance template for spectrum (section 5.2.4.2 of Report ITU-R M.2411)

🞎 Yes 🗷 No This is available in Document [IMT-2020/30(Rev.1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030)).

Provision of compliance template for technical performance (section 5.2.4.3 of Report ITU-R M.2411).

🞎 Yes 🗷 No See Documents [IMT-2020/30Rev1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030) and [IMT-2020/61](https://www.itu.int/md/R15-IMT.2020-C-0061/en).

## 3.3 Summary of conclusions of the evaluation report

Does the evaluation report indicate that the candidate technology meet minimum service and spectrum requirements?

Service requirements: 🞎 Yes 🞎 No Unable to confirm due to “the sparse information provided by the proponent – both in the characteristics template (§ 5.2.3.2.23.1) and the self-evaluation (§ 5.2.4.1.1).” (See Document [IMT-2020/30(Rev.1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030)), p. 19, compliance template for services.)

Spectrum requirements: 🗷Yes 🞎 No With the caveat that “a channel numbering scheme and a frequency raster that would cover all the claimed frequency ranges” are missing, see Document [IMT-2020/30(Rev.1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-IMT.2020-C-0030)), p. 19, compliance template for spectrum.

Which test environments have been considered in the evaluation report? What is outcome of the evaluation?

|  |  |
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| **Test environment** | **Does the evaluation report indicate that the minimum technical performance requirements are met in the test environment?** |
| 🞎 Indoor Hotspot – eMBB | 🞎 Yes 🞎 No UNABLE TO EVALUATE |
| 🞎 Dense Urban – eMBB | 🞎 Yes 🞎 No UNABLE TO EVALUATE |
| 🞎 Rural – eMBB | 🞎 Yes 🞎 No UNABLE TO EVALUATE |
| 🞎 Urban Macro – mMTC | 🞎 Yes 🞎 No UNABLE TO EVALUATE |
| 🞎 Urban Macro – URLLC | 🞎 Yes 🞎 No UNABLE TO EVALUATE |

## 3.4 Additional evaluation methodologies and assumptions

Have any additional evaluation methodologies or assumptions that had not been included in the Report ITU-R M.2412 been used in evaluation?

🗷 Yes 🞎 No This is mainly related to the simulation of RLAN-network topology and advanced receiver structures (MMSE-IRC).

# 4 Evaluation Report

[Editor’s note: Include a final Evaluation Report from IMT-2020/k of this Independent Evaluation Group or attach a final Evaluation Report submitted by Independent Evaluation Group.]

The Evaluation Report is available in the form of input Document [5D/738](https://www.itu.int/md/R19-WP5D-C-0738/en).



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