**3GPP TSG-RAN Meeting #94e *RP-213646***

**Electronic Meeting, December 6-17, 2021**

**Source:** Ericsson

**Title:** TP to TR 37.890 – Latest updates on licensed band in upper 6 GHz

**Agenda item:** 9.2.1

**Document for:** Approval

# Introduction

The RAN-led study item on 6 GHz band for LTE and NR captures the latest status of Regulators decision for the 6 GHz frequency range.

This text proposal is capturing the latest updates received from RCC.

# Text proposal

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# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] RP-172804: “Feasibility Study on 6 GHz for LTE and NR”, Ericsson, Verizon Wireless, Qualcomm Incorporated.

[3] ITU-R Radio Regulations, Articles, Edition 2016;

[4] FCC ONLINE TABLE OF FREQUENCY ALLOCATIONS, 47 C.F.R. § 2.106, December 13, 2017;

[5] FCC 17-104, Notice of Inquiry, “Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz”;

[6] Comments of IEEE 802, in GN Docket No. 17-183;

[7] APPLE INC., BROADCOM LIMITED,,CISCO SYSTEMS, INC., FACEBOOK, INC., GOOGLE LLC, HEWLETT PACKARD ENTERPRISE, INTEL CORPORATION,MEDIATEK INC., MICROSOFT CORPORATION, and QUALCOMM INCORPORATED, in GN Docket No. 17-183;

[8] Reply Comments of the Wireless Internet Service Providers Association, in GN Docket No. 17-183;

[9] Comments of Ericsson, in GN Docket No. 17-183;

[10] Comments of T-Mobile USA, in GN Docket No. 17-183;

[11] Comments of Verizon, in GN Docket No. 17-183;

[12] Reply Comments of the Satellite Industry Association, in GN Docket No. 17-183;

[13] Reply Comments of the Fixed Wireless Communications Coalition, in GN Docket No. 17-183;

[14] Comments of Dynamic Spectrum Alliance, in GN Docket No. 17-183;

[15] Comments of the National Spectrum Management Association, in GN Docket No. 17-183;

[16] Comments of CTIA, in GN Docket No. 17-183;

[17] Reply Comments of Cisco Systems, Inc., in GN Docket No. 17-183;

[18] Reply Comments of WI-FI Alliance, in GN Docket No. 17-183;

[19] PART 15 - Radio Frequency Devices, Title 47 of electronic Code of Federal Regulations;

[20] The European Table of Frequency Allocations and applications in the frequency range 8.3 kHz and 3000 GHz (ECA Table), October 2017;

[21] RSCOM17-53rev1- Mandate to CEPT to study and identify harmonised compatibility and sharing conditions for wireless access systems including radio local area networks in the band 5925-6425 MHz for the provision of wireless broadband services.

[22] ETSI TR 103 524 System Reference document (SRdoc), “Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) in the band 5 925 MHz to 6 725 MHz”, v1.1.1, October 2018

[23] CEPT/ERC/REC 74-01: “Unwanted Emissions in the Spurious Domain”;

[24] ECC Report 302, “Sharing and compatibility studies related to Wireless Access Systems including Radio Local Area Networks (WAS/RLAN) in the frequency band 5925-6425 MHz, May 2019.

[25] FCC Notice of Proposed Rulemaking. FCC 18-147. October 24, 2018

[26] ETSI TR 103 612, "IMT cellular networks; Mobile/Fixed Communication Network (MFCN) in the frequency range 6 425 - 7 125 MHz", v1.1.1, December 2019

[27] ETSI TR 103 631, "Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) in the band 6 725 MHz to 7 125 MHz", v1.1.1, March 2019

[28] ECC Report 302, “Sharing and compatibility studies related to Wireless Access Systems including Radio Local Area Networks (WAS/RLAN) in the frequency band 5925-6425 MHz”

[29] CCSA-TC5-WG8-2019-003 Project Proposal on the feasibility study of IMT system using 5925-7125MHz frequency band, [http://www.ccsa.org.cn/tc/meeting.php?meeting\_id=6243#](http://www.ccsa.org.cn/tc/meeting.php?meeting_id=6243)

[30] World Radiocommunication Conference 2019 (WRC-19) Provisional Final Acts, ITU-R <https://www.itu.int/dms_pub/itu-r/opb/act/R-ACT-WRC.13-2019-PDF-E.pdf>

[31] Report and order and further notice of proposed rulemaking, FCC 20-51

[32] ECC Report 316, “Sharing studies assessing short-term interference from Wireless Access Systems including Radio Local Area Networks (WAS/RLAN) into Fixed Service in the frequency band 5925-6425 MHz”, 21 May 2020

[33] CEPT Report 075, “to study feasibility and identify harmonised technical conditions for Wireless Access Systems including Radio Local Area Networks in the 5925-6425 MHz band for the provision of wireless broadband services”; Report B: Harmonised technical parameters for WAS/RLANs operating on a coexistence basis with appropriate mitigation techniques and/or operational compatibility/coexistence conditions, operating on the basis of a general authorisation. , November 2020

[34] ECC Decision (20)01; “On the harmonised use of the frequency bands 5945 to 6425 MHz for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLAN)”, November 2020

[35] ETSI TR 103 524, "System Reference document (SRDoc); Wireless access systems including radio local area networks (WAS/RLANs) in the band 5925 MHz to 6725 MHz"

[36] EN 303 687, “"6 GHz RLAN Harmonised Standard for access to radio spectrum", Draft

[37] doc 2.1\_LS to 3GPP TSG RAN – ENG (18th meeting of the RCC Commission on Spectrum and Satellite Orbits), [to be updated]

[38] CEPT Report 073, “to study feasibility and identify harmonised technical conditions for Wireless Access Systems including Radio Local Area Networks in the 5925-6425 MHz band for the provision of wireless broadband services”; Report A: Assessment and study of compatibility and coexistence scenarios for WAS/RLANs in the band 5925-6425 MHz, Approved on 6 March 2020 by ECC.

[39] Korea’s Ministry of Science and ICT, "Technical standards for radio equipment for radio stations", URL: https://www.law.go.kr/admRulLsInfoP.do?admRulSeq=2100000196974

[40] Ofcom, "Improving spectrum access for Wi-Fi; Spectrum use in the 5 GHz and 6 GHz bands", July 2020, URL: <https://www.ofcom.org.uk/__data/assets/pdf_file/0036/198927/6ghz-statement.pdf>

[41] Communications & Information Technology Commission, "Spectrum Outlook for Commercial and Innovative Use 2021- 2023", January 2021, URL: <https://www.citc.gov.sa/ar/new/publicConsultation/Documents/Spectrum%20Outlook%20for%20Commercial%20and%20Innovative%20(2021-2023).pdf>

[42] Innovation, Science and Economic Development Canada, "Decision on the Technical and Policy Framework for Licence-Exempt Use in the 6 GHz Band", May 2021, URL: <https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11698.html>

[43] National Telecommunications Agency (ANATEL), "ACT NO. 1306", February 2021, URL: <https://sei.anatel.gov.br/sei/modulos/pesquisa/md_pesq_documento_consulta_externa.php?eEP-wqk1skrd8hSlk5Z3rN4EVg9uLJqrLYJw_9INcO7uvjUt3vSOwT_4Z5fukj9yIzPErY4KWH5cpE9W_9hcTZkCG-vLPIdpXyuhgMG-L9M-uBLoSdAAXO0clb3SIt1i>

[44] Ministerio de Transportes y Comunicaciones, "Resolución Ministerial N° 373-2021-MTC/01", April 2021, URL: <https://cdn.www.gob.pe/uploads/document/file/1861732/Resolución%20Ministerial%20nro%20373-2021-MTC/01.pdf>

[45] MINISTERIO DE TRANSPORTES Y TELECOMUNICACIONES; SUBSECRETARÍA DE TELECOMUNICACIONES, "RESOLUCIÓN 1985 EXENTA", October 2020, URL: <https://www.bcn.cl/leychile/navegar?idNorma=1109333&idParte=9841504&idVersion=&r_c=6>

[46] RP-210957, Liaison statement to 3GPP TSG RAN on inclusion of the frequency band 6425-7125 MHz in 3GPP specification for 5G-NR/IMT-2020 systems, Regional Commonwealth in the filed of Communications.

[47] COMMISSION IMPLEMENTING DECISION (EU) 2021/1067, on the harmonised use of radio spectrum in the 5 945-6 425 MHz frequency band for the implementation of wireless access systems including radio local area networks (WAS/RLANs), 17 June 2021.

[48] The National Telecommunications Commission (CONATEL) of Honduras, "Resolution NR 003/21", March 2021, URL: http://www.conatel.gob.hn/doc/Regulacion/resoluciones/2021/NR003-21.pdf

[49] The Superintendencia de Telecomunicaciones (SUTEL), "DECRETO EJECUTIVO N° 42924-MICITT", April 2021, URL: <https://www.imprentanacional.go.cr/pub/2021/04/30/ALCA87_30_04_2021.pdf>

[50] Communications & Information Technology Commission, "Radio Spectrum Allocation and Use Regulation for WLAN Application", June 2021, URL: <https://www.citc.gov.sa/en/new/publicConsultation/Documents/144207-en.pdf>

[51] Communications & Information Technology Commission, “Public Consultation on Spectrum Light Licensing”, August 2021, URL: <https://www.citc.gov.sa/ar/new/publicConsultation/Documents/EN_PublicConsultationonLightLicensing-144301.pdf>

[52] RCC Recommendation 1/21 “Harmonization of the technical conditions for 5G-NR / IMT-2020 systems in the RCC countries in the frequency band 6 425-7 125 MHz or in its portions” (RP-213605).

[53] Recommendation ITU-R SM.329-12, Unwanted emissions in the spurious domain, 09/2012.

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### 4.1.2 Regional Commonwealth in the field of Communications (RCC) countries

The RCC Commission on Spectrum and Satellite Orbits approved their position on Agenda Item 1.2 of WRC-23 supporting the usage of IMT systems in the 6425-7125 MHz frequency range taking into account the conditions ensuring the compatibility of these systems with other radio systems using this frequency range [37].

In its 20th meeting (6-10 December 2021, Minsk, Belarus), the RCC Commission on Spectrum and Satellite Orbits approved the RCC Recommendation 1/21 “Harmonization of the technical conditions for 5F-NR/IMT-2020 systems in the RCC countries in the frequency band 6 425-7 125 MHz or in its portions” [52]. This recommendation provides the regulatory requirements by harmonized technical conditions for licensed operation of mobile service on a primary basis in 6 425-7 125 MHz band, as summarized here after.

The frequency band is a TDD band and consists of 35 reference frequency blocks of 20 MHz each. A frequency channel can consist of one or more adjacent frequency blocks but should not exceed 400 MHz. Additional information on the band arrangement can be found in [52].

The power of 5G-NR/IMT-2020 base stations and user equipment should not exceed the limits established by Article 21 of the Radio Regulations for the radio frequency band 6425-7125.

The unwanted emissions of 5G-NR/IMT-2020 base stations and user equipment in the spurious emissions domain shall be in compliance with the Category B limits for stations in the mobile service, as provided in the latest version of Recommendation ITU-R SM.329 [53].

Note: The list of RCC members could be consulted at [RCC website](https://en.rcc.org.ru/regional-commonwealth-in-the-field-of-communications/regional-commonwealth-in-the-field-of-communications/rcc-participants/).

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