

Prague, 16 March 2021
Ref.: 545/2021-619

Based on the results of a public consultation held under Section 130 of the Act No. 127/2005 Coll., on Electronic Communications and on Amendment to Certain Related Acts (the Electronic Communications Act), as amended (hereinafter “the Act”) and the decision of the Council of the Czech Telecommunication Office (hereinafter “the Office”) under Section 107(9)(b)(2) of the Act and to implement Section 16(2) of the Act, the Office as the competent administration authority under Section 108(1)(b) of the Act and Section 10 of the Act No. 500/2004 Coll., the Code of Administrative Procedure, as amended, hereby issues this Measure of General Nature

**Part No. PV-P/14/03.2021-1 of the Radio Spectrum Utilisation Plan
for the frequency band 2200–2700 MHz.**

Article 1
Introductory provision

This part of the Radio Spectrum Utilisation Plan sets down the technical characteristics and conditions for the use of radio spectrum in the frequency band from 2200 MHz to 2700 MHz by radiocommunication services. This part of the Radio Spectrum Utilisation Plan is a follow-up to the Common part of the Radio Spectrum Utilisation Plan.¹⁾

Part 1
General information on the frequency band

Article 2
Allocation of frequency bands

Band (MHz)	Current conditions		Future harmonisation ²⁾	
	Allocation	Utilisation	Allocation	Utilisation
2200–2290	SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION- SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE	Fixed links Scientific applications MD	SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION- SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE	Fixed links PMSE Scientific applications MD

¹⁾ Common part of the Radio Spectrum Utilisation Plan No. PV/10.2005-35

²⁾ ERC Report 25: European Table of Frequency Allocations and Utilisations in the frequency range 9 kHz to 3000 GHz, rev. Kyiv, 2020.

	SPACE RESEARCH (space-to-Earth) (space-to-space)		SPACE RESEARCH (space-to-Earth) (space-to-space)	
2290–2300	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	Fixed links	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	Fixed links PMSE Applications of mobile service
2300–2450	FIXED MOBILE Amateur Amateur-satellite	ISM RLAN SRD Amateur applications SAP/SAB Aeronautical telemetry	FIXED MOBILE Amateur Amateur-satellite	IMT ISM RLAN SRD RFID Amateur applications Applications of mobile service SAP/SAB Aeronautical telemetry
2450–2483.5	FIXED MOBILE	ISM RLAN SRD	FIXED MOBILE	ISM RLAN SRD RFID PMSE
2483.5–2500	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) RADIO- DETERMINATION SATELLITE (space-to-Earth)	ISM Applications of mobile-satellite service	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) RADIO- DETERMINATION SATELLITE (space-to-Earth)	ISM Applications of mobile-satellite service PMSE Applications of mobile service Fixed links
2500–2520	FIXED MOBILE except aeronautical mobile	IMT	FIXED MOBILE except aeronautical mobile	IMT
2520–2655	FIXED MOBILE except aeronautical mobile 3)	IMT	FIXED MOBILE except aeronautical mobile 3)	IMT

³⁾ In accordance with footnote 5.339 of the Radio Regulations, the band 2640–2655 MHz is also allocated on a secondary basis to the space research service (passive) and to the Earth exploration-satellite service (passive).

2655–2670	FIXED MOBILE except aeronautical mobile Earth exploration- satellite (passive) Radioastronomy Space research (passive) 4)	IMT	FIXED MOBILE except aeronautical mobile Earth exploration- satellite (passive) Radioastronomy Space research (passive) 4)	IMT Radio astronomy Scientific applications
2670–2690	FIXED MOBILE except aeronautical mobile Radioastronomy 4)	IMT	FIXED MOBILE except aeronautical mobile Radioastronomy 4)	IMT Radio astronomy
2690–2700	EARTH EXPLORATION- SATELLITE (passive) RADIOASTRONOMY SPACE RESEARCH (passive)	Passive scientific applications Broadcasting forbidden	EARTH EXPLORATION- SATELLITE (passive) RADIOASTRONOMY SPACE RESEARCH (passive)	Passive scientific applications Broadcasting forbidden

The information state in the table are further detailed in sections setting the specific conditions for the utilisation of the band in individual radiocommunication services and bands.

Article 3 Frequency band characteristics

(1) The utilisation by applications which are an example of convergence of fixed, mobile and broadcasting radiocommunication services is characteristic for this band. Based on the decision of the Commission,⁵⁾ the band 2500–2690 MHz is being harmonized for terrestrial systems for the provision of the electronic communications services, with special focus on wireless broadband services for end-users. The RLAN⁶⁾ devices in the band 2400–2483.5 MHz are utilised intensively for the mutual communication among electronic equipment, or in fixed or mobile networks, particularly for the access to internet.

(2) In accordance with the footnote⁷⁾ of the Radio Regulations⁸⁾ (hereinafter only “RR”) the 2400–2500 MHz band is utilised by industrial, scientific and medical applications (ISM⁹⁾). The ISM means using the radio frequencies for purposes other than transmission of information, e.g. technological heating, lighting, cooking, scientific experiments, etc. Harmful interference caused by the operation of these applications shall be reduced to minimum. Examples of this utilisation are microwave ovens using the 2450 MHz frequency.

(3) In the band 2690–2700 MHz, any transmission is forbidden in order to protect passive scientific applications.

⁴⁾ In accordance with footnote 5.149 of the Radio Regulations shall users of the bands 2655–2690 MHz take all practicable steps to protect the radio astronomy service.

⁵⁾ Commission Implementing Decision (EU) 2020/636 of 8 May 2020 amending Decision 2008/477/EC as regards an update of relevant technical conditions applicable to the 2 500–2 690 MHz frequency band.

⁶⁾ The abbreviation RLAN stands for Radio Local Area Network.

⁷⁾ Footnote 5.150 of the Radio Regulations.

⁸⁾ Radio Regulations of the International Telecommunication Union, Geneva, 2020.

⁹⁾ Abbreviation ISM stands for Industrial, Scientific and Medical applications.

Article 4
International obligations

Provisions of the RR, Commission harmonisation documents and provisions of the HCM Agreement¹⁰⁾ apply to utilisation and coordination.

Part 2
Devices operated out of radiocommunication services

Article 5
**Current conditions in terms of devices
operated out of radiocommunication services**

(1) In accordance with the Commission decision¹¹⁾ and CEPT recommendation,¹²⁾ it is possible to use the band 2400–2483.5 MHz by SRD.¹³⁾ The non-specified stations and devices for movement detection and buildings security can be operated based on the General authorisation.¹⁴⁾

(2) In accordance with the Commission decision¹¹⁾ and CEPT recommendation,¹²⁾ it is possible to use the sub-band 2446–2454 MHz by applications in the railway transportation and by radio identification devices. The operation is possible based on the General Authorisation.¹⁴⁾

(3) In accordance with the Commission decision¹¹⁾ and CEPT recommendation,¹²⁾ it is possible to use the band 2483.5–2500 MHz for power active medical implants and MBANS. The operation is possible based on the General Authorisation.¹⁴⁾

Article 6
**Information on future development in terms of devices
operated out of radiocommunication services**

The adjustment of the conditions for the use of Short Range Devices is subject to periodic update done by the CEPT ECC and the Commission.

¹⁰⁾ HCM Agreement – Agreement between the Administrations of Austria, Belgium, the Czech Republic, Germany, France, Hungary, the Netherlands, Croatia, Italy, Liechtenstein, Lithuania, Luxembourg, Poland, Romania, the Slovak Republic, Slovenia and Switzerland on the co-ordination of frequencies between 29.7 MHz and 43.5 GHz for the fixed service and the land mobile service.

¹¹⁾ Commission Implementing Decision (EU) 2019/1345 of 2 August 2019 amending Decision 2006/771/EC updating harmonised technical conditions in the area of radio spectrum use for short-range devices.

¹²⁾ CEPT/ERC/REC 70-03 Recommendation – Relating to the use of Short Range Devices.

¹³⁾ Abbreviation SRD stands for Short Range Devices.

¹⁴⁾ General Authorisation No. VO-R/10/12.2019-9 for the use of radio frequencies and for the operation of Short Range Devices.

Part 3
Mobile service

Article 7
Current conditions in mobile service

(1) In the band 2200–2300 MHz, the mobile service has no civil utilisation.

(2) In accordance with the CEPT recommendation,¹⁵⁾ the sub-band 2300–2328 MHz is used by aeronautical telemetry in a single radio channel of the 28 MHz bandwidth.

(3) The sub-band 2328–2400 MHz is not used by the mobile service.

(4) In accordance with the Commission Decision¹¹⁾ and the CEPT Recommendation,¹²⁾ the band 2400–2483.5 MHz is used by radio local area networks (RLAN). Operation is possible based on the General Authorisation.¹⁶⁾

(5) In accordance with the identification for IMT in RR footnote,¹⁷⁾ with the EC Decision⁵⁾ and CEPT Decision,¹⁸⁾ the band 2500–2690 MHz is designated for operation of electronic communications networks by block allocation holders whereas apply:

- a) operational conditions are set down in the Annex of the EC Decision,¹¹⁾ which specifies technical parameters called Block Edge Masks covering both the limit values of radiation inside and outside the block and the conditions for compliance with these parameters;
- b) assigned blocks are multiples of 5 MHz;
- c) paired sub-bands 2500–2570 / 2620–2690 MHz are designated for duplex operation with frequency division FDD¹⁹⁾ and duplex separation of the transmitting and the receiving frequency of 120 MHz, the 2500–2570 MHz sub-band is designated for the terminals' transmission, the 2620–2690 MHz sub-band is designated for the base stations' transmission. There are 14 duplex block pairs of 5 MHz bandwidth defined in these sub-bands;
- d) the non-paired frequency sub-band 2570–2620 MHz is designated for transmission with the time division duplex TDD²⁰⁾ or for base stations' transmission ("only downlink") in accordance with the Annex of the EC Decision.⁵⁾ There are 10 blocks of 5 MHz bandwidth defined in this sub-band;
- e) the use of the 2570–2575 MHz sub-band or those sub-bands, where TDD and FDD networks or other non-synchronised networks are adjacent may increase the risk of mutual interference and procedures under the technical conditions set in the Annex of EC Decision⁵⁾ may apply;
- f) frequency sub-bands according to Points c) and d) may be used by block allocation holders of radio frequencies allocations for applications within mobile, fixed, and broadcasting radiocommunication service;
- g) the number of rights for use of radio frequencies is defined by the number of duplex block pairs according to the Points c) and blocks according to the Point d). These rights are geographically defined by the whole area of the Czech Republic;

¹⁵⁾ CEPT/ERC/REC 62-02 Recommendation – Harmonised frequency band for civil and military airborne telemetry applications.

¹⁶⁾ General Authorisation No. VO-R/12/12.2019-10 for the use of radio frequencies and for the operation of equipment for broadband data transmission in the 2.4 GHz – 71 GHz band, as amended.

¹⁷⁾ Footnote 5.384A of RR.

¹⁸⁾ CEPT/ECC/DEC/(05)05 – Harmonised utilization of spectrum for Mobile/Fixed Communications Networks (MFCN) operating within the band 2500-2690 MHz.

¹⁹⁾ Abbreviation FDD stands for Frequency Division Duplex.

²⁰⁾ Abbreviation TDD stands for Time Division Duplex.

- h) the minimal transferable unit is a right for use of a single duplex pair of frequency blocks according to the Point c) or of a block according to the Point d);
- i) operation of user's fixed, mobile or nomadic²¹⁾ terminals in the band 2500–2690 MHz is possible based on the General authorisation;²²⁾
- j) national coordination is carried out by block allocation holders of radio frequencies; international coordination is carried out by the Office.

Article 8

Information on future development in the mobile service

(1) In accordance with the CEPT Recommendation,¹⁵⁾ the band 2300–2400 MHz should primarily be used for future applications of aeronautical telemetry where these applications should prefer the sub-band 2300–2330 MHz and the rest of the band would be utilised based on further needs. Frequencies on the state border should be coordinated by negotiations of national administrations of the affected states.

(2) Within the programme point 1.4 of the World Radiocommunication conference ITU WRC-23 in 2023, the utilisation of HIBS²³⁾ high altitudes platforms as IMT base stations on frequency bands below 2,7 GHz will be addressed.

Part 4

Fixed service

Article 9

Current conditions in the fixed service

(1) Fixed service has no civil use in the sub-band 2200–2252 MHz in the Czech Republic.

(2) The sub-band 2252–2300 MHz can be utilised in the fixed service only for experimental or short-time purposes.

(3) The sub-band 2300–2412 MHz, is designated for short-term programme making applications SAP/SAB.²⁴⁾

(4) The sub-band 2412–2500 MHz is not used by the fixed service.

(5) Utilisation of the 2500–2690 MHz band is set in Article 5(7).

(6) For RLAN fixed networks, provisions listed in Article 7(4) shall apply.

Article 10

Information on future development in fixed service

Utilisation of the band by the fixed service is gradually reduced.

²¹⁾ According to Recommendation ITU-R F.1399 on terminology for wireless access is as nomadic application considered a terminal in the mobile service which may be used in different places but is stationary during operation.

²²⁾ General Authorisation No. VO-R/1/12.2020-12 for the operation the users' terminals of the radio networks of the electronic communications.

²³⁾ The abbreviation HIBS stands for High-altitude platform stations as IMT base stations.

²⁴⁾ Abbreviation SAP/SAB stands for Service Ancillary for Programme / Service Ancillary for Broadcasting, it means auxiliary applications for programme making, including making of radio broadcast and television transmission.

Part 5
Mobile-satellite service

Article 11
Current conditions in the mobile-satellite service

(1) The band 2483.5–2520 MHz is allocated to the mobile-satellite service (space-to-Earth direction) on primary basis.

(2) By the RR footnote²⁵⁾ and by the Resolution,²⁶⁾ the use of 2483.5–2520 MHz and 2670–2690 MHz sub-bands are identified for IMT satellite component. This is but without prejudice to utilising it by applications of those services that have this band allocated not sets any priority. However, in the Czech Republic, the European harmonised terrestrial use is preferred.

(3) In accordance to CEPT Decision,²⁷⁾ it is possible to transmit from satellites to Earth stations of the mobile-satellite service in the band 2483,5–2500 MHz. In accordance with the RR footnote,²⁸⁾ the use of the band 2483,5–2500 MHz by the mobile-satellite service is subject to the coordination under the RR provision.²⁹⁾

Article 12
Information on future development in the mobile-satellite service

Changes in the use of the band by mobile-satellite service are not foreseen.

Part 6
Radiodetermination-satellite service

Article 13
Current conditions in the radiodetermination-satellite service

The band 2483.5–2500 MHz is allocated to radiodetermination-satellite service (space-to-Earth) on a primary basis. In accordance with the RR footnote,³⁰⁾ for radiodetermination-satellite service in this band does not apply the RR provision³¹⁾ which requires protection from interference for safety applications within framework of this service. In accordance with the RR footnote,²⁸⁾ the use of the 2483.5–2500 MHz band by radiodetermination-satellite service is subject to coordination under the RR provision.²⁹⁾

Article 14
**Information on future development
in radiodetermination-satellite service**

Changes in the use of the band by radiodetermination-satellite service are not foreseen.

²⁵⁾ Footnote 5.351A of RR.

²⁶⁾ Resolution No. 225 (Rev. WRC-07).

²⁷⁾ ECC Decision of 26 June 2009 on the harmonisation of the bands 1610-1626.5 MHz and 2483.5-2500 MHz for use by systems in the Mobile-Satellite Service.

²⁸⁾ Footnote 5.402 of RR.

²⁹⁾ Provision No. 9.11A of RR.

³⁰⁾ Footnote 5.398 of RR.

³¹⁾ Provision No. 4.10 of RR.

Part 7
Amateur and amateur-satellite service

Article 15
Current conditions in the amateur and amateur-satellite service

(1) The band 2300–2450 MHz is allocated to the amateur service on a secondary basis.

(2) In accordance with the RR footnote,³²⁾ amateur-satellite service may use the 2400–2450 MHz band subject to not causing harmful interference to other services. Also, it shall not claim protection against interference from other services. In accordance with the RR provision,³³⁾ any harmful interference caused by emissions from a station in amateur-satellite service shall be terminated immediately.

(3) Operation of amateur and amateur-satellite service shall be in conformity with the special legal measure.³⁴⁾

Article 16
**Information on future development
in amateur and amateur-satellite service**

No changes in the utilisation of the band 2300–2450 MHz by amateur and amateur-satellite service on international and national levels are expected.

Part 8
Radio astronomy service

Article 17
Current conditions in the radio astronomy service

(1) Radio astronomy service is passive radiocommunication service based on reception of radio waves of cosmic origin. With regard to low levels of received signals, the operation of the service depends on protection from interference from other radiocommunication services. In accordance with the RR footnote,⁴⁾ users of the 2655–2690 MHz band shall take all practicable measures to protect radio astronomy service.

(2) Radio astronomy service shares the band 2690–2700 MHz with passive services and any emissions in this band are forbidden.³⁵⁾

Article 18
Information on future development in radio astronomy service

Changes are not expected in the utilisation of the 2655–2700 MHz band by the radio astronomy service on international and national level.

³²⁾ Footnote 5.282 of RR.

³³⁾ Provision No. 25.11 of RR.

³⁴⁾ Decree No. 156/2005 Coll., on technical and operational conditions of the amateur radiocommunication service.

³⁵⁾ Footnote 5.340 of RR.

Part 9
Earth exploration-satellite and space research services

Article 19
Current conditions in Earth exploration-satellite and space research services

The band 2200–2290 MHz is allocated to Earth exploration-satellite service and to space research service (space-to-Earth) and for space-space links under conditions mentioned in the RR footnote.³⁶⁾ The space research service uses the 2290–2300 MHz band for deep space research (space-to-Earth). Furthermore, for operation of passive sensors, the band 2640–2670 MHz is allocated to Earth exploration-satellite service and space research service. Both these services share the 2690–2700 MHz band with the radio astronomy service. Any emission in this band is forbidden, use of passive sensors is allowed only.

Article 20
Information on future development in Earth exploration-satellite and space research services

Changes are not expected in the utilisation of bands by the Earth exploration-satellite and space research services on international and national level.

Part 10
Final provision

Article 21
Repealing provision

This is to repeal the Measure of General Nature – part of the Radio Spectrum Utilisation Plan No. PV-P/14/11.2010-15 for the 2200–2700 MHz frequency band from 3 November 2010.

Article 22
Effect

This part of the Radio Spectrum Utilisation Plan comes into effect on 15 April 2021.

³⁶⁾ Footnote 5.392 of RR.

Explanatory memorandum

To implement Section 16(2) of the Act, the Office issues the Measure of General Nature Part No. PV-P/14/03.2021-1 of the Radio Spectrum Utilisation Plan (hereinafter "the part of the Plan"), laying down the technical characteristics and conditions of the use of radio spectrum in the frequency band from 2200 Hz to 2700 MHz by radiocommunication services.

This part of the Plan is based on the principles embedded in the Act and European legislation, especially in Directive (EU) 2018/1976 of the European Parliament and of the Council establishing the European Electronic Communications Code and on Decision No. 676/2002/EC of the European Parliament and of the Council on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision), as well as on principles set in the Common part of the Radio Spectrum Utilisation Plan No. PV/10.2005-35. The purpose of this part of the Plan is to ensure the transparency of conditions for radio spectrum utilisation and the ability to anticipate future decisions of the Office.

The reason for the new issue of the part of the Plan is to implement the Commission Implementing Decision,⁵⁾ which updates the conditions for terrestrial systems for the provision of electronic communications in the 2500–2690 MHz band.

Article 2 consists of information from the Plan of Frequency Band Allocations (National Table of Frequency Allocations), amended with the current utilisation by applications. Also, it presents future harmonisation intentions, i.e. allocation to radiocommunication services and utilisation by applications according to ERC Report No. 25 (European Table of Frequency Allocations and Utilisations). The amendments to the Table reflect the valid version of the National Table of Frequency Allocations and the Report No. 25. The information stated in the Table is then specified in individual Parts setting the specific conditions for the use of radio frequencies for radiocommunication services and applications.

Article 3 presents characteristics of the frequency band where utilisation for terrestrial IMT and RLAN communications predominates. Article 4 contains international obligations meaning in this case the Radio Regulations of the International Telecommunication Union, Commission documents, and the HCM Agreement.

The text laying down the conditions for Short Range Devices was set into separate Part 2. Article 5 presents Short Range Devices which can be operated in individual ranges and refers to specific conditions for the use of radio frequencies set in the relevant General Authorisation. Article 6 then points out that these devices are developing rapidly, and the conditions of their utilisation are being updated on European level very often.

Article 7 sets conditions for the use of the band by mobile service. Paragraph 5 on the use of 2500–2690 MHz band implemented changes stemming from Commission Implementing Decision (EU) 2020/636 amending the Decision No. 2008/477/EC. The band is designated for the operation of terrestrial systems for the provision of electronic communications services and the new conditions allow to deploy 5G systems in this band. The operation conditions for the use of radio spectrum are stated in the Annex of the Commission Decision setting the spectral block edge mask for active and non-active antenna systems, arrangement of paired sub-bands and non-paired sub-bands, and measures to mitigate the radio interference in case of two adjacent non-synchronised TDD networks or TDD networks adjacent to FDD network. The described sub-bands are utilised by block allocation holders and the rights to use the frequencies are transferable in accordance to Section 23 of the Act. The minimal transferable unit is 2x5 MHz for FDD or 5 MHz for TDD. Terminology was amended to correspond to the terminology used in the Commission Decision.

Information on future development in the mobile service is included in Article 8 which also informs on the fact that the band will be subject to a study before and within the WRC-23 with regard to the possible utilisation of high-altitude platforms as IMT base stations.

Article 9 with conditions for the use of the band by applications of fixed service was amended with regard to the termination of MMDS fixed networks operation in 2252–2300 MHz sub-band and with termination of the possibility to operate SAP/SAB applications in 2500–2690 MHz band, where networks of block allocation holders in the mobile service are currently operated.

Article 10 states that fixed service applications shall not be developed in the band because it is utilised by applications in mobile service on a primary basis.

Use of the band by mobile-satellite service is described in the Article 11. The new wording of the text reflects a situation where the utilisation in mobile-satellite service in Europe is concentrated into 2483,5–2500 MHz band. Because it regards only the reception of satellite signal, the text was amended to make it clearer that in the given band it is not being transmitted from terrestrial stations of the mobile-satellite service. Similar amendment was performed to the text on radiodetermination-satellite service in Article 13. The new text in Article 14 reflects that the WRC-12 made change to the allocation of 2483,5–2500 MHz band to radiodetermination-satellite service from additional secondary basis to primary basis allocation.

Articles 15 to 18 present conditions for the use of radio spectrum by amateur and amateur-satellite services, radioastronomy, Earth exploration-satellite and space research services.

Because the allocation of 2300–2690 MHz band to radiolocation service was terminated in the Czech Republic, provisions regarding this service were deleted.

Based on the Section 130 of the Act and in accordance with the Rules of the Czech Telecommunication Office for Consultations at the Discussion Site, the Office published a draft of Measure of General Nature part No. PV-P/14/XX.2021-Y of the Radio Spectrum Utilisation Plan together with a call to apply comments on the discussion site, on 5 February 2021. The Office received comments from 4 parties during the public consultation. The comments were of the same content and required adding the broadcasting service to bands 2200–229 MHz and 2290–2300 MHz in the Table of Article 2. With regard to the fact, that such a change would breach the Decree No. 427/2017 Coll., amending the Decree No. 105/2010 Coll, on the Plan of Frequency Band Allocations (National Table of Frequency Allocations), the Office did not accept these comments.

The settlement table, published on the discussion site, complies with the Rules of the Czech Telecommunication Office for consultation at the discussion site presents summary of comments and settlement thereof by the Office, including justification.

On behalf of the Council of the
Czech Telecommunication Office

Hana Továrková

Chair of the Council
of the Czech Telecommunication Office
<signed>