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On the basis of public consultation 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 on the basis of the decision of the Council of the Czech Telecommunications Office (hereinafter „the Office“) under Section 107(8)(b)(2) of the Act and in order to implement Section 16(2) of the Act, the Office as the appropriate state administration body under Section 108(1)(b) of the Act hereby issues this Measure of General Nature

**Part No. PV-P/7/11.2008-15
of the Radio Spectrum Utilisation Plan
for the frequency band 2700–4200 MHz.**

Article 1
Introductory provision

This part of the Radio Spectrum Utilisation Plan sets down the technical characteristics and conditions of use of radio spectrum in the frequency band from 2700 MHz to 4200 MHz by radiocommunication services. This part of the Radio Spectrum Utilisation Plan is follow-up to the Common part of the Radio Spectrum Utilisation Plan¹⁾.

Part 1
General information on the frequency band

Article 2
Frequency bands

Band (MHz)	Current conditions		Future harmonisation ²⁾	
	Allocation	Utilisation	Allocation	Utilisation
2700–2900	AERONAUTICAL RADIONAVIGATION Radiolocation ³⁾	MD Radar and navigation systems Meteorological radars	AERONAUTICAL RADIONAVIGATION Radiolocation ³⁾	MD Radar and navigation systems Meteorological radars

¹⁾ Common part of the Radio Spectrum Utilisation Plan Nr. PV/10.2005-35 published in the Telecommunication Journal 14/2005 .

²⁾ CEPTC/ERC Report 25: European Table of Frequency Allocations and Utilisations in the frequency range 9 kHz to 1000 GHz, rev. Nice, 2007.

³⁾ In accordance with footnote 5.423 of the Radio Regulations the ground-based radars used for meteorological purposes are authorized to operate in the band 2700-2900 MHz on basis of equality with stations of aeronautical radionavigation service.

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2900–3100	RADIOLOCATION RADIONAVIGATION	MD	RADIOLOCATION RADIONAVIGATION	MD
3100–3300	RADIOLOCATION Earth exploration- satellite (active) Space research (active) 4)	MD Active sensors	RADIOLOCATION Earth exploration- satellite (active) Space research (active) 4)	MD Active sensors
3300–3400	RADIOLOCATION 4)	MD	RADIOLOCATION 4)	MD
3400–3600	FIXED FIXED-SATELLITE (space-to-Earth) Mobile Radiolocation	Access networks ENG/OB MD Amateur applications	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Amateur Radiolocation	Access networks ENG/OB MD Amateur applications
3600–3800	FIXED FIXED-SATELLITE (space-to-Earth)	Fixed links (P-P) Coordinated Earth stations	FIXED MOBILE Fixed-satellite (space-to-Earth)	Access networks
3800–4200			FIXED FIXED-SATELLITE (space-to-Earth)	Fixed links (P-P and P-MP) Coordinated Earth stations

Article 3

Frequency band characteristics

(1) Frequency band 2700–3400 MHz is used mainly by the radiolocation and radionavigation services for non-civil purposes.

(2) In the frequency band 3400–4200 MHz the utilisation by the fixed service predominates.

(3) On basis of European Commission Decision⁵⁾ (hereinafter “Commission Decision”) is the band 3400–3800 MHz harmonised for access networks for providing electronic communication services using fixed, nomadic⁶⁾ and mobile applications. So the convergence of the fixed and mobile radiocommunication services happens here.

Article 4

International obligations

Provisions of the Radio Regulations⁷⁾ (hereinafter „RR“) and HCM Agreement⁸⁾ apply to operation and coordination.

4) In accordance with footnote 5.149 of the Radio Regulations shall users of the bands 3260-3267 MHz, 3332-3339 MHz and 3345,8- 3352,5 MHz take all practicable steps to protect the radioastronomy service.

5) Commission Decision No. 2008/411/ES of 21 May 2008 on the harmonisation of the 3 400-3 800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community.

6) As nomadic application is, according to Recommendation ITU-R F.1399 on terminology for wireless access, considered user terminal in the mobile service which may be used in different places but it must be stationary while in operation.

7) Radio Regulations, International Telecommunication Union, Geneva, 2004.

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Part 2
Fixed service

Article 5
Current conditions in the fixed service

(1) The band 3400–3600 MHz is, in accordance with Commission Decision, designated for operation of electronic communications networks, whereas:

a) operating conditions are designated by Commission Decision Annex, which set down technical parameters called the block edge mask which is covering in-block and out-of-block emissions limits and conditions for observance of these parameters;

b) in the band may be operated equipment using as maximum the limit parameters described in Commission Decision Annex on condition, that services in adjacent bands shall not be interfered and in the band is not touched protection and non-intermittent operation of existing access networks for providing electronic communications services, mentioned in paragraphs 2, 3 and 4.

(2) Paired sub-bands 3410–3459 MHz / 3510–3559 MHz are used for providing of wideband access by geographically defined networks. This spectrum is divided into totally 14 channels of 3.5 MHz wide and for operated equipment the following conditions apply:

- a) operation with at least quadrature or higher-order digital modulation;
- b) duplex separation of transmitting and receiving frequency 100 MHz;
- c) maximal output power 30 dBm and maximal e.i.r.p. 24 dBW.

The arrangement complies with CEPT Recommendation⁹⁾. Operation of base stations is possible on basis of individual authorisation, users terminals are operated on basis of general authorisation¹⁰⁾.

(3) Paired sub-bands 3459–3480 MHz / 3559–3580 MHz are used by countrywide networks for providing of wideband access. Number of rights is limited to 2, provider shall be a holder of the assignment.

Sub-bands are divided into 6 duplex channels of 3.5 MHz wide. For operated equipment the following conditions apply:

- a) operation with at least quadrature or higher-order digital modulation;
- b) duplex separation of transmitting and receiving frequency 100 MHz;
- c) maximal output power 30 dBm and maximal e.i.r.p. 24 dBW.

The arrangement complies with CEPT Recommendation⁹⁾. By assignment holders are operated two networks. Users terminals may be operated on basis of the general authorisation¹⁰⁾.

8) 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 39.5 GHz for the fixed service and the land mobile service, Vilnius, 2005.

⁹⁾ CEPT/ERC/REC 14–03 – Harmonised radio frequency channel arrangements and block allocations for low and medium capacity systems in the band 3400 MHz to 3600 MHz.

¹⁰⁾ General authorisation No. VO-R/18/08.2005-30 for the operation of terminals of fixed wireless access networks, serving for the connection of telecommunication terminal equipment to a public communication network.

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(4) Paired sub-bands 3480–3500 MHz / 3580–3600 MHz are used by fixed links point-point and point-multipoint. Number of rights is limited to one. The bands are divided into 10 duplex channels of 2 MHz wide. For operated equipment the following conditions apply:

- a) operation with at least quadrature or higher-order digital modulation;
- b) duplex separation of transmitting and receiving frequency 100 MHz;
- c) maximal output power 30 dBm and maximal e.i.r.p. 24 dBW.

The arrangement complies with CEPT Recommendation⁹⁾. The assignment holder is operator the public telephone networks. Operation of users terminals is possible on basis of the general authorisation¹⁰⁾.

(5) Sub-bands 3400–3410 / 3500–3510 MHz are the guard bands and may be used only subject to fulfilling the conditions listed in paragraph 1 letter b).

(6) In the band 3600–4200 MHz is, paying attention to the time limitation pursuant to paragraph 7, letter b), possible to operate equipment of fixed links point-point enabling operation with channel separation 29 MHz, whereas centre frequencies f_n and f_n' [MHz] of particular operational channels are given in relation to reference frequency $f_0 = 4003,5$ MHz by equations

$$\begin{aligned} f_n &= f_0 - 208 + 29n \text{ in lower part of the band and} \\ f_n' &= f_0 + 5 + 29n \text{ in higher part of the band,} \\ &\text{where } n = 1, 2 \text{ up to } 6. \end{aligned}$$

The arrangement complies with ITU-R Recommendation¹¹⁾.

(7) The band 3600–3800 MHz is on basis of the Commission Decision at latest from 1 January 2012 designated for operation of electronic communications networks under the same conditions like in paragraph 1, letter a), whereas:

a) operation of existing fixed links point-point will be in the band diminished. Validity of existing authorisations the Office may prolong on request of operator till 31 December 2011 as the latest possibility. On authorisations, with validity exceeding 31 December 2011, the Office will decide on the case by case basis. On request of operator the Office will enable a transition to the band 3800–4200 MHz.

b) the band will be from 1 January 2012 made available to assignment holder for operation of electronic communications networks in accordance with parameters set down in Commission Decision Annex. The Office will set down a number of rights in consequence with releasing of the band 3600–3800 MHz from its utilisation in way, which is not in accordance with harmonisation of the band for providing of electronic communications services, at latest until 31 December 2011.

(8) The frequency coordination of individual operated link in the frequency bands pursuant to paragraphs 3 and 4 is made by the operator himself and necessary data will provide the Office on request. In case that more operators share one band the rule apply, that costs for caused interference elimination covers operator who put the equipment into operation later, unless the interference was caused by breaking of the settled parameters of the equipment putted into operation earlier. If the agreement among operators is not reached, the Office decides. Coordination in the sub-band described in paragraph 2, in the band according to paragraph 6 and international frequency coordination in the whole band 3400–4200 MHz, carries out the Office.

¹¹⁾ ITU-R F.382-7 – Radio frequency channel arrangement for radio relay systems operating in the 2 and 4 GHz bands.

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Article 6

Information on future development in the fixed service

(1) In the band 3400–3800 MHz the development of wideband technologies is anticipated. Changes which will occur on basis of Commission Decision implementation are described in Article 5.

(2) Changes in the utilisation of the band 3800–4200 MHz by the service are not envisaged.

Part 3

Fixed-satellite service

Article 7

Current conditions in the fixed-satellite service

(1) The band 3400–4200 MHz is allocated to the service in space-to-Earth direction and may be used for links from telecommunication satellites to coordinated Earth stations.

(2) Due to implementation of Commission Decision shall not be established new Earth stations in the band 3600–3800 MHz.

Article 8

Information on future development in the fixed-satellite service

Change of allocation of the fixed-satellite service in the band 3600–3800 MHz to secondary is expected.

Part 4

Aeronautical radionavigation service

Article 9

Current conditions in the aeronautical radionavigation service

Utilisation of the band 2700–2900 MHz by aeronautical radionavigation service is limited to ground radio locators and associated aircraft transponders, which transmit only on frequencies in this band and only upon activation by radio locators operated in this band.

Article 10

Information on future development in the aeronautical radionavigation service

Changes in the utilisation of the band by the service are not envisaged on international or national levels.

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Part 5
Radionavigation service

Article 11
Current conditions in the radionavigation service

The service has no civil use in the band 2900–3100 MHz.

Article 12
Information on future development in the radionavigation service

Changes in the utilisation of the band by the service are not envisaged on international or national levels.

Part 6
Radiolocation service

Article 13
Current conditions in the radiolocation service

(1) Civil use of the service for needs of aeronautical transport is limited to the band 2700–2900 MHz.

(2) A station in the radiolocation service in the band 2900–3100 MHz shall not, according to the RR footnote¹²⁾, cause harmful interference to radar systems in the radionavigation service nor request the protection from them.

Article 14
Information on future development in the radiolocation service

Changes in the utilisation of the band by the service are not envisaged on international or national levels.

Part 7
Radio astronomy service

Article 15
Current conditions in the radio astronomy service

Radio astronomy service is passive radiocommunication service based on receiving of the radio waves of space origin. Due to low levels of receiving signals the operation of the service depends on protection from interference of other services. According to RR footnote⁴⁾ shall users of the bands 3260–3267 MHz, 3332–3339 MHz and 3345.8–3352.5 MHz take all practicable measures to protect radio astronomy.

Article 16
Information on future development in the radio astronomy service

Changes in the utilisation of the band by the service are not envisaged on international or national levels.

¹²⁾ Footnote 5.424A of RR.

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Part 8

Earth exploration satellite service and space research service

Article 17

Current conditions in the Earth exploration-satellite service and space research service

Active sensors in the band 3100–3300 MHz may be operated in these services.

Article 18

Information on future development in the Earth exploration-satellite service and space research service

Changes in the utilisation of the band by these radiocommunication services are not envisaged on international or national levels.

Part 9

Mobile service

Article 19

Current conditions in the mobile service

(1) The secondary allocation of the band 3400–3600 MHz to the mobile service may be used for temporary terrestrial digital links ENG/OB¹³⁾.

(2) Conditions of the use of the band 3400–3800 MHz by the mobile service applications operated within framework of electronic communications networks on basis of Commission Decision are, with regard to emerging convergence of services, pursuant to Article 3, paragraph 3, described in Article 5.

Article 20

Information on future development in the mobile service

Growing use of the band 3600–3800 MHz by nomadic and mobile terminals in framework of access networks operated on basis of Commission Decision in the band 3400–3800 MHz is assumed.

Part 10

Amateur service

Article 21

Current conditions in the amateur service

(1) The band 3400–3410 MHz is by the footnote of the Plan of the frequency bands allocations¹⁴⁾ allocated to the amateur service additionally on secondary basis.

(2) Operation of the amateur service is governed by the special legal measure¹⁵⁾.

¹³⁾ Abbreviation ENG/OB stands for Electronic News Gathering / Outside Broadcasting.

¹⁴⁾ Footnote CZ7 of the Plan of the frequency bands allocation (National table of the frequency band allocations).

¹⁵⁾ Decree No. 156/2005 Coll., on the technical and operating conditions of the amateur radio communication service.

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Article 22

Information on future development in the amateur service

Changes in the utilisation of the band by the service are not envisaged on international or national levels.

Part 11

Final provisions

Article 23

Repealing provision

This is to repeal Measure of General Nature Part No. PV-P/7/03.2006-7 of the Radio Spectrum Utilisation Plan for frequency band 2700–4200 MHz.

Article 24

Effect

This part of the Radio Spectrum Utilisation Plan comes into effect on 20 November 2008.

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Explanatory memorandum

To implement Section 16(2) of the Act, the Office issues the Measure of General Nature Part No. PV-P/7/11.2008-15 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 2700 MHz to 4200 MHz by radiocommunication services.

The part of the plan is based on the principles set down in the Act and in European legislation, especially Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) and Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision) as well as on principles determined 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 the radio spectrum use and ability to anticipate the decisions of the Office.

The part of the plan replaces the part of Radio Spectrum Utilisation Plan No. PV-P/7/03.2006-7 for frequency band 2700–4200 MHz. The reason for new issue of the part of the plan is particularly implementation of Commission Decision No. 2008/411/ES on the harmonisation of the 3400–3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community.

Article 2 consists of information from National Table of Frequency Allocations and information on current utilisation by applications. Column “Future harmonisation” presents future intentions, i.e. allocation to services and utilisation by applications according to ERC Report 25: European Table of Frequency Allocations and Utilisations. More details about applications are in relevant articles on individual radiocommunication services.

Article 3 presents characteristics of the frequency band and Article 4 contains international obligations, determined by Radio Regulations of the International Telecommunication Union and HCM Agreement which replaced former Berlin 2003 Agreement.

The most significant utilisation of the band is operation of local access networks in the fixed service, which are described in the Part 2. Information on other radiocommunication services, to which is the band allocated, is in subsequent articles.

By implementation of Commission Decision on the harmonisation of the 3400–3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community were modified the conditions of operation of radiocommunication services. Modified conditions in the sub-band 3400–3600 MHz are valid from the date when this part of the plan came into effect and in adjacent sub-band 3600–3800 MHz with effect from 1 January 2012. Relevant changes are taken into account by modifications of Articles 2, 3, 5, 6, 7, 8, 19 and 20.

On the basis of Section 130 of the Act and in accordance with the Czech Telecommunication Office’s Rules for maintaining consultations with affected subjects at the discussion site, the Office published on 19 September 2008 at the discussion site its draft Part No. PV-P/7/XX.2008-Y of the Radio Spectrum Utilisation Plan together with the Call for comments. During 30 days public consultation the Office received the comments from two subjects, requesting particularly conservation of conditions for by them operated fixed links also in the future. These comments were not accepted with regard to harmonisation of the

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band by Commission Decision. The table of settlement of comments which is published at the discussion site contains entire wording of received comments and their settlement.

On behalf of the Council
of the Czech Telecommunication Office
Pavel Dvořák
Chairman of the Council
of the Czech Telecommunication Office
<signed>