

Prague, 4 December 2007  
Ref: 71 211/2007-605

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/13/12.2007-15 of the Radio Spectrum Utilisation Plan  
for the frequency band 10–12.5 GHz**

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 10 GHz to 12.5 GHz 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<sup>1)</sup>.

Part1  
**General information on the frequency band**

Article 2  
**Frequency bands**

Band (GHz)	Current conditions		Future harmonisation <sup>2)</sup>	
	Allocation	Utilisation	Allocation	Utilisation
10–10.3	FIXED MOBILE RADIOLOCATION Amateur <sup>3)</sup>	MD Amateur applications Meteorological- satellite radars	FIXED MOBILE RADIOLOCATION Amateur <sup>3)</sup>	MD Fixed links SAP/SAB applications Amateur applications Meteorological- satellite radars

<sup>1)</sup> Common part of the the Radio Spectrum Utilisation Plan No. PV/10.2005-35 published in Issue 14/2005 of Telekomunikační věstník (Telecommunication Bulletin).

<sup>2)</sup> ERC Report 25: European Table of Frequency Allocations and Utilisations covering the frequency range 9 kHz to 275 GHz, rev. Nice, 2007.

<sup>3)</sup> The subband 9 975–10 025 MHz is allocated to meteorological radiolocators of meteorological service on secondary basis according to the footnote 5.479 of the Radio Regulations.

**This is an unofficial translation. The legally binding text is the original Czech version.**

10.3–10.45	FIXED MOBILE RADIOLOCATION Amateur	MD Fixed links SAP/SAB applications Amateur applications	FIXED RADIOLOCATION Amateur Mobile	MD Fixed links SAP/SAB applications Radars Amateur applications
10.45–10.5	FIXED LAND MOBILE RADIOLOCATION Amateur Amateur-satellite	MD Fixed links SAP/SAB (ENG/OB) Amateur application Amateur-satellite applications	FIXED MOBILE RADIOLOCATION Amateur Amateur-satellite	MD Fixed links SAP/SAB applications Amateur applications Amateur-satellite applications Radars
10.5–10.55	FIXED MOBILE Radiolocation	MD Fixed links	FIXED MOBILE Radiolocation	Fixed links SAP/SAB applications
10.55–10.6	FIXED MOBILE except aeronautical mobile Radiolocation	MD Fixed links SAP/SAB (ENG/OB)	FIXED MOBILE except aeronautical mobile Radiolocation	Fixed links SAP/SAB application
10.6–10.68	EARTH EXPLORATION- SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation	Fixed links SAP/SAB (ENG/OB) Scientific applications (passive)	EARTH EXPLORATION- SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive)	Fixed links SAP/SAB applications Scientific applications (passive)
10.68–10.7	EARTH EXPLORATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)	Scientific applications (passive) Transmission not allowed	EARTH EXPLORATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)	Scientific applications (passive) Transmission not allowed
10.7–11.7	FIXED FIXED SATELLITE (space-to-Earth) (Earth-to-space) <sup>4)</sup> MOBILE except aeronautical mobile	Fixed links Fixed-satellite service applications MD	FIXED FIXED SATELLITE (space-to-Earth) (Earth-to-space) <sup>4)</sup> MOBILE except aeronautical mobile Land mobile-satellite service (space-to- Earth)	Fixed links Fixed-satellite service applications Land mobile-satellite service applications

<sup>4)</sup> The band utilisation by satellite fixed service (Earth-to-space) is limited according to the footnote 5.484 of the Radio Regulations to feeder links for the satellite broadcasting service.

**This is an unofficial translation. The legally binding text is the original Czech version.**

11.7–12.5	FIXED BROADCASTING BROADCASTING- SATELLITE Mobile except aeronautical mobile 5)	Satellite broadcasting Fixed links	FIXED BROADCASTING- SATELLITE Mobile except aeronautical mobile 5)	Satellite broadcasting
-----------	---	---------------------------------------	---	------------------------

### Article 3

#### Frequency band characteristics

The band is mainly utilised by satellite broadcasting service in terms of worldwide harmonised satellite broadcasting. Another satellite utilisation is by Radiolocation services and passive scientific applications for the Earth exploration and space research. Temporary links supporting video broadcasting and point-to-point links are typical utilisation in the fixed service.

### Article 4

#### International obligations

Provisions of the Radio Regulations<sup>6)</sup> (hereinafter „RR“), HCM Agreement<sup>7)</sup> are applied to operation and coordination. The sub bands 10.70–10.95 GHz and 11.2–11.45 GHz are in conformity with the Plan for the fixed-satellite service according to the Appendix of the Radio Regulations<sup>8)</sup>. The sub band 11.7–12.5 GHz is in conformity with the Plan for the broadcasting satellite service according to the Appendix of the Radio Regulations<sup>9)</sup>.

### Part 2

#### Fixed service

### Article 5

#### Current conditions in the mobile service

(1) The sub band 10–10.3 GHz is not used by civil applications.

(2) Operation of the fixed links for TV, broadcasting, voice and data signals in the sub bands 10.3–10.42 GHz and 10.476–10.588 GHz is possible on the basis of the General Authorisation<sup>10)</sup>.

(3) The sub bands 10.420–10.476 GHz and 10.588–10.644 GHz are designated for temporary and local use by the ENG/OB<sup>11)</sup> video links within the SAP/SAB<sup>12)</sup> applications. Channel centre frequencies are 10 434 MHz, 10 462 MHz, 10 602 MHz and 10 630 MHz. Maximum occupied

<sup>5)</sup> Additional allocation according to the footnote 5.487A of the Radio Regulations to the fixed satellite service (space-to-Earth) for non-geostationary satellite systems on a primary basis.

<sup>6)</sup> Radio Regulations, International Telecommunication Union, Geneva, 2004.

<sup>7)</sup> 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 coordination of frequencies between 29.7 MHz and 39.5 GHz for the fixed service and the land mobile service, Vilnius, 2005.

<sup>8)</sup> Appendix 30B of the Radio Regulations.

<sup>9)</sup> Appendix 30 of the Radio Regulations.

<sup>10)</sup> General Authorisation No. VO-R/14/12.2006-38 on the use of radio frequencies and for the operation of equipment in the 10 GHz band.

<sup>11)</sup> ENG/OB (Electronic News Gathering / Outside Broadcasting) describes temporary portable television or broadcasting links for the creation of a program made out of studio.

<sup>12)</sup> SAB/SAP (Service Ancillary for Broadcasting / Service Ancillary for Program) describes applications related to radio broadcasting and applications for the creation of programs

**This is an unofficial translation. The legally binding text is the original Czech version.**

bandwidth is 28 MHz. In accordance with the footnote of the Radio Regulations<sup>13</sup>), stations of the fixed service in the band 10.60–10.68 GHz are limited to maximum e.i.r.p. of +40 dBW and the power delivered to the antenna shall not exceed -3 dBW. The Office can reduce maximum e.i.r.p. with respect to actual specific situation.

(4) The sub band 10.644–10.680 GHz is designated for simplex point-to-point fixed links. Centre frequency is 10 658 MHz, maximum occupied bandwidth is 28 MHz. According to the footnote of the Radio Regulations<sup>13</sup>), the maximum e.i.r.p. in the band 10.60–10.68 GHz is limited to +40 dBW and the power delivered to the antenna shall not exceed -3 dBW. The Office can reduce maximum e.i.r.p. with respect to actual specific situation.

(5) The sub band 10.7–11.7 GHz is designated for the fixed duplex point-to-point links. Following conditions apply:

- a) frequency duplex spacing of transmitted and received signal is 490 MHz;
- b) digital modulation;
- c) channel bandwidth is 40 MHz; central frequencies  $f_n$  and  $f_n'$  [MHz] of individual channels are expressed by the following formulas:

$$\begin{aligned} f_n &= (f_0 - 505 + 40n) \text{ MHz in the lower half of the band and} \\ f_n' &= (f_0 - 15 + 40n) \text{ MHz in the upper half of the band,} \\ &\text{where } n = 1, 2, \dots, 11 \text{ and } f_0 = 11\,200 \text{ MHz.} \end{aligned}$$

The channel arrangement is in accordance with CEPT Recommendation<sup>14</sup>).

(6) The band 11.7–12.5 GHz is utilised by fixed feeder links for broadcasting. These fixed links shall not be utilised by direct broadcast distribution services. In this band, according to the footnote of the Radio Regulations<sup>15</sup>), the fixed service shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Appendix 30 of the Radio Regulations. The fixed service is operated on a secondary basis and shall be operated in such a way that any unacceptable interference to fixed satellite-service in the above bands shall be rapidly eliminated at operator's own expense, or the fixed service operation shall be terminated.

(7) After the 31 December 2007, only fixed links established before this date can be operated in the band 11.7–12.5 GHz with respect to conditions stated in Article 6 and using satellite broadcasting service channel arrangement. Channel bandwidth is 19.18 MHz and central frequency of channel No. 1 is  $f_n = 11\,727$  MHz. Central frequencies of the other individual channels are expressed by the following formula:

$$\begin{aligned} f_n &= f_1 + 19.18 (n-1), \\ &\text{where } n = 3, 4, 5, 6, 8, 10, 11, 12, 13, 16, 19, 20, 21, 27, 29, 30, 32, 35, 37, 38 \text{ and } 40. \end{aligned}$$

(8) The frequency coordination is provided by the Office with respect to demands of radiolocation service and with respect to radio astronomy service protection in the band 10.6–10.68 GHz.

Article 6  
**Information on future development in the fixed service**

---

<sup>13</sup>) Footnote No. 5.482 of the Radio Regulations.

<sup>14</sup>) CEPT/ERC/RECOMMENDATION 12-06 - Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 10.7–11.7 GHz.

<sup>15</sup>) Footnote No. 5.487 of the Radio Regulations.

**This is an unofficial translation. The legally binding text is the original Czech version.**

(1) The provision of the frequency bands 10.15–10.3 GHz / 10.5–10.65 GHz would facilitate deployment of point-to-multipoint fixed service systems according to the CEPT Recommendation<sup>16</sup>). Harmonisation of this frequency band in Europe is based on the CEPT Recommendation<sup>17</sup>) and is still in progress. No changes of utilisation of the band by the fixed service in the Czech Republic are expected, nor changes in the band shared with radiolocation service, especially military radiolocation service, that operates on a primary basis.

(2) After releasing of the bands for point-to-multipoint fixed service, the band 10.3–10.5 GHz for SAP/SAB applications according to the CEPT Recommendation<sup>18</sup>) was established. At the present, the utilisation for the SAP/SAB application in the Czech Republic is limited to ENG/OB video links on dedicated channels, where no changes are expected to be made.

(3) Because the sharing between fixed links in the band 10.5–10.6 GHz and SRD<sup>19</sup>), operated in some European countries according to the Recommendation CEPT<sup>20</sup>), which includes traffic road transport telematics, door entry systems, alarms and other systems, is impossible, operation of these devices is not under consideration in the Czech Republic.

(4) CEPT Decision<sup>21</sup>) specifies the fixed service development in the band 10.7–11.7 GHz supporting telecommunication infrastructure created by new fixed point-to-point links. In the band 11.7–12.5 GHz, the priority is given to the satellite service on a primary basis. In CEPT countries, fixed service operation in this band is going to be suppressed.

Part 3

**Broadcasting and broadcasting satellite service**

Article 7

**Current conditions in the broadcasting and broadcasting satellite service**

The sub band 11.7–12.5 GHz is utilised by individual- and multi-satellite receiving of broadcasting. The satellite transmitter shall be operated in conformity with the Plans and List for broadcasting satellite service according to Appendix of the Radio Regulations<sup>9</sup>).

Article 8

**Information on future development in the broadcasting and broadcasting-satellite service**

At the present, no changes of the band utilisation by the service are expected locally or internationally.

Part 4

**Satellite fixed service**

Article 9

**Current conditions in the satellite fixed service**

---

<sup>16</sup>) CEPT/ERC/RECOMMENDATION 13–04 - Preferred frequency bands for fixed wireless access in the frequency range between 3 and 29.5 GHz.

<sup>17</sup>) CEPT/ERC/RECOMMENDATION 12–05 - Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 10.0 –10.68 GHz.

<sup>18</sup>) CEPT/ERC/RECOMMENDATION 25–10 - Frequency ranges for the use of temporary terrestrial ENG/OB video links during events in other CEPT member countries.

<sup>19</sup>) Short Range Device.

<sup>20</sup>) Recommendation CEPT/ERC/REC 70–03 relating to the use of Short Range Devices (SRD).

<sup>21</sup>) CEPT/ERC/DEC/(00)08 - ERC Decision of 19 October 2000 on the use of the band 10.7–12.5 GHz by the fixed service and Earth stations of the broadcasting-satellite and fixed-satellite service (space-to-Earth).

**This is an unofficial translation. The legally binding text is the original Czech version.**

(1) The satellite transmitter shall be operated within the framework of provisions according to Appendix of the Radio Regulations<sup>22</sup>). Appendix of the Radio Regulations<sup>8</sup>) contains Plans for the broadcasting satellite service in the frequency bands 10.7–10.95 GHz and 11.2–11.45 GHz.

(2) Devices of the fixed satellite service downlink can be operated in the band 10.7–11.7 GHz. Uplinks of the satellite fixed service, limited to feeder links for the broadcasting-satellite service according to the footnote of the Radio Regulations<sup>4</sup>), are not used in the Czech Republic.

(3) The band 10.7–12.5 GHz is used, in particular, by terrestrial stations with a very small antenna VSAT<sup>23</sup>). The abbreviation VSAT indicates terrestrial stations with antenna aperture less than 2 m and designated mainly for data communication. According to the General Authorisation<sup>24</sup>), these systems are operated in the above band: In the sub bands 10.95–11.2 GHz and 11.45–11.40 GHz data terminals of system Omnitrac, in the sub band 11.45–11.7 GHz ARCANET data terminals and in the sub band 10.7–12.5 GHz SIT<sup>25</sup>) data terminals. In this band, uncoordinated terrestrial stations shall not claim protection from other services, especially from existing fixed links.

(4) The band 11.7–12.5 GHz, according to the footnote of the Radio Regulations<sup>26</sup>), is also allocated to the fixed satellite service (space-to-Earth), limited to non-geostationary satellite systems. According to the footnote of the Radio Regulations<sup>15</sup>), the fixed satellite service shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Appendix of the Radio Regulations<sup>9</sup>). Assignments to stations of the broadcasting-satellite service based on the footnote of the Radio Regulations<sup>27</sup>) which are in conformity with the Plan included in Appendix of the Radio Regulations<sup>9</sup>) may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference, or require more protection from interference, than the broadcasting-satellite service transmissions operating in conformity with the Plan.

#### Article 10

##### **Information on future development in the fixed satellite service**

Changes of the band utilisation by the service are not expected locally or internationally.

#### Part 5

##### **Amateur and amateur-satellite service**

#### Article 11

##### **Current conditions in the amateur and amateur-satellite service**

(1) The band 10–10.5 GHz is allocated to amateur service on a secondary basis.

(2) The band 10.45–10.5 GHz is allocated to amateur-satellite service on a secondary basis.

(3) The operation of amateur and amateur-satellite service shall be in conformity with the special legal measure<sup>28</sup>).

#### Article 12

##### **Information on future development in the amateur and amateur-satellite service**

---

<sup>22</sup>) Article 9 of the Radio Regulations.

<sup>23</sup>) Very Small Aperture Terminal.

<sup>24</sup>) General Authorisation No. VO-R/4/07.2005-17 to operate terminals for communication via satellites in the bands of 10–30 GHz, published in Issue 10/2005 of Telekomunikační věstník (Telecommunication Bulletin).

<sup>25</sup>) Satellite Interactive Terminal.

<sup>26</sup>) Footnote No. 5.487A of the Radio Regulations.

<sup>27</sup>) Footnote No. 5.492 of the Radio Regulations.

<sup>28</sup>) Decree No. 156/2005 Coll., on technical and operational conditions of the amateur radiocommunication service.

**This is an unofficial translation. The legally binding text is the original Czech version.**

At the present, changes of the band utilisation by the service are not expected locally or internationally.

Part 6

**Radio astronomy service**

Article 13

**Current conditions in the radio astronomy service**

(1) Radio astronomy service is a passive radiocommunication service based on reception of radio waves of cosmic origin. Due to low levels of received signals, the operation of this service depends on protection from interference caused by other radiocommunication services. All users of the band 10.6–10.68 GHz are urged to take all practicable steps to protect radio astronomy service from harmful interference in accordance with the footnote of the Radio Regulations<sup>29</sup>).

(2) The sub band 10.68–10.7 GHz is shared by radio astronomy service and passive Earth exploration-satellite service. Transmission is not allowed in this sub band.

Article 14

**Information on future development in the radio astronomy service**

Changes of the band utilisation by the service are not expected locally or internationally.

Part 7

**Radiolocation service**

Article 15

**Current conditions in the radiolocation service**

The band 10–10.5 GHz is allocated to radiolocation service on a primary basis, the band 10.5–10.68 GHz on a secondary basis. Civil radars are allowed to share the bands with military systems.

Article 16

**Information on future development in the radiolocation service**

Changes of the band utilisation by the service are not expected locally or internationally.

Part 8

**Earth exploration-satellite service and space research**

Article 17

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

The sub band 10.6–10.7 GHz is allocated to these services in passive mode (reception only).

Article 18

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

Changes of the band utilisation by the service are not expected locally or internationally.

---

<sup>29</sup>) Footnote No. 5.149 of the Radio Regulations.

**This is an unofficial translation. The legally binding text is the original Czech version.**

Part 9

**Meteorological-satellite service**

Article 19

**Current conditions in the meteorological-satellite service**

The band 9.975–10.025 GHz is allocated to the meteorological-satellite service on a secondary basis according to the footnote of the Radio Regulations<sup>3</sup>). It can be used by meteorological-satellite radars.

Article 20

**Information on future development in the meteorological-satellite service**

Changes of the band utilisation by the service are not expected locally or internationally.

**This is an unofficial translation. The legally binding text is the original Czech version.**

Part 10  
**Mobile service**

Article 21  
**Current conditions in the mobile service**

In this band, the mobile, land mobile and mobile services, except aeronautical mobile service, are not used in the Czech Republic.

Article 22  
**Information on future development in the fixed service**

Changes of the band utilisation by the service are not expected.

Part 11  
**Final provisions**

Article 23  
**Repealing provisions**

This is to repeal Part No. PV-P/13/03.2006-11 of the Radio Spectrum Utilisation Plan for the frequency band 10–12.5 GHz issued on 9 January 2006.

Article 24  
**Effect**

This part of the Radio Spectrum Utilisation Plan comes into effect on 1 January 2008.

**This is an unofficial translation. The legally binding text is the original Czech version.**

### **Explanatory Memorandum**

To implement Section 16(2) of the Act, the Office issues the Measure of General Nature Part No. PV-P/13/12.2007-15 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 10 GHz to 12.5 GHz by radiocommunication services. The part of the plan is based on the principles embedded in the Act and 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 Council on a regulatory framework for the radio spectrum police 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 radio spectrum use and the ability to anticipate the future decisions of the Office.

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 described in relevant articles on individual radiocommunication services.

Article 3 presents characteristics of the frequency band and the Article 4 contains international obligations, determined by the Radio Regulations of the International Telecommunication Union, HCM Agreement which replaced former Berlin 2003 Agreement and the Appendices of the Radio Regulations with Plans for the fixed satellite and broadcasting-satellite service. The most important utilisation of the band is operation of broadcasting-satellite service and operation of fixed service links described in Part 2. Information on other radiocommunication services, to which the band is allocated, are described in subsequent articles.

This part of the plan No. PV-P/13/12.2007-15 was issued in order to update the articles 5(5) and 5(7) of the previous part of the plan No. PV-P-13/03.2006 issued on 9 January 2006. The updated provision of the article 5(7) enables further operation of already installed devices under the conditions that their operation avoids harmful interference to stations operating in the broadcasting-satellite service.

On the basis of Section 130 of the Act and in accordance with the Czech Telecommunication Office's Rules for conducting consultations with the entities concerned at the Discussion Site, the Office published at the Discussion Site its draft part No. PV-P/13/xx.2007-yy of the Radio Spectrum Utilisation Plan on 1 November 2007 together with a call for comments. During the public consultation period the Office received one comment on the article 5(5) on possible channel aggregation. The comment was not processed, because this option is not restricted by the current part of the plan. However, the channel aggregation depends upon specific technical conditions of frequency planning.

The comment settlement table, made public at the Discussion Site, contains the text of the comment and the way how they were settled.

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