

Prague 21 December 2005
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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/18/12.2005-46
of the Radio Spectrum Utilisation Plan
for the frequency band 12.5–14.5 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 12.5 GHz to 14.5 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 Plan¹⁾.

Part 1
General information on the frequency band

Article 2
Frequency bands

Band (GHz)	Current conditions		Future harmonisation ²⁾	
	Allocation	Utilisation	Allocation	Utilisation
12.5–12.75	FIXED-SATELLITE (space-to-Earth)	VSAT – SIT SNG	FIXED-SATELLITE (space-to-Earth)	VSAT – SIT SNG

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

²⁾ ERC Report 25: European Table of Frequency Allocations and Utilisations covering the frequency range 9 kHz to 275 GHz, rev. Copenhagen, 2004.

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

12.75–13.25	FIXED FIXED-SATELLITE (Earth-to-space) Mobile Space research (deep space) (space-to-Earth)	MD Fixed links Applications of fixed- satellite service	FIXED FIXED-SATELLITE (Earth-to-space)	Fixed links Applications of fixed- satellite service
13.25–13.4	Earth exploration- satellite (active) AERONAUTICAL RADIONAVIGATION Space research (active)	MD Aeronautical radionavigation Active scientific applications	EARTH EXPLORATION- SATELLITE (active) AERONAUTICAL RADIONAVIGATION SPACE RESEARCH (active)	Aeronautical radionavigation Active scientific applications
13.4–13.75	EARTH EXPLORATION- SATELLITE (active) RADIOLOCATION SPACE RESEARCH Standard frequency and time signal- satellite (Earth-to-space)	MD Active scientific applications SRD for radiolocation	EARTH EXPLORATION- SATELLITE (active) RADIOLOCATION SPACE RESEARCH	MD Active scientific applications SRD for radiolocation Radiolocation
13.75–14	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Standard frequency and time signal- satellite (Earth-to-space) Space research	MD SRD for radiolocation	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Space research	MD SRD for radiolocation Radiolocation Applications of fixed- satellite service Passive scientific applications
14–14.25	FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Space research	VSAT SNG	FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Space research	VSAT SNG Applications of mobile-satellite service
14.25–14.3	FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Space research	VSAT SNG	FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Space research	VSAT SNG Applications of mobile-satellite service

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14.3–14.4	FIXED FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Radionavigation- satellite	VSAT	FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite	VSAT SNG Applications of fixed- satellite service Applications of mobile-satellite service
14.4–14.47	FIXED FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Space research (space-to-Earth)	VSAT	FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite	VSAT SNG Applications of fixed- satellite service Applications of mobile-satellite service
14.47–14.5	FIXED FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Radio astronomy ³⁾	VSAT Radio astronomy	FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite Radio astronomy ³⁾	

Article 3 Frequency band characteristics

(1) Described band is characterized by utilisation in the fixed-satellite, mobile-satellite and fixed services. A convergence happens within satellite services when fixed and mobile non-coordinated terminals communicate with stations on board of satellites operated in both fixed-satellite and mobile-satellite services. Above mentioned terminals are terminals with small antenna used particularly for one-way and two-way data communication.

(2) In accordance with footnote EU2 of the ERC Report²⁾ the band 13.4–14 GHz is shared by civil and non-civil applications.

Article 4 International obligations

Provisions of the Radio Regulations⁴⁾ (hereinafter only "RR") and provisions of HCM Agreement⁵⁾ apply to operation and coordination.

³⁾ In accordance with footnote 5.149 of the Radio Regulations shall users of the bands 14.47–14.5 GHz take all practicable steps to protect the radio astronomy service.

⁴⁾ Radio Regulations of the International Telecommunication Union, Geneva, 2004.

⁵⁾ 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.

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Part 2

Fixed-satellite service and mobile-satellite service

Article 5

Current conditions in fixed-satellite service and mobile-satellite service

(1) The band 12.5–12.75 GHz is used in the fixed-satellite service for transmission from satellites to Earth stations with very small antenna VSAT⁶⁾, to satellite interactive terminals SIT⁷⁾, to Earth OMNITRACS terminals of EUTELTRACS system and to terminals of ARCANET SUITCASE system. The band is not allocated to the mobile-satellite service.

(2) Use of the band 12.75–13.25 GHz by applications of the fixed-satellite service is guided by RR Annex⁸⁾. The band is not allocated to the mobile-satellite service.

(3) The band 14–14.25 GHz, may use in the fixed-satellite service for satellite transmission of news contributions SNG⁹⁾ and for other purposes, the Earth terminals with very small antenna VSAT and Earth terminals ARCANET SUITCASE and Earth OMNITRACS terminals of EUTELTRACS system in the mobile-satellite service. Operation of stations is possible on basis of the General Authorisation¹⁰⁾.

(4) The band 14.25–14.3 GHz may be used in the fixed-satellite as well as in the mobile satellite service for satellite transmission of news contributions SNG.

(5) The band 14.3–14.5 GHz may be used in the fixed-satellite as well as in the mobile satellite service for transmission of Earth terminals with very small antenna VSAT.

(6) The Office carries out national and international coordination.

Article 6

Information on future development in fixed-satellite service and mobile-satellite service

(1) In the band 14.3–14.5 GHz will, in accordance to CEPT Recommendation¹¹⁾, occur withdrawal of the fixed service and development of the satellite services. Operation of VSAT terminals on basis of General Authorisation is assumed.

(2) CEPT Decision¹²⁾ enabled development of Earth stations on board vessels, however this use will have no influence on operation in the Czech Republic.

(3) The bands 14–14,5 GHz (Earth-to-space), 10.7–11.7 GHz (space-to-Earth) and 12.5–12.75 GHz (space-to-Earth) are, according to CEPT Decision¹³⁾, designated for harmonised development of Earth stations on board aircraft.

⁶⁾ Abbreviation VSAT stands for Very Small Aperture Terminal.

⁷⁾ Abbreviation SIT stands for Satellite Interactive Terminal.

⁸⁾ Annex 30B of RR.

⁹⁾ Abbreviation SNG stands for Satellite News Gathering.

¹⁰⁾ General Authorisation No. VO-R/4/07.2005-17 to operate terminals for communication using satellites in the 10 to 30 GHz bands

¹¹⁾ Recommendation CEPT/ERC/REC 13-03 – The use of the Band 14.0–14.5 GHz for Very Small Aperture Terminals (VSAT) and Satellite News Gathering (SNG).

¹²⁾ Decision CEPT/ECC/DEC/(05)10 – ECC Decision of 24 June 2005 on the free circulation and use of Earth Stations on board Vessels operating in fixed satellite service networks in the frequency bands 14–14.5 GHz (Earth-to-space), 10.7–11.7 GHz (space-to-Earth) and 12.5–12.75 GHz (space-to-Earth).

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Part 3
Fixed service

Article 7
Current conditions in the fixed service

(1) As regards the fixed service the band 12.75–13.25 GHz is in Europe used by multipurpose radio-relay links. The length of particular point-point links is from 5 to 35 km.

(2) The band 12.75–13.25 GHz may be used by fixed links point-point and equipment in operation shall fulfil following conditions:

a) the channel separation is 28 MHz, whereas centre frequencies f_n and f_n' [MHz] of particular operating channels are in relation to the reference frequency $f_0 = 12\ 996$ MHz given by formulas

$$\begin{aligned} f_n &= f_0 - 259 + 28n \text{ in the lower part of the band and} \\ f_n' &= f_0 + 7 + 28n \text{ in the upper part of the band,} \\ &\text{where } n = 1, 2, 3, 4, 5, 6, 7 \text{ or } 8; \end{aligned}$$

b) or the channel separation is 7 MHz, whereas centre frequencies f_n and f_n' [MHz] of particular operating channels are in relation to the reference frequency $f_0 = 12\ 996$ MHz given by formulas

$$\begin{aligned} f_n &= f_0 - 248.5 + 7n \text{ in the lower part of the band and} \\ f_n' &= f_0 + 17.5 + 7n \text{ in the upper part of the band,} \\ &\text{where } n = 1, 2, 3 \text{ up to } 32; \end{aligned}$$

c) or the channel separation is 3.5 MHz, whereas centre frequencies f_n and f_n' [MHz] of particular operating channels are in relation to the reference frequency $f_0 = 12\ 996$ MHz given by formulas

$$\begin{aligned} f_n &= f_0 - 246.75 + 3.5n \text{ in the lower part of the band and} \\ f_n' &= f_0 + 19.25 + 3.5n \text{ in the upper part of the band,} \\ &\text{where } n = 1, 2, 3 \text{ up to } 64. \end{aligned}$$

The arrangement is in accordance with Recommendations ITU-R¹⁴⁾ and CEPT¹⁵⁾.

(3) Operating channels Nos. 2 and 4 for channel separation 28 MHz are designated for short-term utilisation. Both channels overlapping, according to above mentioned formulae, with channels Nos. 5 to 8 and Nos. 13 to 16 for channel separation 7 MHz, and with Nos. 9 to 16 and Nos. 25 to 32 for separation 3.5 MHz.

Article 8
Information on future development in the fixed service

In the band 14.3–14.5 GHz which is also allocated to the fixed service will, in accordance to CEPT Recommendation¹¹⁾, occur withdrawal of the fixed service and development of the satellite services. The band, however, is not used in the Czech Republic.

¹³⁾ Decision CEPT/ECC/DEC/(05)11 – ECC Decision of 24 June 2005 on the free circulation and use of Aircraft Earth Stations (AES) in the frequency bands 14–14.5 GHz (Earth-to-space), 10.7–11.7 GHz (space-to-Earth) and 12.5–12.75 GHz (space-to-Earth).

¹⁴⁾ Recommendation ITU-R F.497-6 – Radio-frequency channel arrangements for radio-relay systems operating in the 13 GHz frequency band.

¹⁵⁾ Recommendation CEPT/ERC/REC 12-02 – Harmonised radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 12.75 GHz to 13.25 GHz.

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Part 4
Mobile service

Article 9
Current conditions in the mobile service

The mobile service, which has allocated the band 12.75–13.35 GHz on secondary basis, is not used in the Czech Republic.

Article 10
Information on future development in the mobile service

No changes in utilisation of the band by this radiocommunication service on international and national level are expected.

Part 5
Earth exploration-satellite service and space research service

Article 11
Current conditions in Earth exploration-satellite service and space research service

(1) In accordance with RR footnotes¹⁶⁾, ¹⁷⁾ the Earth exploration-satellite (active) and space research (active) services shall not in the band 13.25–13.75 GHz cause harmful interference to the aeronautical radionavigation service or constrain its use or development.

(2) In accordance with RR footnote¹⁸⁾ the allocation of the band 13.4–13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.

Article 12
Information on future development in Earth exploration-satellite service and space research service

No changes in utilisation of the band by these radiocommunication services on international and national level are expected.

Part 6
Radio astronomy service

Article 13
Current conditions in the radio astronomy service

(1) The 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.

¹⁶⁾ Footnote 5.498A of RR.

¹⁷⁾ Footnote 5.501B of RR.

¹⁸⁾ Footnote 5.501A of RR.

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(2) In accordance with RR footnote³⁾ shall users of the band 14.47–14.5 GHz take all practicable steps to protect the radio astronomy service. This radiocommunication service is not used in the Czech Republic.

Article 14

Information on future development in the radio astronomy service

No changes in utilisation of the band by this radiocommunication service on international and national level are expected.

Part 7

Aeronautical radionavigation service

Article 15

Current conditions in the aeronautical radionavigation service

The use of the band 13.25–13.4 GHz by the aeronautical radionavigation service is limited, in accordance with RR footnote¹⁹⁾, to Doppler navigation aids.

Article 16

Information on future development in the aeronautical radionavigation service

No changes in utilisation of the band by this radiocommunication service on international and national level are expected.

Part 8

Radiolocation service

Article 17

Current conditions in the radiolocation service

In accordance with CEPT Recommendation²⁰⁾ the band 13.4–14.0 GHz, as regards civil usage, is used by short range devices for detecting movement and alert. Operation of stations is possible on basis of General Authorisation²¹⁾.

Article 18

Information on future development in the radio astronomy service

No changes in utilisation of the band by this radiocommunication service on international and national level are expected.

¹⁹⁾ Footnote 5.497 of RR.

²⁰⁾ Recommendation CEPT/ERC/REC 70-03 – Relating to the use of Short Range devices (SRD).

²¹⁾ General Authorisation No. VO-R/10/08.2005-24 for the use of radio frequencies and for the operation of short range devices.

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

Part 9
Standard frequency and time signal-satellite service

Article 19

Current conditions in the standard frequency and time signal-satellite service

The band 13.4–14 GHz is allocated to the standard frequency and time signal-satellite (Earth-to-space) service on secondary basis. The allocation is not used in the Czech Republic.

Article 20

Information on future development in the standard frequency and time signal-satellite service

No changes in utilisation of the band by this radiocommunication service on international and national level are expected.

Part 10
Final provision

Article 21

Effect

This part of the Radio Spectrum Utilisation Plan comes into effect on 1 April 2006.

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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/18/12.2005-46 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 12.5 GHz to 14.5 GHz by radiocommunication services.

The part of the plan is based on the principles embedded in the Act and in European legislation, especially in Directive 2002/21/EC of the European Parliament and of the Council 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 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 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 amended by current utilisation of 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. The major applications are listed here and more details about applications are in relevant articles on individual radiocommunication services.

Article 3 presents characteristics of the frequency band together with information common to radiocommunication services using the described band.

Article 4 contains international obligations which in this case are determined by the Radio Regulations of the International Telecommunication Union and the HCM Agreement, which replaced Agreement Berlin 2003.

The most significant use of the band is operation of satellite services described in the Part 2. Information on other radiocommunication services having allocations in the band is contained in subsequent Parts.

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 a draft Part No. PV-P/18/XX.2005-Y of the Radio Spectrum Utilisation Plan together with a call for comments on 16 November 2005.

During this public consultation the Office received minor comments regarding clarification of information on navigation equipment in Article 15.

David Stádník
Chairman of the Council
of the Czech Telecommunication Office
<signed>