

Prague, 18 October 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/9/10.2005-39
of the Radio Spectrum Utilisation Plan
for the frequency band 39.5–43.5 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 39.5 GHz to 43.5 GHz 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 (GHz)	Current conditions		Future harmonisation ²⁾	
	Allocation	Utilisation	Allocation	Utilisation
39.5–40	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth exploration- satellite (space-to- Earth) ³⁾ ⁴⁾	MD	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth exploration- satellite (space-to- Earth)))	Applications of fixed- satellite service MD

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.

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40–40.5	EARTH EXPLORATION- SATELLITE (Earth-to space) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESARCH (Earth-to-space) Earth exploration- satellite (space-to- Earth) 4)	MD	EARTH EXPLORATION- SATELLITE (Earth-to space) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESARCH (Earth-to-space) Earth exploration- satellite (space-to- Earth) 4)	Applications of fixed- satellite service MD
40.5–42.5	FIXED FIXED-SATELLITE (space-to-Earth) BROADCASTING BROADCASTING- SATELLITE)	MWS	FIXED FIXED-SATELLITE (space-to-Earth) BROADCASTING BROADCASTING- SATELLITE)	MWS Applications of fixed- satellite service
42.5–43.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile RADIO ASTRONOMY)	MWS	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile RADIO ASTRONOMY)	MWS Applications of fixed- satellite service Radio astronomy

Article 3 Frequency band characteristics

The band is allocated on primary basis to terrestrial and space services. In Europe the priority is given to development of terrestrial services, particularly to multimedia wireless systems in the fixed service. Development of new applications in the band is foreseen, such as high-density applications in the fixed or fixed-satellite services or broadband systems in the mobile service. Development is heading towards applications smoothing the differences between radiocommunication services. Use of the band by multimedia wireless systems will be preferred in the Czech Republic.

³⁾ In accordance with provision 5.547 of the Radio Regulations the bands 37-40 GHz and 40,5-43,5 GHz are available for high-density applications in the fixed service. Due to development of high-density applications in the fixed-satellite service in the bands 39.5-40 GHz and 40.5-42 GHz there may occur constrains to high-density applications in the fixed service in the future.

⁴⁾ In accordance with provision 5.516B of the Radio Regulations the band 39.5-40.5 GHz is identified for use by high-density applications in the fixed-satellite service (HDFSS). This identification does not preclude the use by applications in other primary services and does not establish priority among users.

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Article 4
International obligations

Provisions of the Radio Regulations⁵⁾ (hereinafter „RR“) apply to operation and coordination.

Part 2
Fixed service

Article 5
Current conditions in the fixed service

(1) The band 39.5–40.5 GHz is not used by the fixed service and according to the CEPT Decision⁶⁾ the development of the fixed service is not foreseen.

(2) The band 40.5–43.5 GHz is used by microwave systems for TV signal distribution (MVDS) and can be, according to the CEPT Decision⁷⁾, utilised by digital multimedia wireless systems (MWS). Band is divided to 2 × 6 sub-bands. 2 sub-bands (radio channels) of width of 250 MHz separated by 1500 MHz will be granted to the operator in the geographically demarked location. Procedure of allocating to the operators is following: A-A', E-E' and C-C'. Sub-bands B-B', D-D' and F-F' are left as reserve for future development of the technology. Their utilisation will be decided according to experience with already allocated sub-bands.

Sub-band	Frequency [GHz]
A	40.50–40.75
B	40.75–41.00
C	41.00–41.25
D	41.25–41.50
E	41.50–41.75
F	41.75–42.00
A'	42.00–42.25
B'	42.25–42.50
C'	42.50–42.75
D'	42.75–43.00
E'	43.00–43.25
F'	43.25–43.50

(2) Sub-bands are designated for utilisation by fixed links point-multipoint or multipoint-multipoint (MESH) and next conditions apply:

- a) duplex mode TDD or FDD with duplex separation of 1500 MHz;
- b) at least quadrature digital modulation;
- c) if the return channel is using frequencies in this band they shall be located in the sub-band allocated to the operator.

(3) Operation of user terminals will be authorised on basis of general authorisation.

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

6) CEPT/ERC/DEC/(00)02 – [ERC Decision of 27 March 2000 on the use of the band 37.5–40.5 GHz by the fixed service and Earth stations of the fixed-satellite service (space-to-Earth)].

7) CEPT/ERC/DEC/(99)15 – [ERC Decision of 1 June 1999 on the designation of the harmonised frequency band 40.5 to 43.5 GHz for the introduction of Multimedia Wireless Systems (MWS) including Multipoint Video Distribution Systems (MVDS)].

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(4) Regarding the characteristics of radio waves propagation in the frequency band and limited coverage, the coordination of operated equipment is needed only for adjacent channels of different operators in the same locality. National coordination is carried out by operators themselves and the Office can, in the individual authorisation for operation of transmitting equipment, set down the maximal spectral density of e.i.r.p. in accordance with the CEPT Recommendation⁸⁾. International coordination is carried out by the Office.

Article 6

Information on future development in the fixed service

Operation of the current analogue microwave systems for TV signal distribution MVDS in the band will be terminated within 12 months of the date of introduction in the locality of a new system fulfilling the above mentioned conditions.

Part 3

Fixed-satellite service

Article 7

Current conditions in the fixed-satellite service

Utilisation of the band 39.5–40.5 GHz in the fixed-satellite service by coordinated and non-coordinated stations is in the Europe harmonised and set down by the CEPT Decision). CEPT identifies the band as suitable for shared operation of military and civil satellite application. The band 40.5–42.5 GHz preferred utilisation is, in accordance with the CEPT Decision⁹⁾, by multimedia wireless systems. Non-coordinated earth stations in the fixed-satellite service or broadcasting-satellite service can not require protection against the stations in the fixed or broadcasting service.

Article 8

Information on future development in the fixed-satellite service

Changes in the utilisation of the band by the service are not envisaged on international or national levels, but development of satellite applications is foreseen in the future.

Part 4

Mobile service

Article 9

Current conditions in the mobile service

The bands 39.5–40.5 GHz and 42.5–43.5 GHz are allocated to the mobile service as a primary. Neither band is currently used by civil applications.

⁸⁾ CEPT/ECC/REC/(01)04 –Recommended guidelines for the accommodation and assignment of Multimedia Wireless Systems (MWS) in the frequency band 40.5–43.5 GHz.

⁹⁾ CEPT/ECC/DEC/(02)04 – [ECC Decision of 15 March 2002 on the use of the band 40.5–42.5 GHz by terrestrial (fixed service/broadcasting service) systems and uncoordinated Earth stations in the fixed satellite service and broadcasting satellite service (space-to-Earth).

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Article 10

Information on future development in the mobile service

ERC Report) shows the bands allocated to the mobile service that are suitable for future development of broadband mobile systems, for example for distribution of video data to mobile terminals. In the Czech Republic is preferred development of the systems in the fixed service in the band 42.5–43.5 GHz according to the CEPT Decision). According to future development of the technology of the systems in the mobile service the utilisation of the band by the mobile service will be considered again.

Part 5

Radio astronomy service

Article 11

Current conditions in the radio astronomy service

Protection of the radio astronomy service against the harmful interference in the band 42.5–43.5 GHz is set down by the provision of the RR¹⁰). In the Czech Republic no observations in this band are performed.

Article 12

Information on future development in the radio astronomy service

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

Part 6

Earth exploration satellite service and space research service

Article 13

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

The band is not used by the Earth exploration-satellite service and space research service in the Czech Republic for the time being.

Article 14

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

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

¹⁰) Provision 1.149 of Radio Regulations.

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Part 7
Broadcasting service

Article 15
Current conditions in the broadcasting service

The band 40.5–42.5 GHz is allocated to the broadcasting service as well, but currently not used by this service.

Article 16
Information on future development in the Earth exploration-satellite service and space research service

Taking into account the priority of two-way multimedia wireless systems in Europe, utilisation of the broadcasting service in the Czech Republic is not envisaged due the one-way character of the service.

Part 8
Final provisions

Article 17
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/9/10.2005-39 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 39.5 GHz do 43.5 GHz 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.

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 with the information common to radiocommunicaton services which utilise described band.

Article 4 contains international obligations, determined by Radio Regulations of the International Telecommunication Union, which set the rules for spectrum management provided by the Office.

In Article 5 the Office sets down the conditions for civil utilisation of the described bands and sub-bands (eg. frequencies of smaller range than bands showed in the Plan of the frequency bands allocations). There described conditions are the basic ones and the Office could regarding actual configuration set down other technical parameters in individual authorisation. The principles for sharing and coordination of particular equipments are laid down. For information on correspondence of parameters with parameters written in international documents, the links to the documents are written in the footnotes.

Article 6 contains information on the foreseen end of MVDS operation.

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 at the discussion site the draft of Part No. PV-P/9/xx.2005-y of the Radio Spectrum Utilisation Plan together with the Call for comments on 25 July 2005.

During the public consultation the Office received the comments regarding editorial changes.

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Full wording of comments and their settlement is in the table of the comments settlement published on the discussion site.

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