Prague, 29 August 2012 Ref.: ČTÚ-68 903/2012-605

On the basis of results 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 under Section 10 of the Act No. 500/2004 Coll., Administrative Regulations, as amended, on the basis of the decision of the Council of the Czech Telecommunications Office (hereinafter "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/10/08.2012-11 of the Radio Spectrum Utilisation Plan for the frequency band 470-960 MHz.

Article 1 Introductory provision

This part of the Radio Spectrum Utilisation Plan sets down technical characteristics and conditions of use of radio spectrum in the frequency band from 470 MHz to 960 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 Plan¹).

Part 1 General information on the frequency band

Pand (MHz)	Current	conditions	Future ha	Future harmonisation ²)		
Band (MHZ)	Allocation	Utilisation	Allocation	Utilisation		
470-645	BROADCASTING Land mobile	Television transmission Wireless microphones	BROADCASTING Mobile ³) ⁴) ⁵)	Digital transmission and other broad- casting service applications of SAB/SAP Wireless microphones		

Article 2 Frequency bands

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

²) ERC Report 25: European Table of Frequency Allocations and Applications in the frequency range 9 kHz to 3000 GHz, rev. Lille, 2011.

³) According to footnote 5.306 of the Radio Regulations, the band 608–614 MHz is also allocated to the radio astronomy service on a secondary basis.

⁴) According to footnote 5.149 of the Radio Regulations, users of the band 608–614 MHz shall take all practicable steps to protect the radio astronomy service.

645-694	BROADCASTING Land mobile	Television transmission Wireless microphones	BROADCASTING Mobile	Digital transmission and other broad- casting service applications SAB/SAP Wireless microphones
694-790	BROADCASTING Land mobile	Television transmission Wireless microphones	BROADCASTING MOBILE	Digital transmission and other broad- casting service applications Mobile electronic communication services SAB/SAP Wireless microphones
790-838	BROADCASTING MOBILE except aeronautical mobile ⁶) ⁷) ⁸)	MD Wireless microphones	MOBILE	IMT/IMT-A Wireless microphones
838-862	BROADCASTING MOBILE except aeronautical mobile ⁶) ⁷) ⁸)	Wireless microphones	MOBILE 6) ⁷) ⁸)	IMT/IMT-A
862-890	MOBILE except aeronautical mobile	PMR/PAMR GSM-R GSM SRD	MOBILE 7)	SRD PMR/PAMR GSM-R GSM/IMT/IMT-A
890-942	MOBILE except aeronautical mobile Radiolocation ⁷)	PMR/PAMR GSM GSM-R	MOBILE ⁷)	PMR/PAMR GSM/IMT/IMT-A GSM-R
942-960	MOBILE except aeronautical mobile	GSM	MOBILE 7)	GSM/IMT/IMT-A

Article 3 **Frequency band characteristics**

(1) The 470-862 MHz band, known as UHF band, is characterised by convenient conditions of radio waves propagation. Originally it was used mainly for television broadcasting. Following the utilisation of other distribution platforms (especially cable television networks, satellite, IPTV), following the transition from analogue to digital television broadcasting and TV and following content consumption changes by users, amount of

⁵) According to footnote 5.291A of the Radio Regulations, the band 470–494 MHz is also allocated to the radiolocation service on a secondary basis, the use is limited to the operation of radar sensors of wind direction and velocity.

⁶⁾ Footnote 5.316B of the Radio Regulations.

⁷) ⁸) Footnote 5.317A of the Radio Regulations.

Footnote 5.316A of the Radio Regulations effective form 1 January 2013.

spectrum designated for terrestrial television broadcasting in the UHF band is being gradually reduced. Decisive for the choice of how to use the UHF band are economic parameters. For this reason, the band 790-862 MHz (the so-called digital dividend I) has been designated for mobile service (mobile networks) in Europe and further changes will bring the World Radiocommunication Conference⁹), which will harmonise the band use with other regions¹⁰) and will iniciate further band rearrangement (digital dividend II). Use of the radio spectrum by television broadcasting, which doesn't bring such economic outcomes like mobile networks, will therefore be justified in cases where socio-economic point of view applies.

(2) So far, the band 880-960 MHz is the main band for operation of public nationwide network providing electronic services using by mobile networks. To these networks, the convergence of electronic communications services applies and they are considered as applications of mobile, fixed and broadcasting services.

Article 4 International obligations

Provisions of the Radio Regulations¹¹) (hereinafter only "RR"), European Commission (hereinafter only "Commission") harmonisation documents, provisions of HCM Agreement¹²) and Geneva Agreement, 2006¹³) apply to the utilisation and coordination of radio frequencies.

Part 2 Mobile service

Article 5

Current conditions in the mobile service

(1) The band 470-790 MHz is allocated to the land mobile service¹⁴) on a secondary basis. The band 790-960 MHz is allocated to the mobile service, except aeronautical mobile, on a primary basis.

(2) The use of the 470-786 MHz band is possible according to the CEPT Recommendation¹⁵) for wireless microphones. In the 786-862 MHz band, the use of frequencies by wireless microphones is time- and power-limited in accordance with the General Authorisation¹⁶), which lays down detailed conditions of radio spectrum use.

⁹) WRC-15 – World Radiocommunication Conference 2015. It takes place in 2 to 27 November 2015.

 ¹⁰) ITU-R regions. In other regions, the 700 MHz band has been already allocated to the mobile service on primary basis.
 ¹¹) Radio Regulations, International Telecommunication Union, Geneva, 2008.

 ⁽a) France, Hungary, the Netherlands, Croatia, Italy, Liechtenstein, Lithuania, Luxembourg, Montenegro, 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, Zagreb, 2010.

 ¹³) Regional Agreement relating to the planning of the digital terrestrial broadcasting service in Region 1 (parts of Region 1 situated to the west of meridian 170° E and to the north of parallel 40° S, except the territory of Mongolia) and in the Islamic Republic of Iran, in the frequency bands 174–230 MHz and 470–862 MHz (Geneva, 2006).

¹⁴) Radiocommunication service defined by provision No. 1.26 of RR.

¹⁵) Recommendation CEPT/ERC/REC 70-03 – Relating to the use of Short Range Devices (SRD).
¹⁶) General Authorisation No. VO-R/10/04 2012-7 for the use of radio frequencies and for the or

¹⁶) General Authorisation No. VO-R/10/04.2012-7 for the use of radio frequencies and for the operation of transmitting radio Short Range Devices.

(3) The band 790-862 MHz is designated according to Commission Decision¹⁷) for operation of electronic communications networks. In the sub-bands 791-821/832-862 MHz, the number of rights is limited and following conditions apply:

- a) the sub-band 790-791 MHz is the guard band;
- b) conditions for utilisation of radio frequencies are determined by the Annex to the Commission Decision¹⁷) which sets down technical parameters called block edges spectral masks and includes the limit values for in-block and out-of-block emissions as well as conditions for fulfilment of these parameters;
- c) paired sub-bands 791-821/832-862 MHz are designated for operation with frequency division duplex FDD¹⁸). Duplex separation is 41 MHz. The sub-band 791-821 MHz is designated for transmission of base stations, the sub-band 832-862 MHz for transmission of terminals;
- d) in the above described sub-bands, six duplex pairs with 5 MHz blocks are defined. Block edge frequencies are given by formulas

 f_n [MHz] = 791 + 5n, in lower part of the band

 f_n [MHz] = f_n + 41, in upper part of the band,

where n = 0 up to 6;

- e) about the utilisation of the non-paired frequency 821-832 MHz sub-band, the Office will decide pursuant to European harmonisation;
- f) the frequency sub-bands under letters c) and d) may be used by holders of radio frequencies assignments;
- g) number of rights for utilisation of radio frequencies in the sub-band described under letter c) is given by the number of six duplex blocks pursuant to letter d). These rights are geographically defined by the whole territory of the Czech Republic;
- h) minimum transferable unit is right for use of single duplex pair of frequency blocks pursuant to letter d);
- the use of frequencies by user's terminals is possible on the basis of the General Authorisation¹⁹);
- j) by implementation of networks within framework of the mobile radiocommunication service, the international obligations described in Article 7, paragraph 2, are not affected;
- assignment holder is obliged to respect the agreements concluded by the Office with neighboring countries administrations;
- I) the analogous conditions as listed in Article 5, paragraph 10, letter j), apply to the assignment holder of frequencies from the band described under letter d). Both international as well as national coordination with operators of transmitting radio equipment beyond the sub-bands described under letter d) are carried out by the Office upon request of assignment holder or the Office may authorise the assignment holder to carry out the coordination.

(4) The sub-band 862-863 MHz cannot be used. The Office will decide on its possible utilisation in accordance with the European harmonisation.

¹⁷) Commission Decision 2010/267/EU of 6 May 2010 on harmonised technical conditions of use in the 790–862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union.

¹⁸) Abbreviation FDD stands for Frequency Division Duplex.

¹⁹) General Authorisation No. VO-R/1/12.2008-17 for the operation of user terminals in the GSM and IMT/UMTS networks.

(5) The sub-band 863-870 MHz may be used in accordance with the Commission Decision²⁰) and CEPT Recommendation¹²) by short range devices. Detailed conditions for use of radio frequencies including technical parameters are set down by the General Authorisation¹³).

(6) The sub-bands 870-872/915-917 MHz MHz are guard bands and currently they are not used. On their possible utilisation will be decided by the Office in accordance with the European harmonisation.

(7) The sub-bands 872-875.8/917-920.8 MHz are designated for use by wideband digital technology in the Czech Republic. Number of rights for use of radio frequencies is limited and the sub-bands are used by holder of assignment for operation of countrywide network providing publicly available electronic communications service and following conditions apply:

- a) only such technology is allowed which is listed in CEPT Decision²¹) or which complies the same spectral mask, i.e. uses radio spectrum from the radiation point of view in the same way and does not affect neighbouring bands more than technologies listed in this Decision. Affecting of neighbouring bands is always verified by trial operation;
- b) maximum e.r.p. of base stations is 200 W;
- c) duplex separation is 45 MHz, the 872-875.8 MHz sub-band is designated for transmission of terminals, the 917-920.8 MHz sub-band for transmission of base stations;
- assignment holder is authorised in the framework of the assignment, while observing conditions listed under letters a) to c), to plan by himself the particular radio frequencies for individual base stations, if takes into account international coordination conditions;
- e) the use of frequencies by terminals of wide band digital technologies is possible on the radio frequencies assigned to base station operator by the individual authorisation for use of radio frequencies on the basis of General Authorisation²²);
- f) the wide band digital technologies may be used in the sub-bands 872-875.8/917-920.8 MHz provided that they will not cause interference to radiocommunication services, technologies and applications, which are already operated in the band or in the adjacent bands in the moment of deployment of the wide band digital technology into operation, and which are operated in accordance with national and international regulations and in accordance with electromagnetic compatibility regulations, and cannot claim protection from them. Operator of wide band digital technology has the obligation to eliminate the interference on his expenses and even cease operation of interfering transmitting radio equipment.
 - (8) The sub-bands 875.8-876/920.8-921 MHz are guard bands.

(9) The sub-bands 876-880.1/921-925.1 MHz are designated for railway transport communication GSM-R systems in accordance with CEPT Decision²³) and CEPT Recommendation²⁴) and following conditions apply:

²⁰) Commission Decision of 30 June 2010 amending Decision 2006/771/EC on harmonisation of the radio spectrum for Short Range Devices.

 ²¹) Decision CEPT/ECC/DEC/(04)06 on the availability of frequency bands for the introduction of Wide Band Digital Land Mobile PMR/PAMR in the 400 MHz and 800/900 MHz bands, amende 9 December 2011.

 ²²) General Authorisation No. VO-R/20/08.2005-32 for operation of broadband digital transmitting equipment in the 400 MHz and 800/900 MHz bands.

- a) duplex separation is 45 MHz, the sub-band 876-880.1 MHz is designated for terminals transmission, the sub-band 921-925.1 MHz for base stations transmission;
- b) maximum e.r.p. of base stations is 350 W;
- c) the sub-bands 876.1-880.1/921.1-925.1 MHz are designated for operation with channel spacing of 200 kHz and centre frequencies of channels are given by formulas

 f_n [MHz] = 890 + 0.2(n - 1024), in lower duplex band,

 f_n [MHz] = f_n + 45, in upper duplex band,

where n = 955 up to 974;

- d) the carrier radio frequencies 876.0125 MHz, 876.025 MHz, 876.0375 MHz, 876.05 MHz and 876.0625MHz are designated for operation in direct mode (DMO) with channel separation of 12.5 kHz;
- e) operator of the GSM-R network can be only the legal entity, which is mandated according to special legal regulation²⁵) to manage the state property comprising the rail transport way and which is awarded by the individual authorisation for radio frequencies utilisation:
- f) the GSM-R network can be employed only for purposes of ensuring railway serviceability, its operation and railway transport operation²⁶);
- g) the use of frequencies by user terminals is possible on basis of the General Authorisation²⁷);
- h) holder of individual authorisation for radio frequency utilisation for GSM-R networks is obliged to observe the provision of paragraph 15, letter j), on mutual coordination with other operators of base stations similarly as holder of radio frequencies assignment.

(10) The sub-bands 880.1-914.9/925.1-959.9 MHz are in accordance with the European Union harmonisation documents²⁸), ²⁹) designated for operation of communication systems providing electronic communications services using technologies of GSM standard or such technologies the operation of which is compatible³⁰) with operation of GSM systems and complies with conditions of above mentioned documents (hereinafter only compatible technologies)³¹). Number of rights for use of radio frequencies is limited. The sub-bands are utilised by holders of assignments and may be used for operation of countrywide networks providing publicly accessible electronic communications service and following conditions apply:

²³) Decision CEPT/ECC/DEC/(02)05 of 5 July 2002 on the designation and availability of frequency bands for railway purposes in the 876-880 MHz and 921-925 MHz bands, amended 26 June 2009.

 ²⁴) Recommendation CEPT/ERC T/R 25–09 – Designation of frequencies in the 900 MHz band for railway purposes.
 ²⁵) Act No. 77/2002 Coll., on the Joint-stock company České dráhy, on the State organisation Správa železniční dopravní cesty, and on change of Act No. 266/1994 on railways, as amended, and on Act. No. 77/1997, Coll., on the state enterprise, as amended.

²⁶) Act No. 266/1994 on railways, as amended.

 ²⁷) General Authorisation No. VO-R/19/08.2005-31 for the operation of GSM-R network User terminals.
 ²⁸) Commission Implementing Decision 2011/251/EU of 18 April 2011 amending Decision 2009/766/EC on the European electronic communications services in the Community.

²⁹) Directive 2009/114/EC of the European Parliament and of the Council of 16 September 2009 amending Council Directive 87/372/EEC on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community.

³⁰) Report CEPT No. 40 – Report from CEPT to the European Commission in response to task 2 of the mandate to CEPT on the 900/1800 MHz bands "Compatibility study for LTE and WiMAX operating within the bands 880–915/925– 960 MHz and 1710–1785/1805–1880 MHz (900/1800 MHz bands).

³¹) Technologies falling into mobile communications systems family marked by abbreviation IMT and IMT-A.

- a) duplex separation is 45 MHz, the sub-band 880.1-914.9 MHz is designated for terminal transmission, the sub-band 925.1-959.9 MHz for base station transmission;
- b) basic channel separation is 200 kHz;
- c) centre frequencies of channels f_{n, f_n} are given by formulas

 f_n [MHz] = f_n + 45, in upper duplex band,

whereas f_{n} is frequency in the lower duplex band, defined in the sub-band 880.1-889.9 MHz by the formula

 f_n [MHz] = 890 + 0.2(n - 1024), where n = 975 up to 1023,

and in the adjacent sub-band 889.9-925.1 MHz defined by the formula

 f_n [MHz] = 890 + 0.2n, where n = 0 up to 124;

- d) the assigned channels may be joined into blocks of integer multiples of 200 kHz channel size for purposes of introduction of compatible technologies operation;
- e) the number of rights for use of radio frequencies is given by number of duplex channels pursuant to letter c), i.e. 174 duplex channels;
- f) if bilateral or multilateral agreements between operators of neighbouring networks do not exist, the holders of assignments who implement the compatible technologies, are obliged to create the guard sub-band of 200 kHz between the block edge of compatible technology and the edge of the nearest GSM or GSM-R channel³⁰), ³²), ³³), ³⁴), ³⁵);
- g) maximum e.r.p. of the GSM base station is 350 W;
- h) holder of assignment is authorised to designate by himself the individual radio frequencies for particular base stations taking into account, according to the CEPT Recommendation³⁶), the agreements concluded by the Office with the administrations of the neighbouring countries and mutual agreements with holders of assignments of the neighbouring countries, about which the Office was informed and approved them;
- the use of frequencies by user's terminals is possible on the basis of the General Authorisation¹⁶);
- j) holder of assignment is obliged to coordinate by himself the use of assigned radio frequencies with other assignments holders, whose networks use radio frequencies adjacent to assigned frequencies, or use also other radio frequencies with which the coordination is necessary. Data for such coordination will provide the Office on the basis of assignment holder request. Assignment holder solves in cooperation with other assignments holders also cases of the mutual interference between networks;
- k) holder of individual authorisation for use of frequencies, who intends to change the transmitting parameters of base station or plans to establish base station, is obliged

 ³²) Report CEPT No. 41 – Report from CEPT to the European Commission in response to Task 2 of the Mandate to CEPT on the 900/1800 MHz bands "Compatibility between LTE and WiMAX operating within the bands 880–915/925–960 MHz and 1710–1785/1805–1880 MHz (900/1800 MHz bands) and systems operating in adjacent bands".

³³) ECC Report No. 96 – Compatibility between UMTS 900/1800 and systems operating in adjacent bands, Krakow, March 2007.

³⁴) ECC Report No. 82 – Compatibility study for UMTS operating within the GSM 900 and GSM 1800 frequency bands, Roskilde, May 2006.

³⁵) Annex of the Commission Implementing Decision 2011/251/EU of 18 April 2011 amending Decision 2009/766/EC on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community.

³⁶) Recommendation CEPT/ECC/REC/(05)08 – Frequency planning and frequency coordination for the GSM 900, GSM 1800, E-GSM and GSM-R land mobile systems.

to adopt operational and technical measures ensuring compatibility with distance measuring systems DME³⁷) operated within the aeronautical radionavigation service framework the band above 960 MHz. Details about dislocation of the aeronautical radionavigation service equipment will provide the Office on the basis of individual authorisation holder request;

international coordination³⁸) and national coordination with operators of other radio I) equipment outside of the GSM networks and compatible technologies is carried out by the Office on the basis of assignment holder request or the Office can authorise holder of assignment to carry out coordination.

Article 6

Information on future development in the mobile service

(1) In the sub-bands 880.1-914.9 MHz/925.1-959.9 MHz, used by GSM networks, the implementation of networks providing electronic communication services using higher generation technologies is expected.

(2) The band 790-862 MHz is designated for providing of broadband access electronic communications services in accordance with Article 5, paragraph 3, and Government Resolution³⁹). This is why other parts of the band will be released from operation of television transmitters in the broadcasting service. Other possible use of the non-paired frequency sub-band 821-832 MHz will be specified subsequently⁴⁰), ⁴¹) in the sense of CEPT Reports⁴²), ⁴³) and particularly on the basis of development in neighbouring countries.

(3) New edition of the Regulations⁴⁴) by extending the list of countries mentioned in the note of the Rules⁴⁵) the name of the Czech Republic allows use of the band 470-790 MHz in the mobile service on a secondary basis for ancillary applications for the broadcasting service). Change has been adopted by WRC-12.

(4) World Radiocommunication Conference WRC-12 adopted conclusions⁴⁶) on future priority allocation of band 694-790 MHz to land mobile service, subject to completion of sharing studies among systems in the land mobile services and services that currently have allocation in the band, i.e., in the case of the Czech Republic, broadcasting services. Co-existence studies prepares within ITU group JTG 4-5-6-7 (Joint Task Group) established to prepare proposals on the issue of identification of additional bands for IMT and digital dividend II issue, and to carry out technical studies and sharing proposing any regulatory

 ³⁷) Abbreviation DME stands for Distance Measurement Equipment.
 ³⁸) Recommendation ECC/REC/(08)02 – Frequency planning and frequency coordination for the GSM 900 (including E-GSM)/UMTS900. GSM 1800/UMTS 1800 land mobile systems.

³⁹) Resolution of the Czech Republic Government No. 78 of 26 January 2011 on the Czech Telecommunication Office procedures for management of the selected parts of radio spectrum with focus to support providing broadband access services in period till 2012.

⁴⁰) Electronic communications network alternatives with restricted (limited) block edge mask or radiated power reduction are considered.

⁴¹) The non-exclusive use for professional SAP/SAB applications is also considered.

⁴²) CEPT Report No. 30 - Report from CEPT to the European Commission in response to the Mandate on "The identification of common and minimal (least restrictive) technical conditions for 790-862 MHz for the digital dividend in the European Union".

⁴³) CEPT Report No. 31 – Report from CEPT to the European Commission in response to the Mandate on "Technical considerations regarding harmonisation options for the digital dividend in the European Union - Frequency (channelling) arrangements for the 790-862MHz band".

⁴⁴) Effective from 1 January 2013.

⁴⁵) Footnote 5.296 of the Radio Regulations. The WRC-12 conference extended the list of countries of the name Czech republic.

⁴⁶) Agenda aitems 1.1 and 1.2 WRC-15: Resolution 232 (WRC-12) and Resolution 224 (rev. WRC-12) on the approach in the digital dividend II band.

steps to meet WRC-15 agenda items. The use of the allocation in the Czech Republic will be decided in accordance with the latest developments in the field of electronic communications, in accordance with European and national policies of the development of electronic communications and in accordance with other documents relating to the use of the band. The allocation will be decided by the Conference WRC-15⁹), i.e. it is assumed that it will not change before 31 December 2016. This change will cover global harmonisation, allowing to spectrum available for mobile broadband extend the radio communications.

(5) Due to the termination of use of the bands 872-875.8 / 917-920,8 MHz, future use of the band will be decided in accordance with European harmonisation and national needs.

Part 3 **Broadcasting service**

Article 7 Current conditions in the broadcasting service

(1) The band 470-862 MHz is allocated to the broadcasting service on the primary basis and is used by digital terrestrial TV broadcasting.

(2) International obligations relating to the band utilisation arise from membership in the European Community and from membership in the ITU⁴⁷). Other utilisation of the band governs the Geneva Agreement, 2006¹⁰) and agreements of national administrations, which details condition of spectrum utilisation in specific cases.

(3) The 470-790 MHz band is arranged into 40 radio channels with bandwidth channel 8 MHz, marked by numbers 21 to 60. The channels are defined by frequencies fmin and f_{max} and aplies:

$$f_{min} = 470 + 8(n - 21),$$

$$f_{max} = 470 + 8(n - 20),$$

where n = 21, 22 až 60.

(4) For the nationwide broadcasting networks, four assignment of radio frequencies (block allocations; hereinafter referred to as "assignment") for networks for the provision of publicly available electronic communications services have been allocated. The assignments include GE-06 allotments, one broadcast network is designed for the transmission of public service multiplex⁴⁸). Assignment holder is authorised within the allotment to use one or more transmitting devices, provided intensity of the electromagnetic field on the borders of the allotment shall not exceed the specified level in accordance with the agreement or a level that has been coordinated individually.

(5) Other radio channels necessary to ensure the required coverage area or population using networks described in paragraph 4, which can not be satisfied within existing allotments, are granted by the Office if justified based on request on individual authorisation to use radio frequencies and based on the successful coordination.

(6) Use of frequencies allocated by the Geneva Agreement, and use of further radio channels, which are usable provided successful international coordination, is possible only on time limited period and only on individual authorisation. Following condition apply:

 ⁴⁷) Abbreviation ITU stands for International Telecommunication Control.
 ⁴⁸) Section 3 of the Law No. 483/1991 Sb., on the Czech Televison, as amended.

- a) individual authorisation is granted for operation of publicly available electronic communication services for transmission of terrestrial digital television broadcasting (hereinafter "DVB-T transmission") in accordance with technical conditions of the Geneva Agreement;
- b) period of time of use of radio frequencies is limited by 31st December 2017;
- c) new assignments of radio frequencies which include allotments in accordance with Geneva Agreement, and which are intended for regional or nationwide DVB-T transmission, will not be granted until adoption of ways and time schedule of digital dividend II implementation (adoption on future use of the 694-790 MHz band by mobile networks). This approach takes into account the process of preparation of changes⁴⁶) and respecting existing spectrum rights resulting from assignment of radio frequencies in accordance with paragraph 4.

(7) For transmission using more advanced technologies than DVB-T, the Office have allocated nationwide radio channels No. 22, 24, 26, 27 and 31. These channels cannot be allocated to other purpose. The way of authorisation and the date of use of the channels will be determined in accordance with results of international agreements and national decision.

(8) Geneva allotments for each geographic area are stated in annex 1 of this document. Geographic specification of the allotments is stated in annex 2.

Article 8 Information on future development in the broadcasting service

(1) In geographic areas with unused parts of radio spectrum in the broadcasting service⁴⁹), future use of advanced intelligent communication systems is expected⁵⁰). Introduction of such systems will be possible after adoption European harmonised conditions.

(2) Development of advanced technologies) utilising spectrum more efficiently is expected.

(3) Article 6 informs in paragraph 4 on future use of the 694-790 MHz band by land mobile radiocommunication service.

(4) Future way of authorisation of unused frequencies in the 694-790 MHz band will be decided by the Office as a result of adoption of a decision on the use of the band.

Part 4 **Radiolocation service**

Article 9 Current conditions in the radiolocation service

The band 470-494 MHz is also allocated to the radiolocation service according to RR footnote⁵¹) on secondary basis but for operation of wind direction and speed sensors only.

 ⁴⁹) White spaces, white spots, interleaved spectrum.
 ⁵⁰) Cognitive radio systems are expected to be deployed. Preparation of conditions on spectrum sharing is underway in the ITU, CEPT, EC and other bodies. Systems will use sharing approach using geolocation databases.

⁵¹) Footnote No. 5.291A of RR.

Article 10 Information on future development in the radiolocation service

Future use of the band 494-942 MHz by the radiolocation service is not expected.

Part 5 Radio astronomy service

Article 11 Current conditions in the radio astronomy service

(1) Radio astronomy service is passive radiocommunication service based on reception of radio waves of space origin. According to RR footnote⁴), users of the band 608-614 MHz shall take all practicable measures to protect radio astronomy.

(2) Even radio astronomy service has no utilisation in the 608-614 MHz band in the Czech Republic, protection of radioastronomy in neighbouring countries is obligatory.

Article 12 Information on future development in the radio astronomy service

Changes in future use of the band 608-614 MHz by the radio astronomy service are not expected.

Part 6 Final provisions

Article 13 Cancelling provision

Measure of General Nature the Part No. PV-P/10/04.2011-5 of the Radio Spectrum Utilisation Plan for the frequency band 470-960 MHz of 27 April 2011 is cancelled.

Article 14 Effect

This part of the Radio Spectrum Utilisation Plan comes into effect on 15 September 2012.

Explanatory Memorandum

To implement Section 16(2) of the Act, the Office issues the Measure of General Nature Part No. PV-P/10/08.2012-11 of the Radio Spectrum Utilisation Plan (hereinafter "the part of the plan"), laying down the technical parameters and conditions of the use of radio spectrum in the frequency band from 470 MHz to 960 MHz by radiocommunication services.

This part of the plan is based on the principles set down 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 (as amended by the Directive 2009/140/EC⁵²)* and *Decision No. 676/2002/EC of the European Parliament and of the Council on a Regulatory Framework for Radio Spectrum Policy in the Community (Radio Spectrum Decision).* It further refers to principles determined in the Common Part of the Radio Spectrum Utilisation Plan No. PV/10.2005-35, as amended.

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 decisions of the Office. The particular reason for issuing this part of the plan is due to modifications of radio spectrum utilisation conditions in connection with the completion of digitalisation of TV transmission, bringing conditions for future migration of existing TV standards to a more advanced TV standard and preparation for future extension of the bands primary allocated to the mobile service. In addition, the text has been editorially rearranged.

Article 1 describes the subject and content of the document and refers to the common part of the Radio Spectrum Utilisation Plan mentioned above.

In article 2 containing frequency allocation arrangements, presented information has been updated with regard to termination of utilisation of the 790-862 MHz band by TV broadcasting. The band is reserved for deployment of systems capable of providing mobile broadband communication networks. The overview also reflects results of the WRC-12 conference, which in particular relates to future mobile service allocation in the 694-790 MHz band on the primary basis (digital dividend II).

Article 3 presents the characteristics of radio spectrum utilisation described by this part of the plan. Conditions presented in this part assume a further release of spectrum for mobile broadband applications - digital dividend II. With regard to gradual allocation of spectrum for mobile networks in UHF bands, spectrum policies will also take into account spectrum efficiency⁵³) and comparison of economic results between operations of TV networks and mobile networks.

Article 4 contains international obligations related to the bands 470-960 MHz.

Article 5 describes the use of the bands by mobile service applications. With regard to future use of the 790-862 MHz bands as described in article 3, conditions of use of the bands by microphones have been updated.

Article 6 contains information on mobile service and details future use of the band 470-790 MHz by ancillary applications in the broadcasting service. The applications will use the band on a secondary basis within the mobile service allocation. The change has been adopted by the WRC-12 conference and it will be reflected in the Radio Regulations starting 1st January 2013. The applications will use white spaces, i.e. channels free of TV broadcasting or mobile service utilisation. This article also details the future extension of the

⁵²) Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities, and 2002/20/EC on the authorisation of electronic communications networks and services.

⁵³) Basic efficiency criteria are technical, functional, social and economic; see also "Final RSPG Opinion on Review of Spectrum Use, RSPG12-408, European Commission, 6 February 2012".

bands allocated to the primary mobile service in favour of the digital dividend II band⁵⁴). Information on future allocation of the 694-790 MHz band to the primary mobile service is supplemented by information on the ongoing ITU preparations of coexistence studies focusing on affected radiocommunication services. Paragraph 5 describing future utilisation of bands 872-875,8/917-920,8 MHz has been amended following a comment received by the Office during the public consultation.

Article 7 contains information on the use of the 470-790 MHz band by the broadcasting service. In accordance with the Common Policy of the Czech Council for Radio and Television Broadcasting, in article 6, conditions of the spectrum use by local transmitters have been modified. Further modifications also take into account further expected or prepared changes to UHF band use, which include e.g. implementation of more advanced TV standards than DVB-T, and anticipated reduction of frequencies allocated to TV broadcasting due to the future allocation of the digital dividend II band to the primary mobile service. Therefore, new individual authorisations for the use of radio frequencies are granted only i) to individual transmitters intended for improvement of coverage within existing nationwide TV networks, if justified, or ii) to transmitters with a limited period of authorisation reflecting the existing assumptions of digital dividend II implementation.

Article 8 contains information about future development in the broadcasting service and summarises the main anticipated changes in the utilisation of UHF band. This article also contains information on interleaved spectrum - white space utilisation. Such utilisation is expected in those parts not used by TV broadcasting, based on geolocation databases which will be used by applications to obtain information on available frequencies. Future conditions of use of the digital dividend II band and relating effects on UHF band will be amended based on the regulatory frame prepared by the ITU, CEPT, EU and in accordance with national policies and strategies.

Part 4 provides information on radiolocation service, which has secondary allocation in the lower part of UHF band.

Part 5 informs on allocation to radioastronomy service, which doesn't use frequencies actively, however based on Radio Regulations, it claims protection against interferences caused by other services. The obligation to protect the radioastronomy service in neighbouring countries is emphasised.

In Article 13, the previous issue of part of the Radio Spectrum Utilisation Plan for the frequency band 470-960 MHz has been repealed. The legal effect of this part of the plan is set down in Article 14 in accoradance with Section 124 of the law.

On the basis of Section 130 of the Act and in accordance with the Czech Telecommunication Office Rules for Conducting Consultations at the Discussion Site, the Office published draft of Measure of General Nature Part No. PV-P/10/XX.2012-Y of the Radio Spectrum Utilisation Plan together with a call for comments on the discussion site on the 24 June 2012. During public consultation the Office received comments and proposals from 4 entities submitted by form pursuant to article 6 of the Rules, and one comment received after the deadline for submission of comments. The Office considered and settled all the comments. The comments related in particular to the issue of future allocation of the 694-790 MHz band to the mobile services (digital dividend II), specification of criteria of efficient use of spectrum, conditions of mutual coexistence of mobile and broadcasting networks in UHF band, future operation of digital terrestrial broadcasting including migration to more advanced TV technologies, than DVB-T. One comment was identified as a statement containing information on future use of UHF band by mobile 4G networks, which bring more efficient use of spectrum not only from technical reasons, but also form social and functional reasons - such networks are e.g. capable of transmission of TV and audio broadcasting. With respect to worldwide preparation on future allocation of the digital

⁵⁴) More details are presented in monthly monitoring report No. 2/2012 (Měsíční monitorovací zpráva ČTÚ č. 2/2012; available in Czech on website <u>www.ctu.cz</u>.

dividend II band to the radiocommunication mobile service, with respect to technology and regulatory trends arising service convergence and with respect to the necessity of efficient use of spectrum, the Office didn't accept that comments and proposals. One proposal, relating to removing of assumed future way of authorisation reflecting also technical and economic issues, has been accepted. An addition, the text has been supplemented by context information due to clarification of basic links and consequences.

The table with all received comments has been published on the discussion site and contains all comments and the way they were processed by the Office.

On behalf of the Council of the Czech Telecommunication Office

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

Annex 1

Allotments for digital terrestrial TV broadcasting for particular geographic areas, assigned to the Czech Republic by the Geneva Agreement, 2006 (Annex 1, Part 1)

Radio channel	Region identification	Radio channel	Region identification
	Region Praha and	Středočes	ský region
23	STC-05N, STC-05S	47	PHA-01
37	PHA-04	51	STC-03N, STC-03S
41	STC-01N, STC-01S	53	STC-02N, STC-02S
42	PHA-02	54	PHA-05
44	STC-04N, STC-04S	57	PHA-06
46	PHA-03	59	STC-06N, STC-06S
	JINOCES	ký Region	
22	JCE-06	39	JCE-01
25	JCE-04	49	
32	JCE-03	50	JCE-02
	Plzeňel		
24		48	
31	PI 7-01	52	PI 7-05
34	PI 7-03	02	
<u> </u>			
	Karlovar	ský Regior	 ו
26	KVA-04	38	KVA-01
35	KVA-02	45	KVA-06
36	KVA-05	60	KVA-03
	Ústeck	ý Region	
21	UST-05	55	UST-03
33	UST-01	58	UST-04
50	UST-02		
	Liberec	ký Region	
26	LIB-04	43	LIB-02
28	LIB-06	52	LIB-05
31	LIB-01	60	LIB-03
	Královéhrad	decký Reg	ion
22	KHR-06	45	KHR-04
38	KHR-01	60	KHR-03
40	KHR-02		
	Pardubic	cký Region	
21	PAR-05	32	PAR-03
24	PAR-04	34	PAR-02

27	PAR-06	39	PAR-01						
	Vysočir	na Region							
28	VYS-01	35	VYS-04						
30	VYS-03	42	VYS-02						
33	VYS-05	57	VYS-06						
	Jihomoravský Region								
26	JMO-03	46	JMO-02						
29	JMO-01	47	JMO-05						
40	JMO-04	59	JMO-06						
	Olomoud	cký Region							
31	OLO-05	50	OLO-02						
36	OLO-01	51	OLO-06						
44	OLO-03	53	OLO-04						
	Moravskosl	ezský Reg	ion						
27	MOS-06	45	MOS-04						
28	MOS-02	48	MOS-03						
37	MOS-01	54	MOS-05						
	Zlínský Region								
22	ZLI-01	42	ZLI-02						
25	ZLI-03	45	ZLI-04B						
33	ZLI-05	49	ZLI-06						
41	ZLI-04A								

Annex 2

Geographic specification of the allotments

Name JCE-01, JCE-02, JCE-03, JCE-04, JCE-05, JCE-06 Coordinates of the border points defining the allotment:

c1	493000	493300	493400	493149	493610	493600	493200	491800
c2	0135700	0140400	0141300	0143348	0144016	0144600	0145600	0145500
c1	491317	490729	490755	490529	490015	485727	485444	485629
c2	0152022	0152522	0153311	0153545	0152937	0153609	0153248	0152934
c1	485716	485855	485916	485713	485640	485921	490010	490108
c2	0152535	0152210	0151805	0151523	0151118	0150936	0150540	0150133
c1	485905	485621	485332	485043	484754	484636	484715	484444
c2	0145852	0145906	0145910	0145830	0145729	0145350	0144949	0144748
c1	484239	484005	483723	483501	483638	483657	483826	483628
c2	0144510	0144304	0144254	0144048	0143715	0143306	0142924	0142626
c1	483436	483411	483458	483543	483549	483657	483940	484208
c2	0142305	0141858	0141456	0141043	0140628	0140230	0140300	0140055
c1	484334	484521	484620	484931	485143	485250	485451	485707
c2	0135709	0135400	0135005	0134727	0134503	0134114	0133828	0133559
c1	485835	491146	493100					
c2	0133222	0134236	0134600					



d) Name JMO-01, JMO-02, JMO-03, JMO-04, JMO-05, JMO-06 Coordinates of the border points defining the allotment:

				0				
c1	490443	490153	485714	485634	485119	484931	484845	485037
c2	0170754	0171450	0172600	0173308	0173841	0173521	0173107	0172657
c1	484851	485233	485023	485022	484713	484320	484015	483819
c2	0172336	0171219	0170858	0170645	0170535	0170006	0165828	0165830
c1	483700	483940	484221	484309	484320	484446	484643	484717
c2	0165642	0165539	0165456	0165053	0164642	0164307	0164010	0163555
c1	484846	484846	484630	484411	484409	484436	484506	484505
c2	0163215	0162808	0162537	0162311	0161853	0161435	0161013	0160553
c1	484619	484757	484952	485152	485241	485134	485220	485356
c2	0160205	0155838	0155537	0155233	0154813	0154425	0154026	0153656
c1	485444	485727	490505	491600	492137	493400	493740	493500
c2	0153248	0153609	0161320	0161500	0162233	0162300	0163353	0164700

c1	492211	492300	491500			
c2	0164859	0170400	0171000			



e) Name KHR-01, KHR-02, KHR-03, KHR-04, KHR-05, KHR-06 Coordinates of the border points defining the allotment:

c1	500917	500604	500234	500800	500900	500800	500500	501500
c2	0163450	0162101	0161446	0160000	0154600	0153400	0152500	0152300
c1	502148	503120	502944	503118	504624	504537	504411	504432
c2	0150728	0150829	0152304	0153554	0153405	0153812	0154201	0154632
c1	504300	504023	504104	504017	503737	503854	503851	503947
c2	0155007	0155151	0155601	0160018	0160124	0160523	0160948	0161354
c1	503937	503832	503626	503344	503104	503015	502837	502644
c2	0161812	0162220	0162512	0162453	0162336	0161924	0161549	0161233
c1	502433	502202	502232	501958	501853	501636	501411	501157
c2	0161507	0161657	0162105	0162246	0162639	0162905	0163113	0163354



f) Name KVA-01, KVA-02, KVA-03, KVA-04, KVA-05, KVA-06 Coordinates of the border points defining the allotment:

c1	502349	501928	500700	500100	495945	495528	495519	495635
c2	0125804	0131358	0131700	0131400	0130446	0125055	0123222	0122828
c1	495916	500032	500157	500307	500531	500754	501041	501257
c2	0122746	0122353	0122003	0121611	0121357	0121133	0121201	0120929
c1	501431	501702	501923	501830	501605	501345	501214	501446
c2	0120601	0120743	0120536	0121119	0121318	0121545	0121925	0122103
c1	501711	501926	502105	502338	502413	502440	502526	502640

c2	0122305	0122543	0122911	0123107	0123524	0123946	0124349	0124736
c1	502624	502452						
c2	0125149	0125517						



g) Name LIB-01, LIB-02, LIB-03, LIB-04, LIB-05, LIB-06 Coordinates of the border points defining the allotment:

00010	oberdinates of the border points demining the dilotitient.									
c1	503118	502944	503120	503628	502913	503000	503900	504900		
c2	0153554	0152304	0150829	0145647	0143902	0142800	0142200	0142700		
c1	505000	505046	504919	504914	505159	505216	505137	505359		
c2	0143800	0144016	0144356	0144815	0144942	0145403	0145813	0150021		
c1	505650	505905	510123	510034	510107	505927	505745	505458		
c2	0150106	0145838	0150109	0150525	0150952	0151322	0151650	0151621		
c1	505223	505046	504803	504840	504710	504624				
c2	0151748	0152120	0152201	0152615	0152951	0153405				



h) Name MOS-01, MOS-02, MOS-03, MOS-04, MOS-05, MOS-06 Coordinates of the border points defining the allotment:

				J				
c1	492931	493229	494200	495100	500459	501619	501618	501614
c2	0181617	0175445	0174200	0170900	0171352	0172525	0172953	0173415
c1	501604	501756	501537	501259	501109	501019	500735	500629
c2	0173827	0174140	0174402	0174542	0174223	0173818	0173846	0174247
c1	500421	500142	495934	495841	500011	500026	500309	500217
c2	0174535	0174708	0175001	0175413	0175746	0180208	0180134	0180539
c1	495943	495930	495751	495532	495619	495555	495428	495512
c2	0180706	0181130	0181505	0181727	0182134	0182547	0182931	0183338

c1	495226	494933	494701	494425	494220	494045	494028	493744
c2	0183432	0183428	0183617	0183759	0184050	0184421	0184836	0184913
c1	493500	493223	493109	493029	492921	493025	492949	493044
c2	0185025	0185144	0185029	0184717	0184440	0184051	0183624	0183538
c1	492921	492757	492339	492343				
c2	0183156	0183239	0182655	0182412				



i) Name OLO-01, OLO-02, OLO-03, OLO-04, OLO-05, OLO-06 Coordinates of the border points defining the allotment:

c1	492600	492100	491500	492300	492211	493500	493900	495000
c2	0173800	0172000	0171000	0170400	0164859	0164700	0165000	0164500
c1	495800	500400	500743	500946	501152	501315	501417	501621
c2	0164300	0164900	0164456	0164750	0165031	0165422	0165823	0170116
c1	501830	502042	502314	502554	502546	502508	502417	502255
c2	0165832	0165602	0165408	0165306	0165719	0170136	0170538	0170928
c1	502115	501936	501928	501644	501619	500459	495100	494200
c2	0171249	0171616	0172043	0172107	0172525	0171352	0170900	0174200
c1	493229							
c2	0175445							



j) Name PAR-01, PAR-02, PAR-03, PAR-04, PAR-05, PAR-06 Coordinates of the border points defining the allotment:

c1	500400	495800	495000	493900	493500	493740	493400	493800		
c2	0164900	0164300	0164500	0165000	0164700	0163353	0162300	0161600		
c1	494400	494114	494921	494903	495000	495600	500100	500500		
c2	0160000	0155457	0154415	0153509	0152900	0153200	0152200	0152500		

c1	500800	500900	500800	500234	500604	500917	500704	500605
c2	0153400	0154600	0160000	0161446	0162101	0163450	0163724	0164128
c1	500743							
c2	0164456							



k) Name PHA-01, PHA-02, PHA-03, PHA-04, PHA-05, PHA-06 Coordinates of the border points defining the allotment:

	je se										
c1	501123	500725	500500	500100	495934	495929	495612	500600			
c2	0143234	0143923	0144300	0144035	0143841	0143056	0142121	0141300			
c1	500752										
c2	0141632										



I) Name PLZ-01, PLZ-02, PLZ-03, PLZ-04, PLZ-05

Coordinates of the border points defining the allotment:

c1	500357	495600	494600	494035	493100	491146	485835	485652
c2	0132513	0135000	0134800	0134252	0134600	0134236	0133222	0132910
c1	485840	490104	490340	490539	490651	490727	491002	491151
c2	0132602	0132358	0132229	0131934	0131550	0131146	0131023	0130705
c1	491419	491556	491828	492022	491946	492016	492230	492443
c2	0130506	0130144	0125953	0125644	0125231	0124813	0124542	0124310
c1	492612	492900	493123	493358	493643	493857	494115	494314
c2	0123940	0123845	0123626	0123439	0123349	0123122	0122856	0122557
c1	494551	494724	494958	495236	495519	495528	495945	500100
c2	0122444	0122813	0122958	0123129	0123222	0125055	0130446	0131400
c1	500700							
c2	0131700							



m) Name STC-01N, STC-02N, STC-03N, STC-04N, STC-05N, STC-06N Coordinates of the border points defining the allotment:

				0				
c1	501500	502100	502100	503000	502913	503628	503120	502148
c2	0135200	0140000	0142200	0142800	0143902	0145647	0150829	0150728
c1	501500	500500	500100	495600	495000	494700	500100	500500
c2	0152300	0152500	0152200	0153200	0152900	0152600	0144035	0144300
c1	500725	501123	500752					
c2	0143923	0143234	0141632					



n) Name STC-01S, STC-02S, STC-03S, STC-04S, STC-05S, STC-06S Coordinates of the border points defining the allotment:

c1	494700	494500	493900	493500	493200	493600	493610	493149
c2	0152600	0151500	0151100	0150000	0145600	0144600	0144016	0143348
c1	493400	493300	493000	493100	494035	494600	495600	500357
c2	0141300	0140400	0135700	0134600	0134252	0134800	0135000	0132513
c1	501200	501500	500752	500600	495612	495929	495934	500100
c2	0133200	0135200	0141632	0141300	0142121	0143056	0143841	0144035



o) Name UST-01, UST-02, UST-03, UST-04, UST-05 Coordinates of the border points defining the allotment:

00010		ie border pe		ig the allot	nont.			
c1	505000	504900	503900	503000	502100	502100	501500	501200
c2	0143800	0142700	0142200	0142800	0142200	0140000	0135200	0133200
c1	500357	500700	501500	501928	502349	502452	502523	502759
c2	0132513	0131700	0131500	0131358	0125804	0125517	0125940	0130101
c1	502952	503009	503126	503405	503434	503643	503634	503715
c2	0130413	0130841	0131232	0131347	0131809	0132047	0132512	0132930
c1	503939	504219	504243	504311	504359	504327	504444	504713
c2	0133156	0133258	0133723	0134140	0134552	0135006	0135401	0135612
c1	504850	504833	504956	505108	505312	505305	505341	505611
c2	0135954	0140416	0140805	0141209	0141459	0141923	0142337	0142153
c1	505837	505948	510222	510232	510114	510111	510012	505729
c2	0141939	0141539	0141717	0142139	0142544	0143012	0143415	0143536
c1	505450	505303	505046					
c2	0143437	0143757	0144016					



p) Name VYS-01, VYS-02, VYS-03, VYS-04, VYS-05, VYS-06 Coordinates of the border points defining the allotment:

c1	492137	491600	490505	485727	490015	490529	490755	490729
c2	0162233	0161500	0161320	0153609	0152937	0153545	0153311	0152522
c1	491317	491800	493200	493500	493900	494500	494700	495000
c2	0152022	0145500	0145600	0150000	0151100	0151500	0152600	0152900
c1	494903	494921	494114	494400	493800	493400		
c2	0153509	0154415	0155457	0160000	0161600	0162300		



q) Name ZLI-01, ZLI-02, ZLI-03, ZLI-05, ZLI-06 Coordinates of the border points defining the allotment:

00010		ie border po		ig the allot	nont.			
c1	492343	492202	491927	491714	490806	490522	490200	490121
c2	0182412	0182448	0182151	0181057	0180617	0180649	0180331	0175926
c1	490053	485538	485526	485138	485119	485634	485714	490153
c2	0175459	0175307	0174650	0174215	0173841	0173308	0172600	0171450
c1	490443	491500	492100	492600	493229	492931		
c2	0170754	0171000	0172000	0173800	0175445	0181617		



r) Name ZLI-04A

Coordinates of the border points defining the allotment:

c1	490522	490200	490121	490053	485538	485526	485138	485119
c2	0180649	0180331	0175926	0175459	0175307	0174650	0174215	0173841
c1	485634	485714	490153	490443	491500	492100	492600	
c2	0173308	0172600	0171450	0170754	0171000	0172000	0173800	



s) Name ZLI-04B

Coordinates of the border points defining the allotment:

-			-	<u> </u>			-	
c1	492343	492202	491927	491714	490806	490522	492600	493229
c2	0182412	0182448	0182151	0181057	0180617	0180649	0173800	0175445
c1	492931							
c2	0181617							



In conformity with the Geneva Agreement 2006, coordinates are presented IDWM system⁵⁵).

⁵⁵) Abbreviation IDWM denotes ITU Digitized World Map.