



VIA REGISTERED MAIL AND E-MAIL

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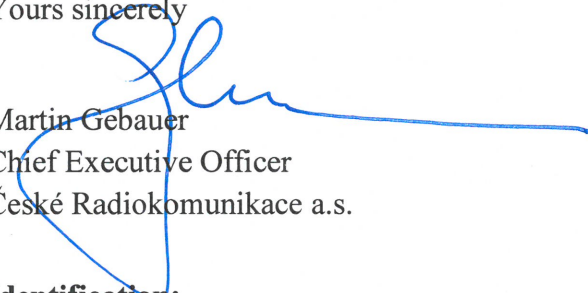
In Prague, Czech Republic, January 12, 2015

Re: Response in the public consultation regarding the “Draft RSPG Opinion on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union” and the “Draft RSPG Opinion on Common Policy Objectives for WRC-15”

Dear Sirs,

Attached please find a response prepared by České Radiokomunikace a.s. with respect to the public consultation regarding the “Draft RSPG Opinion on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union” and the “Draft RSPG Opinion on Common Policy Objectives for WRC-15”.

Yours sincerely


Martin Gebauer
Chief Executive Officer
České Radiokomunikace a.s.

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I. General Introduction

České Radiokomunikace a.s. (“**CRA**”), a joint-stock company established and existing under the laws of the Czech Republic, and a leader on the Czech market in the area of providing electronic communications services related to the terrestrial transition of television broadcasting, hereby, in connection with the public consultation opened by Radio Spectrum Policy Group (“**RSPG**”) regarding the draft materials published by RSPG, namely (i) the Draft RSPG Opinion on a Long-Term Strategy on the Future Use of the UHF Band (470-790 MHz) in the European Union (the “**Draft UHF Opinion**”), and (ii) the Draft RSPG Opinion on Common Policy Objectives for WRC-15 (the “**Draft WRC-15 Opinion**”) (collectively the “**Draft RSPG Materials**”), provides its response, position and comments regarding the Draft RSPG Materials, including a summary of CRA’s long-term position regarding the discussed future use of the UHF frequency band (470-790 MHz) (the “**UHF Band**”), as it has previously been presented to the relevant authorities in the Czech Republic.

CRA is a leading Czech telecommunications company which, through the use of its own extensive broadcasting infrastructure consisting of over 1.000 facilities across the entirety of the Czech Republic, is a central player on the Czech market providing services in the fields of information and communications technology, internet access, data and cloud solutions, and, above all, distribution of digital radio and television broadcasting with nation-wide coverage. **The sole shareholder of CRA is a global investment group, Macquarie Infrastructure and Real Assets Europe.** The strong investor background allows CRA to continuously develop its services and be an innovative provider of complex broadcasting, telecommunications and ICT solutions utilising its own infrastructure:

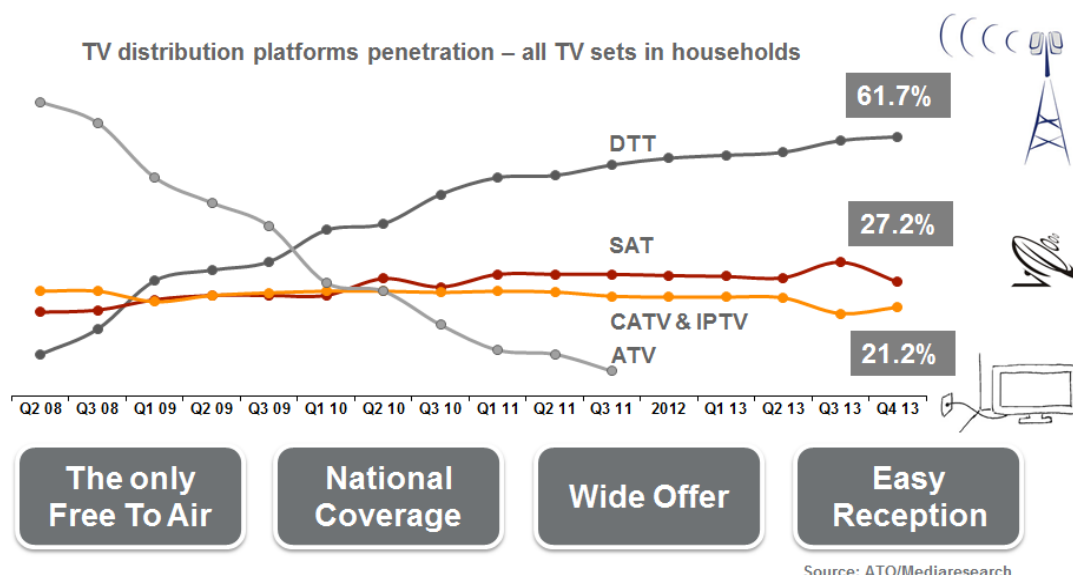
- 26 main strategically located TV towers
- ~1.000 other broadcasting and Telecoms PoPs
- 2.600 km of fibre-optics backbone
- 3 Data Centres
- Cloud Computing systems

CRA, founded in 1963, is a strong, respected and stable infrastructure company that provides services to all significant television and radio broadcasters in the Czech Republic. CRA’s Telecoms and ICT services are utilised by medium and large businesses and government organisations. CRA also provides wholesale infrastructure services to all three mobile operators operating in the Czech market (O2, Vodafone and T-Mobile). **CRA’s most significant customers in the field of broadcasting include public television and radio broadcasters Czech Television and Czech Radio, major commercial television broadcasters CET 21 (part of Central European Media Enterprises) and FTV Prima (co-owned by Modern Times Group) as well as major commercial radio broadcasters Lagardère Active ČR (part of Lagardère Group France) and LONDA (part of AGROFERT, a.s).**

The terrestrial television broadcasting (the “**DTT**”) is by far **the most significant television broadcasting platform used on a daily basis by almost 2.7 million**

Czech households (*i.e.* almost 62% of all households)¹ and television signal reception via the DTT is showing an increasing trend and popularity. The DTT is a primary source of television reception for 52% of all households in the Czech Republic and this number continues to grow. Moreover, the DTT is the only fully free of charge broadcasting platform for the end users (*i.e.* viewers) in the Czech Republic. In the European Union, the Czech Republic is one of the countries with the highest penetration and utilisation of the DTT.²

DTT is the preferred way of TV reception by majority households in the Czech Republic



Four nationwide DVB-T networks with 95.3 - 99.9% coverage operate in the Czech Republic. Their capacity to date is almost exhausted, whilst broadcasters – both public and commercial – are interested in increasing the number of television channels they operate.

CRa directly owns the No. 2 nationwide DVB-T network with 99.9%³ population coverage and via its wholly owned subsidiary Czech Digital Group the No. 3 nationwide DVB-T network with 98.9%⁴ population coverage. CRa is also the provider of the No. 1 nationwide DVB-T network with 99.9%⁵ population coverage operated by the public television broadcaster Czech Television.

¹ See relevant data provided by MEDIARESEARCH, a.s., as published on the CRa's website on March 18, 2014, see: http://www.radiokomunikace.cz/o-spolecnosti/tiskove-centrum/archiv-tiskovych-zprav.html/11_1239-varujeme-pred-omezovanim-pozemniho-tv-vysilani/2.

² Source: EBU and Broadcast Network Europe.

³ Source: Czech Telecommunication Office.

⁴ Source: Czech Telecommunication Office.

⁵ Source: Czech Telecommunication Office.

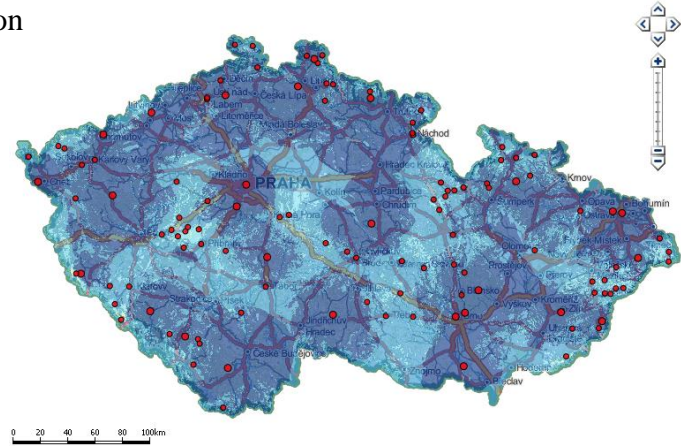
DVB-T Multiplex 1

Network operator: Czech Television

Network provider: CRa

Population coverage 99.9%

Free capacity: 0 Mbps

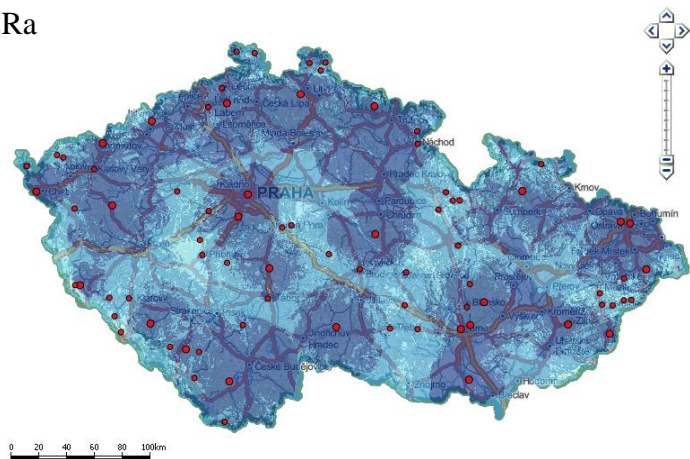


DVB-T Multiplex 2

Network operator and provider: CRa

Population coverage 99.9%

Free capacity: 0 Mbps



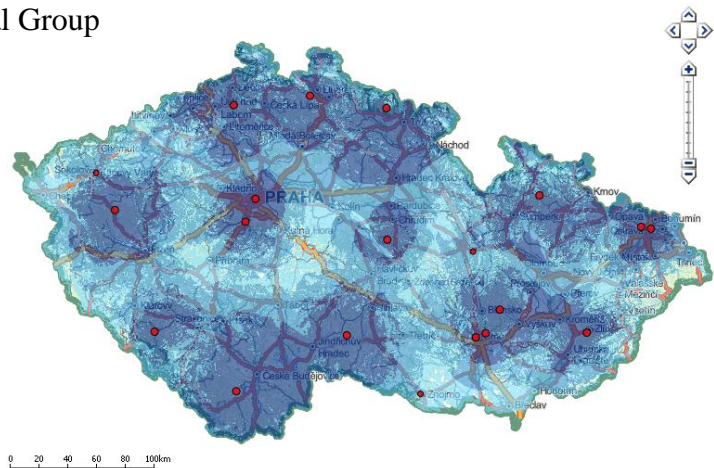
DVB-T Multiplex 3

Network operator: Czech Digital Group

Network provider: CRa

Population coverage 98.1%

Free capacity: 4.8 Mbps



II. CRa's Position Regarding the Draft UHF Opinion

1. CRa's Position Regarding the Frequency Band of 694–790 MHz

RSPG in its Draft UHF Opinion supports the change of the use of the radio spectrum within the frequency band 694–790 MHz (the “**700 MHz Band**”) in such a way that the 700 MHz Band would be completely released (vacated) by the DTT in favor of wireless broadband service, *i.e.* the service of the mobile broadband (the “**IMT**”).

In this respect, RSPG emphasizes the importance of allocating the 700 MHz Band for the purpose of the IMT within the entire territory of the European Union and recommends that the European Commission, in collaboration with the member states of the European Union, strive for a coordinated approach, particularly in the matter of (i) defining the harmonized technical conditions of the use of the 700 MHz Band for the IMT within the earliest possible term, and (ii) proposing the deadline for completing the authorization process on a national level, and a deadline for making the 700 MHz Band effectively available for use by the electronic communications services in accordance with the harmonized conditions, by means of a legally binding legislative act, such as Decision No. 243/2012/EU of the European Parliament and of the Council of March 14, 2012, on establishing a multiannual radio spectrum policy programme (the “**RSPP**”).

In this respect, RSPG recommends that the change in the use of the 700 MHz Band be executed by the member states of the European Union as soon as possible, as this process entails a number of complications. In light of these facts, RSPG suggests two terms for the release of the 700 MHz Band for IMT, namely the years 2020 and 2022.

(a) *The Key Role of the DTT Platform in the Czech Republic*

We would like to point out, in the first place, that a complete release of the 700 MHz Band by the DTT in favor of the IMT (the “**Complete Release of the 700 MHz Band**”), in the contemplated manner and with the absence of clear and pre-defined guarantees of the continued existence and development of the DTT, where 30% of the radio spectrum currently used for the purposes of the DTT in the Czech Republic is located in the 700 MHz Band, may lead to a substantial weakening of the DTT platform, including limiting the scope of the provided services, decreasing the coverage and slowing down further development of the DTT. The loss of 30% of the current frequencies may result in the future complete liquidation of the DTT platform.

The DTT is, both historically and currently, the indisputably strongest television broadcasting platform in the Czech Republic, used by nearly 2.7 million Czech households (*i.e.* nearly 62% of households in the Czech Republic),⁶ while the reception of television broadcasting via the DTT is showing a continually increasing tendency and popularity. Furthermore, the DTT is the only real free-to-air platform for the end consumers (viewers) in the Czech Republic. Additionally, the Czech Republic ranks among the states with the highest DTT penetration within the

⁶ See relevant data provided by MEDIARESEARCH, a.s., as published on the CRa's website on March 18, 2014, *see*: http://www.radiokomunikace.cz/o-spolecnosti/tiskove-centrum/archiv-tiskovych-zprav.html/11_1239-varujeme-pred-omezovanim-pozemniho-tv-vysilani/2.

European Union.⁷ In our opinion, these facts must not be overlooked, and, in the case of the Czech Republic, as opposed to a number of other states, where the penetration and use of the DTT is minimal, an entirely unique approach shall be required. A premature removal of the 700 MHz Band from the DTT might lead to a suppression of the most important distribution platform in the Czech Republic and to undesired and serious socio-economic impact associated therewith, namely in the form of the potential introduction of payment obligation for the television broadcasting for the majority of the Czech Republic's inhabitants, limiting the means of distribution for public broadcasting (with the DTT being its primary distribution platform) and significant limitation of competition on the distribution platform market.

This fact is, in our opinion, absolutely key with regard to the future strategy for the use of the 700 MHz Band, and thus, any impact that such strategy has on the consumer (viewer) should be one of the main criteria that must be considered when forming such strategy. In this respect, we would like to emphasize the fact that the change of the use of the radio spectrum in favor of the IMT will bring about a significant decrease in the DTT platform's ability to compete, where the DTT platform, considering its high investment and maintenance efficiency, is the sole distribution platform enabling realization of such business model which guarantees free access to television broadcasting for the final consumer.

(b) *The Role of the DTT Platform in the European Union*

In connection with the position of the DTT platform in the Czech Republic, it must not be further overlooked that the DTT platform represents, not only in the Czech Republic, but also in other member states of the European Union, a key pillar of the media, film and creative industries, and the broader cultural sphere, *i.e.* fields which constitute the basis of a European digital economy as such. In this regard, the irreplaceable role of the DTT in delivering free-to-air television programming to a substantial portion of the population has to be emphasized, along with the fact that the IMT is currently incapable of filling this role. At the same time, the DTT is the most important distribution platform as regards the delivery of public media audiovisual content.

Moreover, the Complete Release of the 700 MHz Band would constitute a significant intervention into the primary distribution platform on a European level as well, as the DTT is currently used by 46% of households in the European Union (250 mil. inhabitants) while approximately 2,000 channels is being currently transmitted via DTT platform.⁸ At this time, there is no technology available that could replace the current DTT networks, as far as its financial efficiency (investments and maintenance) and the efficiency of spectrum use, and such technology will not become available even in medium-term.

The foregoing should be, in our view, taken into account before any decision on the Complete Release of the 700 MHz Band is adopted, otherwise there is a substantial risk of extensive and far-reaching negative impact not only on the individual member states of the European Union, but also on the European economic area as a whole.

⁷ See Annex No.1 hereof - The Czech Republic is a country with a very high DTT platform penetration.

⁸ Source: 2014-11-05 EBU Forecast, Release of 700 MHz /LB, page 9.

(c) *The Validity of the Current Allotments of Radio Frequencies for the DTT*

In connection with the Complete Release of the 700 MHz Band it is, in our view, also necessary to take into account the fact that the relevant allotments of radio frequencies are granted for different periods of time in different member states of the European Union; in many cases the validity of such allotments of radio frequencies extends beyond 2020 or 2022, *i.e.* the terms proposed by RSPG as the dates of the Complete Release of the 700 MHz Band, in some cases even by several years. For example, the allotment of radio frequencies currently held by CRa shall expire in 2021. In some member states of the European Union, the validity of the relevant allotments of radio frequencies shall expire at an even later date (*e.g.* 2032).

Although the above circumstance is mentioned by RSPG in the Draft UHF Opinion, it is not, in our opinion, duly taken into account, nor is any suggestion of a thorough solution to this complicated situation presented. In this respect, RSPG does not propose any clear conditions or measures based on which the Complete Release of the 700 MHz Band should be executed in those member states where the term of the relevant allotments of radio frequencies exceeds the term for the Complete Release of the 700 MHz Band proposed by RSPG. At the same time, the manner of financing the proposed Complete Release of the 700 MHz Band, which will most likely represent an imposed process disadvantageous for an entire segment of electronic communications, is not addressed either. Please note that we consider the satisfactory resolution of the above-mentioned issues to be absolutely fundamental.

In the event that RSPG proposes that a binding EU legislation be adopted in the matter of the Complete Release of the 700 MHz Band (such as the RSPP), it is, in our opinion, essential that RSPG also recommend the manner of resolution of the above-described issues and, furthermore, generally clarify and recommend the manner of a unified approach regarding a process of the Complete Release of the 700 MHz Band on the level of the European Union, *e.g.* in the form of a “roadmap”, which would ensure minimal cross-border interference caused by the use of different technologies in individual member states of the European Union, as well as other undesired complications which could arise on part of the neighboring member states in the event that one of the member states is in delay regarding an implementation of the Complete Release of the 700 MHz Band.

We would also like to point out that according to the Draft UHF Opinion, the international co-ordination negotiations are to be concluded by the end of 2017. In this regard, it is important to note that no conclusions (technical conditions) of these co-ordinations will be available at WRC-15, which could otherwise contribute to the complexity of the view on the potential changes to the use of the radio spectrum, and offer the necessary basis for a qualified decision in this matter.

(d) *The Necessity of a National Decision on the Complete Release of the 700 MHz Band*

Taking into account the terms of the respective allotments of radio frequencies and the role of the DTT platform in the individual member states of the European Union and given the various obligations of the individual member states of the European Union regarding the protection of foreign investments within their jurisdiction, it is in

our view essential that any final decision regarding the Complete Release of the 700 MHz Band shall remain on a national level.

(e) *A Significant Portion of the Radio Spectrum Has Already Been Allocated for the IMT*

We would also like to re-emphasize the frequently overlooked fact, which RSPG does not address accordingly in its Draft UHF Opinion, that a significant portion of the radio spectrum has already been allocated in favor of the IMT as of the date hereof, namely within the frequency bands of 800 MHz, 900 MHz, 1800 MHz, 2100 and 2600 MHz. There are development criteria set forth for the networks in the 800 MHz band, including mandatory coverage, to be reached within the time period until 2019. Only at such time will the actual extent of usage of this portion of radio spectrum by the IMT become apparent and clear, as well as any potential need of additional spectrum allocations for further development of IMT networks.

Therefore, there is a question as to whether the existing allocations of the radio spectrum for the purposes of the IMT are sufficient or not at this time, and what would be the real future need of the IMT regarding additional allocation of radio spectrum. It is our concern that as of the date hereof, no due audit in this matter has been executed and we believe that, considering the effective management of the radio spectrum, the execution of such audit must precede any decision on the Complete Release of the 700 MHz Band. Such audit should objectively examine and assess, through appropriate methods, the data traffic density, market scope and its dynamics, technological innovations of the IMT networks (such as WiFi-offload, small cells, more efficient compression, *etc.*), and, last but not least, the data resources of the current 2G and 3G networks and the implementation of technological neutrality for the purpose of changing spectrum-inefficient technologies (2/3G) to LTE. The primary change preceding any release of any additional radio spectrum for the IMT should be the increase of efficiency of 2G and 3G networks and introduction of new and more efficient technologies. Furthermore, as the experience with development of 4G networks in the 800 MHz band shows, the accessibility of the IMT in rural areas is very low across the majority of the European Union member states, contrary to the original proclamations of the importance of this frequency band specifically for rural areas. It should be noted that only three member states have shown any significant development of LTE networks in rural areas. Even mobile operators in the Czech Republic have begun developing LTE networks in the 800 MHz band primarily in larger cities and agglomerations, not in rural areas.⁹ As a result, the 2.6 GHz band, primarily identified for providing capacity coverage in areas with high population density, remains unused.¹⁰ Given the aforesaid, we are of the view that it is not reasonable or efficient to release any additional radio spectrum for the IMT at this time.

All of the currently opened IMT networks, including WBB networks, use Frequency Division Duplex, *i.e.* the same range of radio spectrum for both forward and reverse link, even though the data load generated by internet traffic is very asymmetrical

⁹ See Annex No. 2 hereof - the “Geographical depiction of radio spectrum use in the 800 MHz band by mobile operators in the Czech Republic”.

¹⁰ See Annex No. 3 hereof - the “Geographical depiction of radio spectrum use in the 2600 MHz band by mobile operators in the Czech Republic”.

(more data is being transferred in forward link than in reverse link). The radio spectrum in reverse link therefore remains largely unused, which leads to an inefficient use of the radio spectrum. The solution is to use the Time Division Duplex technology, which allows for a dynamic allocation of radio spectrum for forward link and reverse link.

It is apparent that the current allocations of radio spectrum for the IMT services are not used efficiently, and, furthermore, even in case of potential allocations of additional frequency bands, including the 700 MHz Band, to the IMT, it is highly likely that these bands would not be used efficiently either. It is therefore questionable whether there is even any grounded demand on part of the IMT for allocation of frequencies within the 700 MHz Band, and, as the case may be, when and in what extent such demand would arise in the future and in case that it does arise, whether or not this demand is substantiated, given the above-mentioned arguments. In this regard, it is also necessary to consider that the real needs of the IMT will undoubtedly differ significantly across all member states, just as the DTT platform penetration is different.

The above discussion shall be further viewed from the point of the needs of the radio spectrum for 5G networks, which are making demands in bands above 6 GHz, where a broader spectrum is available in comparison with the 700 MHz Band.

(f) Transition to DVB-T2

Furthermore, we would like to stress that an essential condition for any potential Complete Release of the 700 MHz Band is a successful completion of the transition of the DTT from the DVB-T standard to the DVB-T2 standard (the “**Transition**”). Considering the fact that a potential Complete Release of the 700 MHz Band would be a forced process in the member states of the European Union, the Transition should, in our view, be guaranteed and managed by the respective individual member states.

A successful completion of the Transition shall be, in our opinion, conditional upon the concurrent fulfillment of a number of conditions, which would undoubtedly include, *inter alia*, (i) achieving the necessary and precisely defined household penetration with technical devices for the reception of the television broadcasting in the DVB-T2 standard, (ii) achieving sufficient coverage of the population of the relevant member state by television signal in the DVB-T2 standard, (iii) conducting a targeted information campaign concerning the Transition and its impact on the affected subjects in the relevant member state, and/or (iv) a reimbursement of costs to the defined scope of subjects affected by the Transition, *i.e.* namely to the providers of television broadcast and the providers of electronic communications networks. Preparation and acceptance of a complex Technical Transition Plan by the member states of the European Union and the subjects affected thereby shall constitute a further essential condition for a successful Transition.

Without sufficient guarantees that the above conditions will be fulfilled, a successful execution of the Transition, and, as a result, also a successful execution of the Complete Release of the 700 MHz Band, would be impossible to achieve.

(g) Financing the Transition and Compensation

The Draft UHF Opinion does not address in detail the issue of financing the Transition and the Complete Release of the 700 MHz Band, nor the issue of the compensation of the respective holders of those allotments of radio frequencies, which are to expire after the term proposed by RSPG for the Complete Release of the 700 MHz Band.

It is, however, clear that the Transition and the Complete Release of the 700 MHz Band will be, given the above-discussed issue of the term of the relevant allotments of radio frequencies, forced processes, *i.e.* processes prescribed by national or EU legislation, and they will require substantial investments into the technical equipment of the relevant electronic communications networks, as well as spending various other costs, *e.g.* costs related to re-tuning of transmitters within the individual electronic communications networks, costs related to the modification of relationship between the providers of services of electronic communications and their clients, the construction of transitional DVB-T2 networks and the costs of partial parallel operation of electronic communications networks in the DVB-T and the DVB-T2 standards, as well as the costs associated with the information campaign for the television viewers in the individual member states of the European Union. In this regard, it is important to note that the existing DVB-T networks were only completed as recently as 2012, and are therefore at the very beginning of their investment cycle not only in the Czech Republic, but also across the majority of member states of the European Union.

The Draft UHF Opinion does not properly address the foregoing issues. It is clear, however, that any decision on the level of the European Union regarding the Complete Release of the 700 MHz Band has to include the specification of the adequate resources for financing the respective process, as well as the guidance regarding their use.

(h) Technical Aspects

We are of the view that the Draft UHF Opinion does not sufficiently address the technical aspects associated with the Complete Release of the 700 MHz Band, and/or their potential impact on the member states of the European Union, and their inhabitants in particular. It should be stressed that an unregulated Complete Release of the 700 MHz Band would result in the loss of television reception by a large portion of households in the Czech Republic.¹¹

As we mentioned above, the essential condition for the Complete Release of the 700 MHz Band is the successful completion of the Transition. From the point of view of efficient use of the radio spectrum and maintaining the competitiveness of the DTT platform, it is crucial that the Transition is implemented to the newest current standard DVB-T2 with H.265 coding – High Efficiency Video Coding (“**DVB-T2/HEVC**”). However, the broadcast in the DVB-T2/HEVC format has only just been tested within

¹¹ See Annex No.4 hereof - “Impact of the Complete Release of the 700 MHz Band on current digital networks of terrestrial television broadcast (DVB-T) and the diminishment of household television reception”.

the territory of the European Union, and only in a few states, such as Germany, Italy, and the Czech Republic.

The Czech Republic was the first state in the central Europe to conduct trial broadcast in the new DVB-T2/HEVC format. As of November 30, 2014, the individual authorization granted to the CRa with respect to the first experimental broadcasting in the DVB-T2/HEVC format has expired and no new individual authorization for further experimental broadcasting has been granted as of yet. Therefore, we are of the view that the broadcasting technology in the DVB-T2/HEVC format has not yet been sufficiently tested, certainly not to an extent that would make it possible to implement this format as a framework standard for the DTT within the entirety of the European Union. It is only now that the leading manufacturers of n-coding technologies are starting or planning to introduce their first versions of HEVC coders onto the market, which are necessary components of broadcasting High-End. There is a similar situation regarding the devices enabling the reception of television broadcasting in the DVB-T2/HEVC format – television sets and set-top boxes, which, at the moment, are yet to be made available on retail market. Considering this new technology, it can be assumed that during the first few years the prices for the devices enabling the reception of television broadcasting in the DVB-T2/HEVC format would be significantly higher in comparison with the prices of the currently available devices. This fact will adversely affect adoption of the new standard, especially by more socially vulnerable households which often use the free-to-air DTT as their only means of television broadcasting reception.

In connection with the assessment of the suitability of the Complete Release of the 700 MHz Band within the terms proposed by RSPG, *i.e.* the years 2020 and 2022, we cannot overlook the fact that the natural cycle of replacement of television sets in the Czech Republic ranges from 6 to 8 years. The deadlines for the Complete Release of the 700 MHz Band proposed by RSPG therefore, in our view, offer insufficient time for the replacement of television sets for a non-negligible portion of the viewership in the Czech Republic due to the necessary parallel broadcast in the current DVB-T/MPEG-2 standard and the new DVB-T2/HEVC standard.

As regards the above, it is therefore essential that RSPG recommend the adoption of sufficient measures to support the production and distribution of television sets already optimized for the reception of broadcasting in the new formats (DVB-T2/HEVC), and on the new frequencies, with the emphasis on an increased resistance against interference from neighboring bands used for the operation of LTE networks. Backwards compatibility with the DVB-T system will, of course, be preserved. The support of the production and distribution of television sets under the above conditions would also bolster the decrease in the amount of interference with television broadcasting by LTE technologies. RSPG should also support the creation of legal regulation for the mobile industry which would ensure the protection of consumers of television services provided via the UHF Band.

2. CRa's Position Regarding the 470–694 MHz Frequency Band

RSPG states in the Draft UHF Opinion that the frequency band 470–694 MHz (the “**500/600 MHz Band**”) is used mostly for the distribution of audiovisual content, and recommends that, from a long-term perspective, it should remain so even beyond the

year 2030. RSPG acknowledges the need to offer some certainty to the investments into the broadcasting infrastructure, and in this regard recommends that the 500/600 MHz Band remain allocated to the DTT, at least until the year 2030.

However, RSPG at the same time recommends that the member states of the European Union be flexible in their use of the 500/600 MHz Band, as well as in the matter of a possible allocation of this band to the IMT, presuming that such use is compatible with the needs of the DTT and does not create any obstacles for the DTT in the given member state, nor in any of its neighboring states. In this regard, RSPG recommends that the member states develop and, with sufficient advance notice, communicate to interested parties and neighboring states the framework for a potential migration of the IMT into the 500/600 MHz Band, and in their resolution of this issue, consider the deadline set forth for the migration of the IMT into the 500/600 MHz Band in the neighboring states.

When assessing the options of the future use of the 500/600 MHz Band by the IMT, according to RSPG, a number of factors have to be taken into consideration, *e.g.* technological advancements, consumer behavior, significance of providing free-to-air television broadcasting in the given state or other political, social, cultural and economic goals, if such goals are achieved by means of the DTT platform.

(a) *The Need to Protect the DTT in the 500/600 MHz Band*

The DTT is doubtlessly the most efficient distribution platform for the delivery of linear audiovisual content on a mass market in the European Union. Despite the growing tendency toward consumption of non-linear audiovisual content, linear television broadcast remains and, according to relevant analyses,¹² will remain highly dominant in the European Union even beyond the horizon of the year 2020. In 2020, the share of linear broadcasting will represent 82% of time, and non-linear 18%.¹³

As described above, the key position of the DTT platform in the Czech Republic, as well as in some other member states of the European Union, shall require a wholly unique approach towards its protection and future development. The stability and future development of this broadcasting platform depends on the creation of stable legislative conditions and guarantees, which would ensure the confidence in the continuing existence and sustainability of this platform for the individual key players on the field of the DTT, namely the providers of electronic communications services and providers of television broadcasting, as well as making the necessary investments into the DTT by such key players based on their long-term business plans. The absence of such guarantees could cause a material limitation of technological and qualitative development, and carry a significant risk of the decline of the DTT platform, or its complete dissolution.

¹² European Commission, Spectrum policy, Analysis of technology trends, future needs and demand for spectrum in line with Art. 9 of the RSPP, *see*: <http://ec.europa.eu/digital-agenda/en/news/final-report-analysis-technology-trends-future-needs-and-demand-spectrum-line-art-9-rspp>.

¹³ *See Annex No. 5* hereof - IHS – ScreenDigest: Cross-platform Television Viewing Time FY 2012.

From the point of view of protecting DTT as the key platform for the distribution of television broadcasting in the Czech Republic and protection of its future stability and development, it is also necessary to take into account, in connection with the future strategy for the use of the 500/600 MHz Band, the anticipated development of broadcasting in HD and UHD standards, which will require higher transmission capacities.

Taking into consideration the aforesaid, we are expecting a clear guarantee that the 500/600 MHz Band will be protected for the purposes of the DTT for a period of no less than 20 years following the Complete Release of the 700 MHz Band. This issue is, in our view and from the viewpoint of protecting the DTT, absolutely crucial and essential. The potential Complete Release of the 700 MHz Band has to be clearly conditioned upon a guarantee of preserving the 500/600 MHz Band for the purposes of DTT. Furthermore, an issue of no lesser importance is the protection of the 500/600 MHz Band against its possible co-primary use by the DTT and the IMT.

We therefore strongly request that any and all tendencies which could lead to the primary or co-primary use of the 500/600 MHz Band by the IMT before the year 2040, or any other similar use of the 500/600 MHz Band by the IMT, including Supplemental Downlink, be strongly opposed by the European Union and its respective member states. Considering the irreplaceable role of the DTT platform in the Czech Republic, we are of the view that it is necessary to insist that the 500/600 MHz Band remain wholly allocated to the DTT for the period mentioned above, in order to ensure the stability of the key broadcasting platform in the Czech Republic.

The need to retain the 500/600 MHz Band for primary use by the DTT is also generally emphasized, *inter alia*, by the Electronic Communications Committee (ECC) functioning within the European Conference of Postal and Telecommunications Administrators (CEPT),¹⁴ or by Mr. Pascal Lamy in his report prepared within the capacity of the High Level Group,¹⁵ Office of Communications (Ofcom),¹⁶ or Aetha Consulting Limited,¹⁷ and by RSPG itself, where the preservation of the 500/600 MHz Band for primary use by the DTT is recommended at least until 2030.

In addition, any potential decision on the release of the 500/600 MHz Band, currently used primarily for the DTT, for the purposes of the IMT, including its potential assignment for co-primary use by both the DTT and the IMT, would have to be based on a thorough analysis of the particular future needs of the IMT, from the perspective

¹⁴ Report 224 on Long Term Vision for the UHF broadcasting band, November 28, 2014, *see*: http://www.broadcast-networks.eu/wp-content/uploads/2014/12/ECC14089-Annex-11_ECC-Report-224-Long-term-vision-for-the-UHF-broadcasting-band-for-publication.pdf.

¹⁵ Pascal Lamy's Report on the future use of the UHF band, September 1, 2014, *see*: http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=6721.

¹⁶ Office of Communications - Decision to make the 700 MHz band available for mobile data – statement, November 19, 2014, *see*: <http://stakeholders.ofcom.org.uk/binaries/consultations/700MHz/statement/700-mhz-statement.pdf>.

¹⁷ Aetha Consulting Limited - Future use of the 470–694MHz band, October 31, 2014, *see*: <http://www.aethaconsulting.com/downloads/Aetha%20future%20use%20of%20the%20470-694MHz%20band%20in%20the%20EU%2031%20Oct%202014.pdf>.

of effective use of the radio spectrum and including the question of whether the substantial portion of the radio spectrum already allocated to the IMT is used in a sufficiently efficient way.

We therefore conclude, taking into account the foregoing, that RSPG should recommend to the member states of the European Union that they not implement the IMT, including Supplemental Downlink, in the 500/600 MHz Band within the above-mentioned period of time at all, not even on a co-primary basis or any other similar basis that could lead to even a partial or conditional use of the 500/600 MHz Band by the IMT.

3. Summary of CRa's Position Regarding the Draft UHF Opinion

Taking into account all of the above, we would like to summarize our position regarding the Draft UHF Opinion as follows:

- (i) The time frame for the Complete Release of the 700 MHz Band proposed by RSPG, *i.e.* the years 2020 and 2022, are, taking into account the various above-mentioned circumstances, neither realistic nor appropriate (for more details, please *see* Section II.1 hereof), while, under the current conditions, it is premature that this matter to be resolved as early as during WRC-15 or in connection therewith;
- (ii) Any decision regarding the Complete Release of the 700 MHz Band must take into account the absolutely critical and, within the foreseeable future, irreplaceable role of the DTT platform in some of the member states of the European Union, including the Czech Republic, and in the European Union as a whole (for more details, please *see* Sections II.1(a) and (b) hereof);
- (iii) The choice of term for the Complete Release of the 700 MHz Band must take into account the terms of the respective allotments of radio frequencies for the DTT, while in the case of the Czech Republic and CRa such allotments of radio frequencies are valid through 2024 (for more details, please *see* Sections II.1(c) hereof);
- (iv) In the event that the Complete Release of the 700 MHz Band is set forth upon a binding EU legislation, where a term for the Complete Release of the 700 MHz Band would precede the date as of which the current allotments of radio frequencies for the DTT will expire, it is absolutely essential that RSPG, or another authorized body, set forth a proposal regarding compensation for the relevant holders of such allotments of radio frequencies for the DTT who will be affected by the Complete Release of the 700 MHz Band (for more details, please *see* Sections II.1(c) and (g) hereof);
- (v) It is absolutely crucial that RSPG generally clarify and recommend the unified approach to the execution of the Complete Release of the 700 MHz Band on the level of the European Union by means of, *e.g.* a “roadmap”, which would ensure minimal cross-border interference due to the use of different technologies in individual member states, as well as other undesired complications which could arise on the part of neighboring member states in the event that one of the member states is in delay with implementation of the

Complete Release of the 700 MHz Band (for more details, please *see* Sections II.1(c) hereof);

- (vi) The necessary condition precedent for the Complete Release of the 700 MHz Band shall be a successful completion of the Transition, including the resolution of the issue of its financing (for more details, please *see* Sections II.1(f) and (g) hereof);
- (vii) The decision regarding the Complete Release of the 700 MHz Band must be preceded by a detailed analysis which would assess the current allocations of radio spectrum for the purposes of the IMT from the viewpoint of their adequacy and efficient use, and, furthermore, properly evaluate the real future needs of the IMT, as far as any additional allocations of the radio spectrum are concerned (for more details, please *see* Section II.1(e) hereof);
- (viii) The Complete Release of the 700 MHz Band should be conditional upon a decision adopted at a national level, which shall fully reflect all of the above-mentioned facts and circumstances, including the fact that a substantial portion of the radio spectrum has already been allocated for the purposes of the IMT, and, as the case may be, additional issues concerning the technical aspects related to the Complete Release of the 700 MHz Band (for more details, please *see* Sections II.1(d) and (h) hereof);
- (ix) The execution of the Complete Release of the 700 MHz Band must be based on a clear guarantee that the 500/600 MHz Band will remain in use for the DTT on a primary basis for a time period of no less than 20 years following the Complete Release of the 700 MHz Band (for more details, please *see* Sections II.2(a) hereof); and
- (x) We request that any and all acts that could lead to the co-primary use of the 500/600 MHz Band by the DTT and the IMT, or any other similar use of the 500/600 MHz Band by the IMT, before the year 2040 be strongly opposed and rejected (for more details, please *see* Sections II.2(a) hereof).

III. CRa's Position Regarding the Draft WRC-15 Opinion

RSPG in the Draft WRC-15 Opinion describes the most important agenda points of the WRC-15 conference scheduled to take place in Geneva from November 2 to November 27, 2015 under the aegis of the International Telecommunication Union, where the various fundamental questions regarding the future use of the UHF Band, as well as other parts of the radio spectrum, are to be discussed and resolved. RSPG in its Draft WRC-15 Opinion recommends that the member states of the European Union formulate a common position regarding the individual points of such agenda.

Aside from the general recommendations listed in the Draft WRC-15 Opinion, RSPG particularly recommends that the member states of the European Union support the harmonization of the existing allocations of the radio spectrum for electronic communications services on a global level for the purposes of obtaining economic advantages, and to that purpose identify the parts of the radio spectrum suitable for allocation for the IMT. On the other hand, RSPG in this respect, as well as in order to ensure the protection of the DTT, does not recommend that any decision regarding the

allocation of the 500/600 MHz Band used by the DTT be adopted at the WRC-15, not even on a co-primary basis.

In this matter, we hereby generally refer to our position regarding the Draft UHF Opinion, as it is described in Section II. hereof, which shall apply hereto *mutatis mutandis*.

Taking into account all of the aforesaid, we would like to further stress that it would not be appropriate to adopt any decision on the Complete Release of the 700 MHz Band at WRC-15, because there are a number of crucial and, as of yet, unresolved issues in this matter, some of which are discussed above. On top of this, it is apparent that the term proposed by RSPG for the Complete Release of the 700 MHz Band is to be preceded by the WRC-18. In this respect, we would like to point out, *inter alia*, that, according to RSPG's proposal, the international coordinating negotiations regarding the Complete Release of the 700 MHz Band should be concluded by the end of 2017, and it is, therefore, apparent that no conclusions (technical conditions) of these negotiations will be known by the time of WRC-15, while such conclusions would be essential to contribute to the complexity of the perspective on the potential changes of use of the radio spectrum, as well as offer the necessary foundation for a qualified decision in this matter.

Based on all of the aforementioned, we expect that RSPG recommend to the individual member states of the European Union that they do not propose to the agenda of WRC-15 nor support, in the event that such item is addressed at WRC-15, any resolution regarding the Complete Release of the 700 MHz Band to be adopted at WRC-15, but that they support the potential inclusion of such item, in the event that such resolution is addressed at WRC-15, in the agenda of WRC-18.

Furthermore, in light of the Draft Opinion WRC-15, we deem necessary to re-emphasize the need for the protection of the 500/600 MHz Band for the purposes of the DTT. In this regard, we expect that RSPG recommend to the individual member states of the European Union that they do not propose to the agenda of WRC-15 nor support, in the event that such item is addressed at WRC-15, any resolution, which would enable the use of the 500/600 MHz Band for the purposes of the IMT, even on a co-primary basis, to be adopted at WRC-15.

Finally, I would like to thank RSPG on behalf of CRA for its open and kind approach regarding the above-described matters. We would be delighted to provide you with any further assistance regarding the above at your convenience.

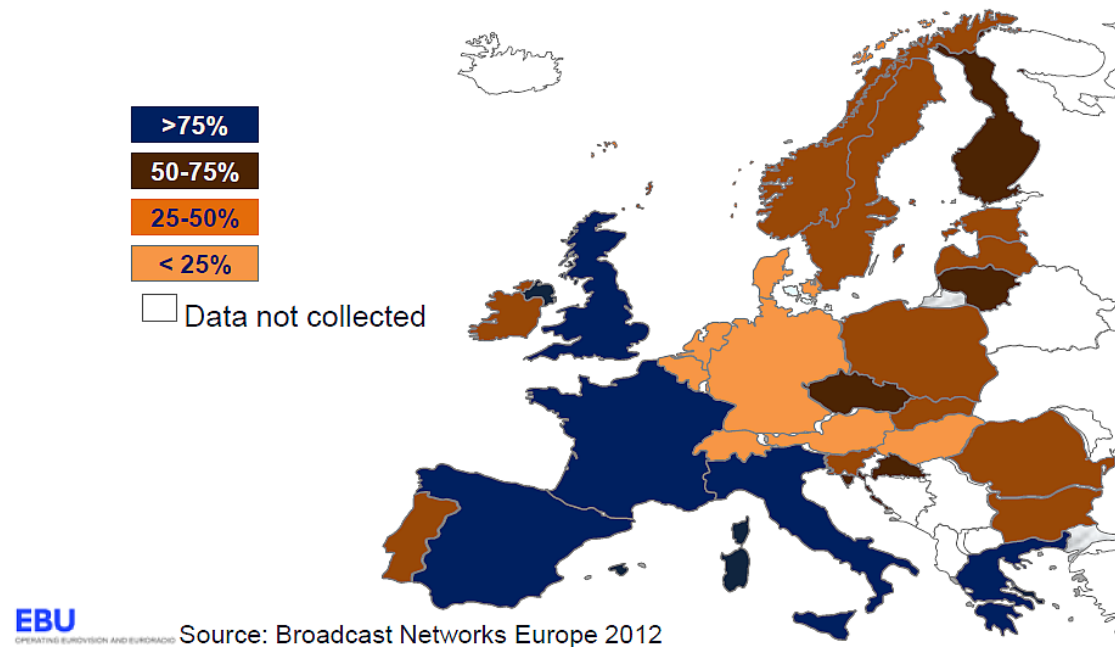
Annexes

Annex No. 1

The Czech Republic is a country with a very high DTT platform penetration

62% of households in the Czech Republic use the UHF Band for reception of television broadcasting via the DTT platform.

Source: Broadcast Network Europe



Annex No. 2

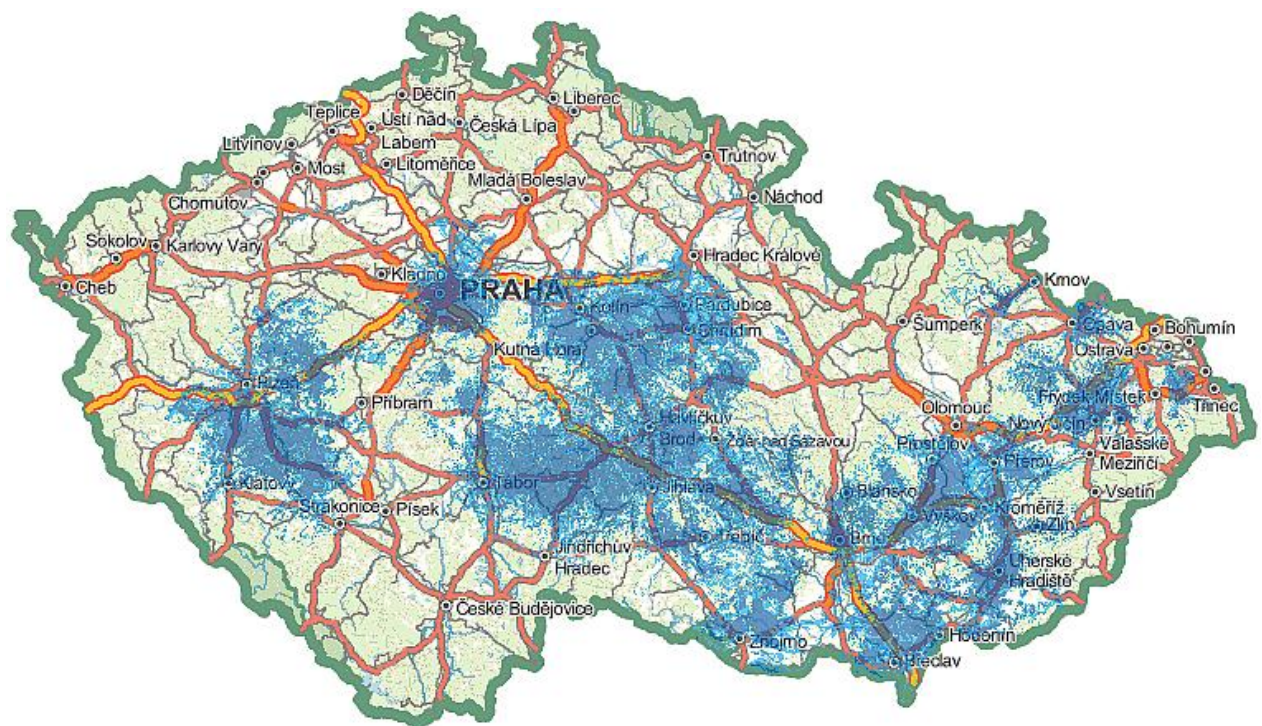
Use of the 800 MHz band by mobile operators in the Czech Republic – map of coverage

The mobile operators use the 800 MHz band primarily in the urban areas, despite their declaration regarding the importance of this band for the coverage in rural areas. It is apparent that the 800 MHz band is not used for the purpose to which it was allocated, *i.e.* the IMT.

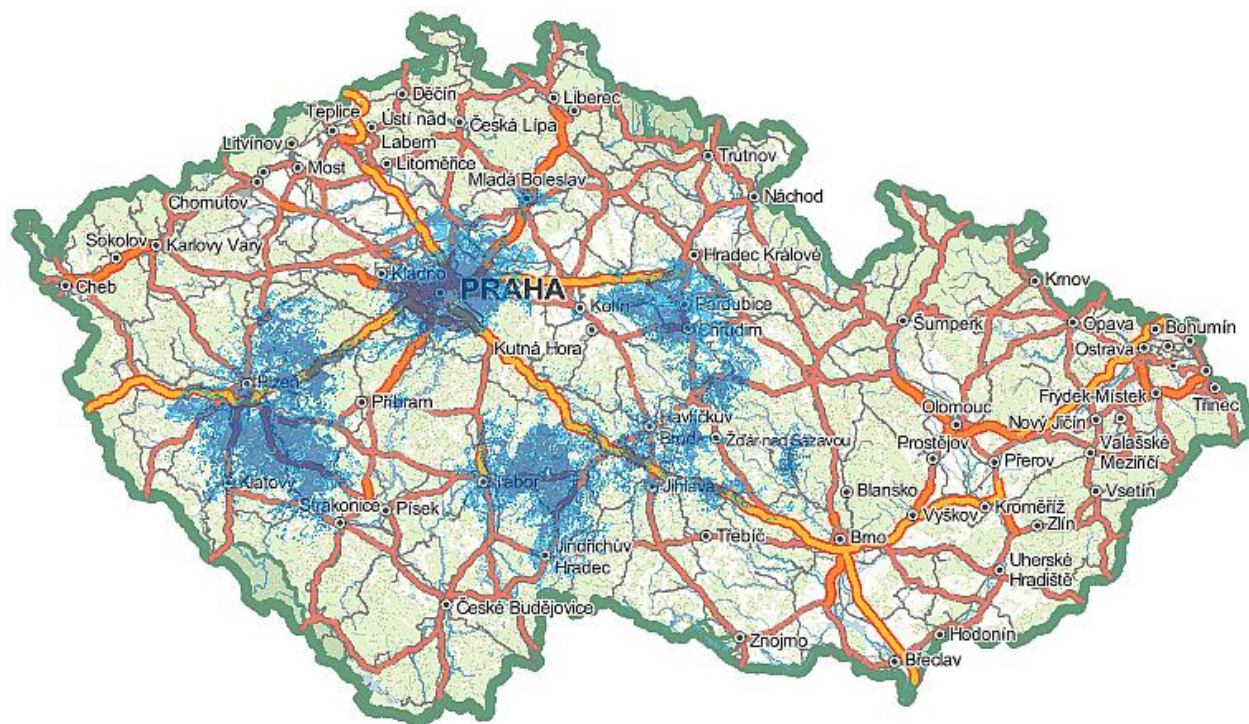
Source: CTO (<http://lte.ctu.cz/pokryti/>, updated December 8, 2014)

O2 – map of signal coverage in the 800 MHz band

- area coverage: 24.6%
- population coverage: 33.9%

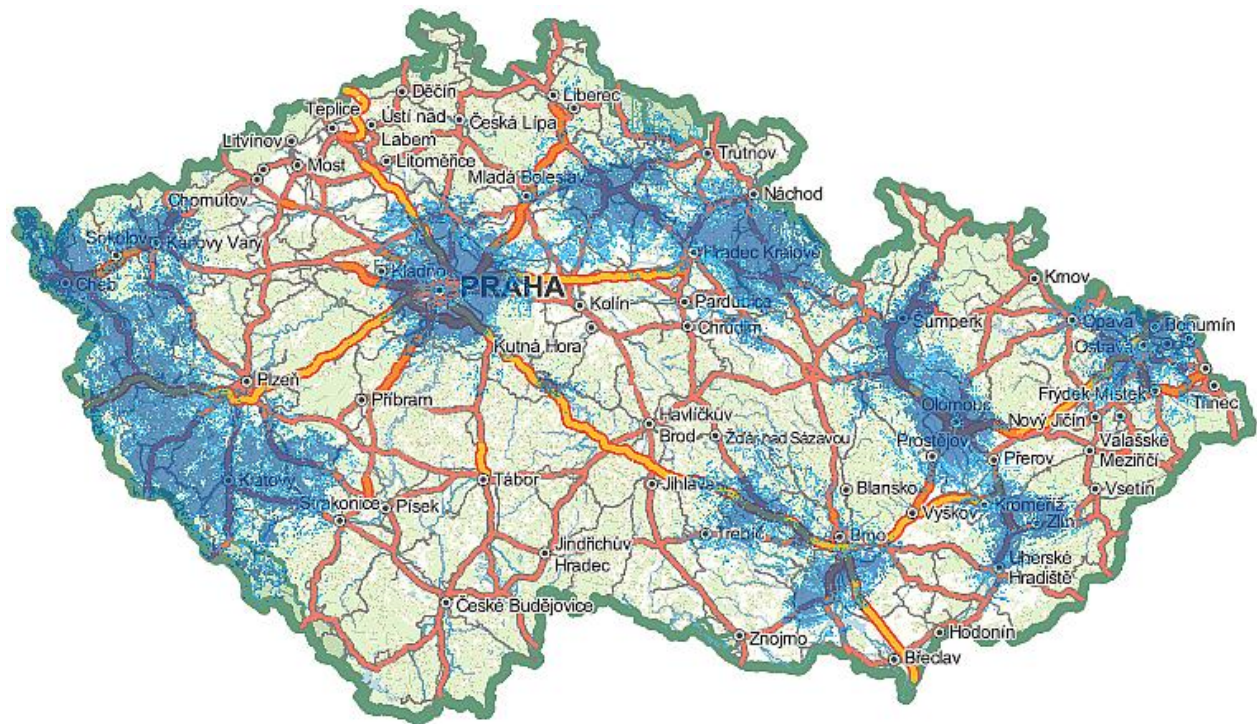


- area coverage: 11.1%
- population coverage: 20.5%



Vodafone – map of signal coverage in the 800 MHz band

- area coverage: 24.6%
- population coverage: 32.2%



Annex No. 3

Use of the 2600 MHz band by mobile operators in the Czech Republic – map of coverage

The mobile operators have not commenced using the 2600 MHz band at all.

Source: CTO (<http://lte.ctu.cz/pokryti/>, updated December 8, 2014)

O2 – map of signal coverage in the 2600 MHz band

- area coverage: 00.0%
- population coverage: 00.0%



T-Mobile – map of signal coverage in the 2600 MHz band

- area coverage: 00.0%
- population coverage: 00.0%



Vodafone – map of signal coverage in the 2600 MHz band

- area coverage: 00.0%
- population coverage: 00.0%

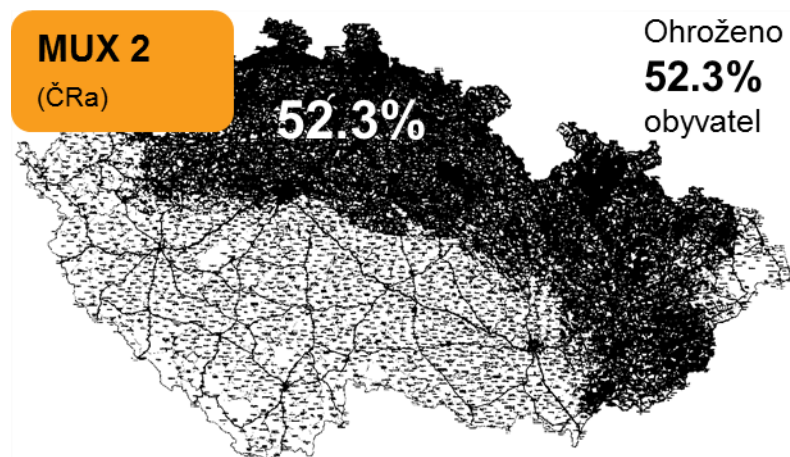
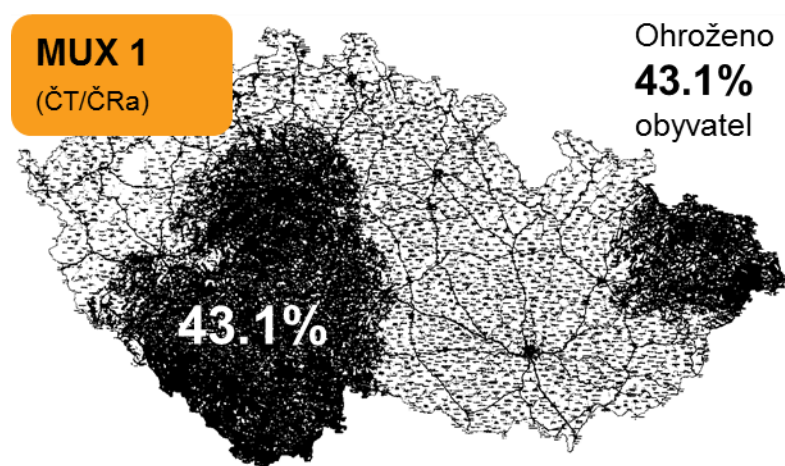


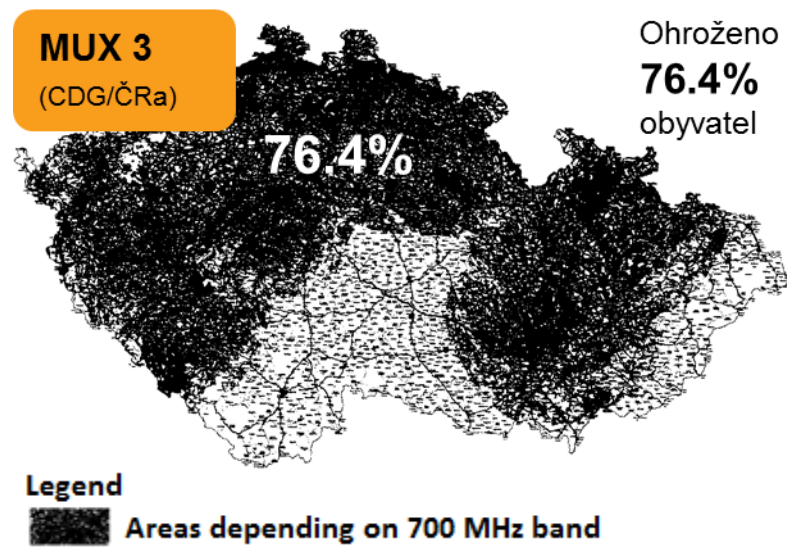
Annex No. 4

The impact of the Complete Release of the 700 MHz Band on the current electronics communication networks used for the distribution of the digital terrestrial television broadcasting (DVB-T) and the diminishment of household television reception

The 700 MHz Band is currently intensively used for terrestrial television broadcasting (DVB-T). Removing this band without adopting adequate measures would result in substantial diminishment of television broadcasting reception for the majority of households in the Czech Republic (*see the percentage of households to be negatively affected as a result of the Complete Release of the 700 MHz Band in the respective digital multiplexes used for the DTT in the Czech Republic*).

Source: CRa



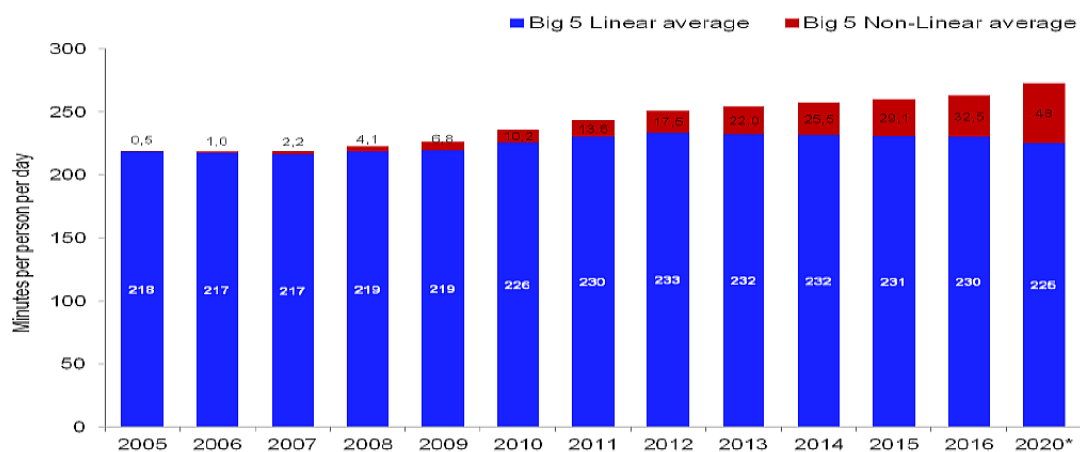


Annex No. 5

Evolution of linear and non-linear television viewing

Source: IHS – ScreenDigest: Cross-platform Television Viewing Time FY 2012

EVOLUTION OF LINEAR AND NON-LINEAR TV VIEWING (MINUTES PER PERSON PER DAY) (AVERAGE IN EU BIG 5)



EBU
OPERATING EUROVISION AND EUROADIS

Source: IHS – ScreenDigest: Cross-platform Television Viewing Time FY 2012
Note: Forecast from 2012 // * 2020 forecast by EBU

DVB