

ALCATEL-LUCENT

January 9th, 2015

Submission to the RSPG

Radio Spectrum Policy Group:

(Draft) RSPG Opinion on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union

Introduction

Alcatel-Lucent welcomes the opportunity to respond to the RSPG draft Opinion on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union.

Alcatel-Lucent recognizes that the investigation and development of an appropriate regulatory and spectrum licensing regime for the UHF frequency range 470-694 MHz should carefully take into account all the various stakeholder interests. We appreciate the work conducted to analyse the flexibility of future use of the UHF band by the EU administrations expressed within CEPT in a manner that better responds to the specifics of each respective national market and demands of the Member States.

Through the response to the consultation, Alcatel-Lucent expresses its general comments on the report and makes specific recommendations on the long-term use of the UHF band in Europe and the possible evolution of the Digital Terrestrial Television (DTT) services taking advantage of the advancement in the delivering technologies.

This response to the consultation reflects the views of Alcatel-Lucent on the future use of the UHF band (470-790MHz) in general and in the context of EU elements for common policy objectives.

About Alcatel-Lucent

Alcatel-Lucent is at the forefront of global communications, providing products and innovations in IP and cloud networking, as well as ultra-broadband fixed and wireless access to service providers and their customers, and to enterprises and institutions throughout the world.

Underpinning us in driving the industrial transformation from voice telephony to high-speed digital delivery of data, video and information is Bell Labs, an integral part of the Group and one of the world's foremost technology research institutes, responsible for countless breakthroughs that have shaped the networking and communications industry. Our innovations have resulted in our Group being recognized by Thomson Reuters as a Top 100 Global Innovator, as well as being named by MIT Technology Review as amongst 2012's Top 50 "World's Most Innovative Companies". We have also been recognized for innovation in sustainability, being named Industry Group Leader in the Technology Hardware & Equipment sector in the 2013 Dow Jones Sustainability Indices review, for making global communications more sustainable, affordable and accessible, all in pursuit of the Group's mission to realize the potential of a connected world.

With revenues of Euro 14.4 billion in 2013, Alcatel-Lucent is listed on the Paris and New York stock exchanges (Euronext and NYSE: ALU). The company is incorporated in France and headquartered in Paris.

For more information, visit Alcatel-Lucent on: <http://alcatel-lucent.com>, read the latest posts on the [Alcatel-Lucent blog](#) and follow [Alcatel-Lucent on Twitter @Alcatel_Lucent](#).

Alcatel-Lucent's Response

Introduction

The responses below represent Alcatel-Lucent views on the specific topics raised in the consultation referring to elements for common policy objectives.

Alcatel-Lucent thanks RSPG for establishing draft elements for a common policy in an open and transparent manner through its Radio Spectrum Policy Programme aiming to support and achieve policy objectives in the areas of efficient management and use of spectrum, and allocation of sufficient and appropriate spectrum in a timely manner. In particular, Alcatel-Lucent believes that a European long-term strategy for the UHF band (470-790 MHz) is of paramount importance for the administrations of both Member States and non-EU countries in defining the evolution of their communication markets.

Alcatel-Lucent has participated in discussions in several European Groups such as CEPT/ECC and CPG for WRC-15 preparations. We welcome the opportunity to further contribute to the process by responding to this consultation on the future of the UHF band in the European Union. We believe that, for a complete evaluation of the possible medium and long-term scenarios of the future use of the UHF band, it is essential to consider the likely evolution of both DTT and WBB (wireless broadband) markets and technologies. This evolution needs to be taken into consideration when defining the long-term objectives and the advantages and disadvantages of each alternative, including the regulatory and technical constraints.

Alcatel-Lucent believes that the preparation of this Opinion by RSPG is an important element as it formalizes the positions shared by the 28 EU Member States and expressed within CEPT, contributes to reinforce their role within CEPT, and will ensure consistency with the views that the European Commission will express on WRC-15.

Background

Alcatel-Lucent takes good note of the definition of audiovisual media service (AVMS) from Directive 2010/13/EU (10 March 2010) recalled in RSPG Opinion, i.e.: Audiovisual media service means a service “... which is under the editorial responsibility of a media service provider and the principal purpose of which is the provision of programmes, in order to inform, entertain or educate, to the general public by electronic communications networks within the meaning of point (a) of Article 2 of Directive 2002/21/EC. Such an audiovisual media service is either a television broadcast or an on-demand audiovisual media service.”

In particular, Alcatel-Lucent appreciates the comment from RSPG about audiovisual media non-linear services, that “*The regulatory framework for audiovisual media service applies to both audiovisual media linear services and audiovisual media non-linear services, irrespective of the technology used to deliver these services. The AVMS Directive encourages taking in technology when developing the audiovisual media service regulation.*”

Alcatel-Lucent also notes the description of options for the future use of the band 470-694 MHz based on scenarios combining:

- Service: content/information and/or functions provided to/from a user (e.g. audio/video linear, audio/video non-linear, interactive/on-demand services, data, PMSE, etc.)
- Terminal/user device: receiving/transmitting equipment for the above service (e.g. large flat screen, portable TV sets, PC, laptop, smartphone, game console, tablets, etc.)
- Usage environment: description of the radio propagation environment (e.g. rural, dense urban) as well as the receiving mode (fixed, portable/mobile) and location (e.g. at home, in public places, and vehicles);

Observations

As recognized in the RSPG Opinion, currently the band 470-694 MHz is used for the delivery of television, which can be expected to continue in the foreseeable future.

However, there is a growing market demand for television to deliver both linear and non-linear AVMS and this is true for all types of equipment: large flat screens, as well as portable TV sets, PCs, laptops, smartphones, game consoles, tablets, etc.

As recalled in the RSPG Opinion, audiovisual non-linear service is a service providing audiovisual content by which the user chooses for himself the time he wishes to call up and view the content based on a catalogue of programme content supplied by the service provider. It requires upstream transmission from the terminal/user device, and not just downstream reception.

In the RSPG Opinion, it is stated that *“RSPG recognises that the band 470-694 MHz is mainly used for downstream audiovisual content distribution and recommends that it remains as such for the long term, even beyond 2030;”*

In the RSPG Opinion, it is also stated that: *“Notwithstanding, the RSPG recommends that Member States should have the flexibility to use the 470-694 MHz band for WBB downlink, provided that such use is compatible with the broadcasting needs in the relevant Member State and does not create a constraint on the operations of DTT in this band, including for neighbouring countries;”*

Alcatel-Lucent comments

It is Alcatel-Lucent’s view that a long-term strategy for the future of the band 470-694 MHz should leave the door open to likely evolutions of AVMS towards a growing share of non-linear usage.

Such non-linear AVMS requires that user devices be capable of upstream transmission. And it is likely that AVMS service providers would prefer to use the same 470-694 MHz band to convey the upstream transmission as the downstream transmission.

Therefore Alcatel-Lucent suggests that RSPG Opinion, while remaining technology neutral in the recommendation to use the 470-694 MHz, should avoid limiting such use to downlink, and leave the door open to AVMS technologies making use of uplink transmission.

Moreover, the ECC Report 224 states that - although linear services are currently primarily delivered over the traditional broadcast distribution platforms, while the on-demand ones are primarily delivered over broadband networks - *“the broadcast services are more and more heading for using return channels or additional parallel channels to allow the user more flexibility and access to additional information. A cooperation between radiocommunication services is expected in the long term.”*

Acknowledging that the 470-694 MHz band is part of the discussions on the long-term convergence of broadcast and mobile broadband, Alcatel-Lucent is of view that a co-primary allocation of the band to the Mobile Service in Region 1 would ensure a global allocation of the band to Mobile Service. This band, adjacent to already allocated mobile bands, has a lot of potential for better coverage, even considering the need to protect that the existing high DTTV from any resulting interference. An allocation to the Mobile Service, and even an identification for IMT, would not prejudice the results of these discussions. It should be noted that early availability of the band to IMT applications may be expected between in 2020-2025 in some areas of CEPT/EU countries, e.g. Northern Europe.

An allocation to the Mobile Service does not oblige an Administration to authorise or deploy mobile applications in the band. What it does do is to give administrations the flexibility to make these political decisions at a later stage. While the date of the political decisions will differ from country to country, we are of the view that a mobile allocation is necessary to ensure that the equipment ecosystem will exist when the time is right. The development of a global market and a robust ecosystem would clearly serve the interests of the EU and of consumers.

If the co-primary mobile allocation of the UHF 470-694 MHz band does not result from WRC-15, Alcatel-Lucent is of the view that it should be considered as part of the long-term vision.

Regarding the approach for the 700 MHz band, as mentioned in the RSPG’s opinion, several activities are underway at the international and European levels. As part of that effort, the European Commission mandated CEPT to develop a series of studies aiming to develop harmonized technical conditions for the 694-790 MHz band in the EU for the provisioning of the WBB and other uses. The (draft) ECC Decision on harmonized technical conditions for MFCN in the 700 MHz band proposes, taking into account the timing of the WRC-15, an implementation date of these conditions no earlier than 1st April 2016.

In this context and with regards to the AI 1.2, Alcatel-Lucent believes that WRC-15 is to confirm the identification of this band for IMT made at WRC-12 for Region 1. As the first deployments are expected in 2017-2018 period and wide-scale deployment in 2020, Alcatel-Lucent supports this agenda item and the RSPG views that this allocation to the Mobile Service and identification for IMT will facilitate the implementation of IMT systems in Europe in this band.