

31 October 2014

European Commission Spectrum Inventory Report COM (2014) 0536

INTRODUCTION

The European Satellite Operators Association (ESOA) appreciates the opportunity to comment on the report on the radio spectrum inventory published by the EU Commission on 1 September 2014.

ESOA is a non-profit European organisation established with the objective of serving and promoting the common interests of European satellite operators. The Association is the reference point for the European satellite industry, and today represents the interests of 25 satellite operators, manufacturers, and related sectors that deliver information communication services across the globe. See www.esoa.net.

USE OF THE C-BAND FOR FSS

ESOA very welcomes the Commission's acknowledgement of the importance of the C-band for FSS in Europe. We particularly commend the Commission for this following statement:

"the [inventory] analysis concluded that the increase in satellite bandwidth required for backhaul and trunking services, professional services, and the continuously increasing bitrates used for video distribution will be the main trends pushing satellite spectrum demand upwards and that most of those needs may be met by the C-band. This is a valuable band for satellite use as it contains quite a large amount of spectrum at relatively low frequencies which have superior propagation characteristics (allowing very wide coverage) and are less susceptible to rainfall and humidity (enabling signal resiliency) than higher satellite frequencies."

The C-band was allocated to and used by the satellite industry since the first networks were deployed over 40 years ago, and the C-band remains one of a few key bands in which satellite services can technically be provided. This is because this part of the electromagnetic spectrum is particularly suited to meet the communication needs of countries near or within tropical or equatorial regions that suffer from heavy rainfall - signals transmitted in the C-band are more resilient to rain fade. The C-band also allows satellite networks to cover large regions, making Europe the gateway for communications with other continents.

Consider Africa: a large part of backhaul infrastructure for communications in and with Africa relies on C-band satellite platforms based in Europe. The African air navigation safety organisation ASECNA, which depends on the International organisation ICAO, uses C-band satellite earth stations based in Portugal, Spain and France as communications infrastructure nodes.

Furthermore several communications channels between Asia or Latin America and Europe, such as for the delivery of TV programmes to expatriates living in Europe, also rely on the satellite C-band. Around 20 C-band satellites covering Europe specifically provide TV signals which can be received by people using 1.8 metre dishes.¹ These satellites deliver broadcast services to hundreds of thousands of European homes from many non-European countries that are located far away, thanks to the global coverage of the earth that C-band enables.

In addition the C-band is largely used for critical services that are uniquely enabled by satellite – the UN Working Group on Emergency Communications (UN WGET) has previously stated that for them C-band is a standard for emergency communications. Other applications such as the emergency.lu platform, the Galileo data network and the European Broadcasting Union video contribution links all rely on the C-band in Europe as well. The World Meteorological Organisation (WMO), the Global Maritime Distress & Safety System (GMDSS) and the United National High Commissariat of Refugees (UNHCR) also use the C-band for highly reliable and secure communications, either all over the globe, or specifically between Geneva and the rest of the world. A total of more than 180 satellites with a C-band spectrum operate in the world today, 55 of which cover Europe.

OTHER USERS IN THE C-BAND?

Despite the adoption in May 2008 of the EC Decision on the harmonisation of the 3400-3800 MHz frequency band for terrestrial systems capable of providing electronic communications services,² it is striking to note how little usage has been made of this band for terrestrial services in more than 6 years.

The analysis of the EC spectrum inventory makes it very clear:

“The level of under-utilised spectrum for mobile broadband is still significant - approximately 30%, mainly but not exclusively in the 3.4- 3.8 GHz range due to lack of demand and/or linked to usage difficulties.”

“Decision 2008/411/EC harmonised the 3400-3800 MHz band for terrestrial systems but its use for wireless broadband is currently low.”

¹ Examples of satellite services that can be received by a 1.8 metre dish can be found here: <http://www.tele-satellite.com/TELE-satellite-0607/eng/c-band.pdf> Example of discussions on C-Band reception in the UK can be found here: <http://www.satellites.co.uk/forums/555-c-band-reception-uk-and-europe/>

² EC Decision 2008/411/EC

Considering our own analysis of IMT spectrum needs and spectrum usage,³ ESOA therefore concurs with the European Commission views that no more spectrum is needed for IMT:

“Based on the analysis of spectrum supply and demand, the Commission believes there is currently no need for additional spectrum harmonisation, beyond the 1200 MHz target, in the range 400 MHz - 6 GHz for licensed wireless broadband.”

CONCLUSION

On the one hand, ESOA remains fundamentally unsatisfied by the opening of such an important band as 3400-3800 MHz in Europe to mobile terrestrial systems in Europe.

We are particularly concerned by the European insistence to make 3400-3800 MHz co-primary globally (in view of WRC-15), given the criticality of the whole of C-band for FSS in many regions of the world – including in Africa & Russia, which are parts of ITU Region 1. Even if a policy decision is made to open the C-band in Europe to mobile terrestrial services – which we oppose – that is not justification for “exporting” the concept to the rest of the world, including in areas that critically depend on C-band FSS services.

In many countries of Latin America, Asia and Africa that have authorised terrestrial systems in some parts of the C-band, interference cases have been reported, including the recent example of the Philippines.⁴

At the same time where C-band spectrum has been given to terrestrial systems in certain European countries, those systems have often failed to make use of it and have therefore had to return their license to the regulator. This is not only the case in Europe!

On the other hand, ESOA can only applaud at the Commission’s conclusion from its spectrum inventory:

“the Commission considers that demands to allow terrestrial wireless broadband services in the whole C-band (i.e. in 3.8-4.2 GHz as well as 3.4-3.8 GHz) would not be justified.”

Yours sincerely



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³ See LS telcom reports on Mobile spectrum requirements estimates and on Worldwide licensing & usage of IMT spectrum, both available from: <http://www.lstelcom.com/en/news/>

⁴ In the Philippines, it’s been reported that the government has awarded LTE (i.e. IMT Advanced/Small cells) to a mobile operator in the extended C-band 3.4-3.6 GHz and it has caused a complete loss of the broadcasters channels transmitting in that spectrum with the operator Asia Broadcast Satellite.