



Europe

## **GSMA Europe Response to the RSPG Draft Opinion for Public Consultation on**

### **A long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union**

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## **About the GSMA**

The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences.

For more information, please visit the GSMA corporate website at [www.gsma.com](http://www.gsma.com). Follow the GSMA on Twitter: @GSMA.

## Executive Summary

The GSMA would like to thank the RSPG for its draft opinion paper and the opportunity to provide input on this important topic. The GSMA's overall view is that the draft opinion paper contains numerous positive elements; however, certain recommendations could harm innovation and risk the ability of Member States to deliver affordable and ubiquitous mobile broadband access.

In response to specific recommendations in the report, the GSMA's position is that:

- 1. Support for making the 700MHz band available for mobile broadband is positive, but greater flexibility needs to be provided to meet Member States' requests for earlier release.**
- 2. Recommending completion of cross-border coordination by the end of 2017 is also positive as it gives Member States the freedom to advance quickly and a requirement for a TV broadcast plan in 470-694 MHz band.**
- 3. The RSPG proposals addressing PMSE and PPDR needs, and RF and EMC standards for TV receivers and TV ancillaries as well as the proposal to take into account all aspects of DTT platform (technical and non-technical) when considering any option for sub-700 future use are positive. However, allowing flexibility for Member States wishing to grant mobile broadband in the sub-700MHz band is positive and advocating for a co-primary mobile allocation at WRC-15 would make that clear. The absence of a mobile allocation at WRC-15 will hold back the evolution, and reach, of broadband services, especially in rural areas, as well as restrain economic growth and technology innovation.**

The GSMA's position is chiefly based on the following premises:

1. The trend in media consumption is moving gradually away from linear broadcasting and towards broadband-based, on-demand viewing. Member States should have the option to gradually shift their spectrum resources from broadcast to broadband.
2. Mobile data consumption is rapidly growing and research shows significantly more mobile spectrum will be required as a result.
3. Research shows that using the digital dividend for mobile broadband services provides significant economic benefits which diminish the longer that access to the spectrum is delayed.
4. UHF spectrum has unique benefits that cannot be provided by higher frequency bands. Its propagation qualities make it an essential means of providing rural and in-building coverage, thus it is central to achieving the Digital Agenda objective for universal high-speed broadband access (i.e. 30Mbit/s for all EU citizens).
5. Reliance on terrestrial broadcast TV varies significantly throughout Europe so Member States should be given the freedom to decide on the sub-700MHz while advocating for global harmonisation of the 700MHz band at WRC-15.

## Introduction

The GSMA would like to highlight that the mobile industry is playing a central role in supporting economic activity and recovery in the region, contributing 3.1% to Europe's gross domestic product (GDP) in 2013, equivalent to €430 billion. This figure will increase to nearly €500 billion by 2020. In addition, mobile operators and the ecosystem jointly employed 1.8 million people.<sup>1</sup> These numbers capture the direct, indirect and productivity impact of the mobile industry as a whole, but do not include much of the positive impact from mobile services, which are improving welfare in the region. These include the role of mobile services in helping to modernise access to public services such as the health system, and the development of new products in a range of markets including transport and energy.

In 2013, the economic value of mobile in the EU was €269 billion compared with €48 billion for terrestrial TV and radio broadcast.<sup>2</sup> To put that in perspective, the amount the mobile industry paid in tax in 2012 (€53 billion) was greater than all terrestrial TV and radio broadcast revenues in 2013. Crucially the value of mobile is rapidly rising – it will be worth €477 billion in 2023 (up 77% from 2013)

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<sup>1</sup> GSMA Mobile Economy Report Europe (2014)

<sup>2</sup> Plum Consulting: 'Valuing the use of spectrum in the EU' (2013)

– whereas the value of terrestrial broadcast is falling – it will be worth €25 billion in 2023 (about half the size it was in 2013).

The significant economic value mobile services provide is reliant on timely access to sufficient spectrum – and specifically UHF ‘digital dividend’ spectrum. For example, the 800MHz digital dividend is expected generate up to €119B of incremental GDP over the period 2012-2020, producing €23B of additional tax revenues and supporting up to 156,000 new jobs across the region.<sup>3</sup> The indications are that the 700MHz band would also have a strong impact with the UK regulator Ofcom estimating its value, if made available for mobile broadband, would be worth €1.1bn-€1.7bn (or £900m-£1.3bn) in the UK alone<sup>4</sup>.

However, delays to making digital dividend spectrum available for mobile broadband can be significant. For example, the economic benefits of the 800MHz band are substantially lessened if a number of countries delay releasing it until 2017 - the overall GDP benefit in 2020 would be reduced by €16B and the number of new jobs by 67,000.<sup>5</sup>

## GSMA Response

### **1. Support for making the 700MHz band available for mobile broadband is positive, but greater flexibility needs to be provided to meet Member States’ requests for earlier release.**

The GSMA strongly supports the RSPG’s draft opinion that Member States make the 700MHz band available for mobile broadband “as early as possible”. However, the opinion then claims that “two dates are under consideration i.e. 2020 and 2022” despite numerous Member States actively considering much earlier use of the band for mobile services.

These later timelines mean the RSPG risks advocating that Member States’ delay their plans to use the band to accelerate their broadband agendas. Sweden and Finland have announced their intention to use the 700MHz band for mobile broadband by 2017 as well as Germany<sup>6</sup> in the first half of 2015 while France<sup>7</sup> aims to do the same by end of 2015.

The GSMA believes it is essential that Member States have the flexibility to use the band for mobile services in 2017, or certainly no later than 2020. This is necessary to ensure these services reach, and can scale to support growing traffic requirements. Such an effort is especially important to meet the Digital Agenda objective of universal high-speed broadband access (i.e. 30Mbit/s for all EU citizens). This certainty is also important for mobile operators seeking to acquire spectrum in the earlier processes. Uncertainty about cross-border interference and its duration has a disproportionate effect on the present value of spectrum.

Europe has been hampered by slow 4G rollouts, largely due to the delayed release of the 800MHz band, while 4G markets in Asia and North America have flourished. If Europe is to regain its place in the forefront of leading broadband regions, delays in allowing access to vital coverage spectrum must not be repeated.

### **2. Recommended completion of cross-border coordination by the end of 2017 is positive as it gives Member States the freedom to advance quickly.**

The GSMA agrees with the RSPG’s coordinated approach for the release of the 700MHz band including completion of the agreements for cross-border coordination by 2017. With these agreements in place, Member States can subsequently prepare and implement, the 700MHz release, while allowing for the necessary flexibility in timing. The step-by-step measures advocated, if properly planned and adhered to, could encourage rapid mobile broadband development across Europe.

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<sup>3</sup> GSMA Mobile Economy Report Europe (2013)

<sup>4</sup> Ofcom ‘Consultation on future use of the 700 MHz band’ (May, 2014)

<sup>5</sup> GSMA Mobile Economy Report (2013)

<sup>6</sup> [Germany's Bar hopes for 700 MHz allocation in H1 2015](#) reported in Telecom Paper (Dec 2014)

<sup>7</sup> [Calendrier du deuxième dividende numérique](#) Announcement of Prime Minister Manuel Valls (Dec 2014)

These include the adoption of harmonised regulation and technical procedures on a European level, followed by publication in a European release measure, including binding deadlines for transition of the band.

With the upcoming review of the RSPG, the discussion of the technical harmonisation measures should begin as early as possible. Opening the door to discussion on this topic now would allow Member States more time to prepare the necessary legislative instruments and achieve a co-ordinated release, as well as deal with cross border, and other potential, issues that could delay the process. More importantly, establishing a forum where the 700MHz band is discussed could bring together the mobile industry, manufacturers, broadcasters, and national regulators including both members and non-members. This will minimise the difference between approaches to national authorisation, implementation and introduction of mobile services in the band.

We therefore urge the RSPG, in its final opinion, to allow for such discussions and coordination to begin, as early as possible thus encouraging a smooth release of the 700MHz band. If there is a clear roadmap detailing the different actions to be taken in order to minimise the transition time for the change of use, the delays that occurred with the release of the 800MHz band can be avoided.

**3. Allowing flexibility for Member States wishing to grant mobile broadband in the sub-700MHz band is positive and advocating for a co-primary mobile allocation at WRC-15 would. The absence of a mobile allocation at WRC-15 will hold back the evolution, and reach, of broadband services, especially in rural areas, as well as restrain economic growth and technology innovation.**

At a time when the media and broadband markets are undergoing such rapid change as a result of the internet revolution, it is essential that the European regulatory environment has greater flexibility to react. Such flexibility will be essential in the sub-700MHz band given the differing levels of reliance on terrestrial broadcast, satellite, cable and IPTV around Europe means there is unlikely to be a single 'one-size-fits-all' solution. The GSMA believes that by ensuring that broadcast and the mobile service share a co-primary allocation in the sub-700MHz band at WRC-15, Europe will have the flexibility needed to support the right regulatory balance, rather than being constrained by the current situation.

Although Member States are sovereign, revisions to the ITU's Radio Regulations are an essential pre-requisite giving European administrations the confidence to license mobile broadband services, safe in the knowledge there will be affordable compatible equipment and roaming potential.

The RSPG's recommendation that Member States should have the flexibility to use the sub-700MHz band for mobile broadband – albeit for downlink only – is a step in the right direction. However, the GSMA believes that if Member States wish to gain the flexibility to determine the use of the sub-700MHz outside of the WRC timetable, then a more wide-ranging co-primary allocation should be sought. The RSPG opinion dismisses a combined uplink/downlink use case based solely on the potential difficulties in negotiating cross-border issues. This approach pre-supposes that the differences we see in DTT usage today will persist. This may not be the case in the long run, if TV migrates to IP networks and usage behaviours change. Without full flexibility being sought at this stage, the EU may needlessly delay further innovation by having to seek a further change to the allocation at a future WRC.

A mobile co-primary allocation is already supported by a growing number of Member States including Denmark<sup>8</sup> and Finland<sup>9</sup>. Most of Asia-Pacific and large parts of the Americas already have the flexibility to use the band for broadband services through an existing mobile allocation. That these other regions have not yet used the band for mobile broadband, and continue to use it for broadcast, shows that a mobile co-allocation is not, as some have claimed, a foregone conclusion that broadcast services will suddenly disappear. However, the allocation does mean governments in these regions have options at their disposal to react to the growing internet revolution in ways Member States lack.

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<sup>8</sup> ECC TG6-M5: TG6(14)062

<sup>9</sup> Finland is supporting co-primary allocation and a flexibility option within CEPT

The GSMA also recommends that the RSPG extends its support for flexibility to include allowing Member States to support two-way mobile broadband in the sub-700MHz band. We understand that the objective for the RSPG's work is to build a long-term strategy that would be future proof, keep the door open to future technologies and foster innovation, as well as develop coordination solutions that could be an example for others to follow. Any long-term view that is open to innovation must support the full potential of the internet by having the flexibility to include support two-way traffic in the band.

Doubtless the situation in the sub-700MHz band is more complex than the 700MHz band, but such a challenge is one that the GSMA believes the RSPG and its members would be wiser to engage than to avoid and delay. The goal of delivering maximum flexibility for Member States so they can find the best solution for supporting the internet revolution as well as broadcasting is too important to the European economy to be sidestepped.

As such, we encourage the RSPG to take a positive approach to this challenge by supporting this option and urging dialogue and cooperation rather than closing the door to such developments and risk re-opening this topic when new solutions emerge. The GSMA proposes that some analysis on convergence between mobile broadband and broadcast in the sub-700MHz band be conducted under the remit of the existing EU research projects on 5G. The resulting roadmap should give certainty to broadcasters, mobile operators, and consumers, as well as maintain access to high quality mobile broadband services and nurture an innovative mobile environment.

## **Key reasons to support greater flexibility in sub-700MHz**

The GSMA would like to take this opportunity to re-iterate three key reasons why greater flexibility is required to allow regulators to support mobile broadband and broadcast services in the band. These key factors have not been fully appreciated in the current draft of the report.

### **1. Reliance on terrestrial broadcast TV varies significantly throughout Europe so Member States should be given the freedom to make decisions based on their national circumstances.**

Terrestrial broadcasting plays a vital role in Europe and represents the most common way for EU citizens to watch broadcast television services. However, this reality disguises a more complex situation that is often overlooked, resulting in some Member States finding themselves in a position where their spectrum options are being dictated by others.

The use of terrestrial TV services varies enormously between Member States like Belgium, where it is used by only 4% of the viewing public, to others like Spain where it is used by 89%. As a result, some Member States understandably place enormous importance on the economic and social importance of terrestrial TV spectrum, while others should justifiably be allowed the flexibility to explore other options.

Even in those countries where terrestrial TV viewing is high, the bulk of the 'public value' comes from a small number of channels that require a relatively small amount of spectrum. For example, in the UK and Spain, only seven channels in each market have a viewer share above 5% and beyond the 20th TV channel, market share drops below 1%.

Given, most people do not use terrestrial TV in Europe, and there are only five EU countries where the majority of people use DTT (accounting for ~25% of EU TV households), there is an argument that Member States should have the option to use some, or all, of the sub-700MHz band for other services. This argument is especially strong given demand for terrestrial broadcast TV is falling in Europe (10% since 2011).<sup>10</sup>

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<sup>10</sup> According to the EC Special Eurobarometer: e-Communications Household Survey March 2014 (p59) terrestrial broadcast made up 53% of EU TV owning households in Feb/Mar 2011 (ie. 23% analogue + 30% DTT) and fell to 43% in Jan 2014 (ie. 6% analogue + 37% DTT)

**2. The trend in audio-visual consumption is moving gradually away from linear broadcast and towards broadband-based, on-demand viewing. Member States should have the option to gradually shift their spectrum resources from broadcast to broadband.**

While terrestrial broadcast services are expected to play an important role in future, it is undeniable that a dramatic change is taking place regarding how people consume media content. Earlier this year, Ericsson Media Vision released research predicting that by 2020 half of all media consumption will be on-demand in Western Europe.<sup>11</sup> This being driven by a generational change in viewing habits with Ofcom revealing that the younger generation is watching only half the amount of TV as adults.<sup>12</sup>

It is also notable that future mobile broadband networks could potentially support broadcast services through convergence. The GSMA would encourage nurturing a regulatory environment which, at the very minimum, avoids constraining the possibility of these developments.

**3. Mobile data consumption is rapidly growing and research shows significantly more mobile spectrum will be required as a result – this must include sub-1GHz coverage spectrum.**

The fact that global mobile data traffic grew 45-fold from 2007-2013<sup>13</sup> has defied all expectations. This is perhaps unsurprising given the rate of mobile data growth has continually been underappreciated. In 2010, mobile data traffic was five times greater than some of the estimates made in an ITU report from 2005, and had already exceeded some estimates made for 2020.<sup>14</sup> In light of that, the industry would require much more spectrum that is currently made available. Several reports, from the ITU and the GSMA as well have indicated that by 2020 there will be a significant shortage of spectrum. This particular issue is developed further in the GSMA response to the RSPG draft opinion for public consultation on the Common Policy Objective for WRC-15.

It is essential that the new mobile spectrum comprises a mixture of coverage (ie. <1GHz) and capacity (i.e. >1GHz) bands. If mobile operators are restricted to capacity spectrum then the cost of mobile networks would increase and could still fail to provide good in-building and rural coverage. As such, the bands below 1GHz are an essential means of delivering good value, high quality mobile services and therefore meeting the Digital Agenda objective for universal high-speed broadband access.

It is also important to appreciate that mobile operators invest significantly in using their spectrum as efficiently as possible. This includes constantly breaking the barriers of spectrum efficiency through new radio technologies (e.g in 15 years operator have gone from 2G to 4G and research has begun on 5G), new network architectures, as well as by refarming frequency bands, initially licensed for specific GSM technology, for use by the latest technologies (e.g. the 1800MHz band used for 2G is now the world's most popular 4G band).

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<sup>11</sup> [Ericsson Media Vision 2020 report \(2014\)](#)

<sup>12</sup> [Ofcom Digital Day 2014 Survey](#)

<sup>13</sup> Based on Cisco's proven historic traffic statistics – not tentative future traffic predictions – in its VNI reports

<sup>14</sup> See ITU report 'ITU-R M.2243'