

Telefónica response to RSPG draft opinion on a long term strategy for the UHF band¹

Telefónica thanks RSPG and the European Commission for the work leading up to the draft opinion, and welcomes the opportunity to comment on a topic of significant relevance to us.

The Telefónica group has made its name as a telecommunications operator, and that continues to be our core business. We already cover 40% of Spanish households with FTTH, and our plan is to increase that figure to 80% by the end of 2017. In parallel, we have a co-investment agreement with Deutsche Telekom in Germany which will give us access to 60% of German households with FTTC/VDSL technology by the end of 2016, and we are investing heavily to deploy near-nationwide 4G mobile networks in Spain, the UK and Germany.

Our future, however, is beyond the limits of a provider of telecommunication services. We see ourselves as a Digital Telco, combining traditional and digital assets to help people access and enjoy the best that technology can offer in all aspects of our lives, including the way we consume audio-visual services, an activity where technology is already driving change at a fast pace. Netflix, a video on demand subscription service, already accounts for 35% of peak time internet traffic in the US², and has almost forty million paying subscribers in that market, roughly a third of US households and more than any other pay TV platform³. At the same time, in 2013 US adults spent for the first time on average more time with other digital media (including mobile internet, which is growing at the fastest pace and accounts for more than half of the time spent on line) than watching TV⁴, a clear sign that demand for mobile broadband should grow in the next years as better content and more powerful applications are available.

The picture of audio-visual consumption in Europe should also change dramatically in the near future, and we are preparing for it by increasing our capabilities to buy, produce and distribute audio-visual content. In Spain, between September 2013 and September 2014 we have multiplied by 2.5 the number of subscribers to our IP-TV platform, surpassing cable. Telefónica now has a customer base similar to that of the Satellite platform⁵, for which we have made an offer that, pending regulatory approval, will make Telefónica the market leader in pay TV services in Spain. In September 2013 we also created Telefónica Studios, a company dedicated to produce Films and TV Series that in its first year of operation has produced or co-produced twenty seven films that have been seen in theatres by 21 million spectators⁶. The new

¹ "Draft RSPG Opinion on a long-term strategy on the future use of the UHF band (470-790MHz) in the European Union". RSPG14-585(rev1). 12 November 2014.

² <https://www.sandvine.com/trends/global-internet-phenomena/>

³ <http://www.statista.com/topics/1309/pay-tv/>

⁴ <http://www.emarketer.com/Article/Digital-Set-Surpass-TV-Time-Spent-with-US-Media/1010096>

⁵ <http://www.lavanguardia.com/television/audiencias/20141113/54419260690/movistartv-abonados-canal.html>

⁶ <http://telefonicastudios.com/>

company is devoted to create high quality content for theatres and TV, for the moment focused in Spain and Latin America but with plans to expand its audience to other European countries and North America.

Being a relevant provider of both mobile connectivity and audio-visual services, the two main candidates to use the UHF band in the future, puts us in a unique position to comment on the long term strategy, a discussion that in our view should be continuously updated and to which we also hope to contribute in the future.

This response will focus on sections seven and eight of the RSPG draft opinion, which are the basis for the RSPG recommendations described in section nine, and will essentially follow the structure of those sections of the RSPG document.

1. Elements for the Long Term Strategy: The Overview

The increasing demand for mobile broadband is inducing spectrum managers in the most advanced regions to allocate increasing parts of the UHF band to mobile services. In the United States, for example, where the UHF sub-band above 698 MHz is already used for FDD mobile services, it is very likely that after the incentive auction currently planned for 2016 also a relatively large sub-band below 698 MHz will also be repurposed. The band plan will not be known until after the auction, but there is a very high likelihood that there will be up to 2x35 MHz for FDD mobile broadband immediately below 698 MHz, and frequencies for Supplemental Downlink further below.

As a result, there is already an ecosystem of end user and network equipment for mobile broadband in the 700 MHz band, and it is very likely that it will expand below 698 MHz by 2018, making those frequencies very valuable for mobile operators in Europe. This does not mean that Europe should decide today to allocate all those frequencies for mobile broadband in the future, but it does call for spectrum managers in Europe to ensure that there is in-built flexibility in the policy framework to increase the set of UHF frequencies dedicated to mobile broadband if it proves to be the most valuable use, taking into account coexistence needs with other services.

We acknowledge however that besides mobile broadband other services also have a legitimate interest in the UHF band, especially current users, as described in the RSPG opinion:

Spectrum for DTT

Whilst we agree that there is a political will in a number of European countries to intervene in order to preserve a set of cultural and social values, the RSPG is in our view unjustifiably pessimistic with respect to the role that platforms different from DTT could play in the protection of those values. Looking forward the internet will undoubtedly grow as the platform best suited to deliver European audiovisual content to minorities, especially taking into account that broadband penetration should grow rapidly. Similarly, European films and TV series can be subsidized, but the distribution of that content can be done over platforms different from DTT: immediacy does not provide much value to films and TV series, a type of content better suited for Video on Demand rather than broadcasting, as the success of Netflix shows.

A wide range of hybrid options are possible in which DTT can be used in combination with alternative delivery platforms to fulfil social and cultural needs (e.g. described in the ECC-Report 224 as developed by ECC TG6), reducing the number of DTT channels required, and as a consequence also diminishing the need for spectrum reservation. These options should be explored in more depth, both at EU and national level, before committing to a specific long lasting spectrum allocation that would significantly limit the way in which the various options could be implemented.

Spectrum for PMSE

We agree with the stance of RSPG in relation to PMSE services, which we summarize as:

- There is a need to search for alternative bands above 1GHz that can be used by PMSE services, to compensate the likely reduction of spectrum available in UHF.
- Spectrum policy should facilitate spectrum sharing between PMSE and other users.
- Spectrum policy should create incentives for the development of PMSE technologies that use the spectrum more efficiently.

Spectrum for PPDR

With respect to PPDR broadband services, we acknowledge that the implementation of broadband PPDR networks is a national matter, with national competences on the frequencies used and on the choice between deploying dedicated networks for PPDR and sharing a commercial network with other uses. However, in our opinion there is a role to play by the European Institutions ensuring that those who deploy dedicated networks benefit from EU wide economies of scale. A valuable initiative would in our view be to harmonize a band plan and technical usage conditions for PPDR services in the 400 MHz frequency range (380-470 MHz) across Europe, ensuring that the Member States that choose to deploy on this band are protected from interference from its neighbours and are not constrained by the use of this band and neighbouring bands in other countries.

The 380-470 MHz frequency range has a lower opportunity cost than the 700 MHz band, because it is not as suitable for mobile broadband or broadcasting. Furthermore, dedicated PPDR networks are cheaper to build in 400 MHz than in higher frequencies like 700 MHz, especially since large parts of the existing narrowband digital PPDR infrastructure could be reused⁷.

Only when PPDR agencies are willing to use commercial mobile networks with enhanced functionalities would it make sense to provide PPDR services using the 700 MHz band. In these cases, best practice benchmarks and recommendations from RSPG would be valuable, for example describing and evaluating options to incorporate PPDR obligations in spectrum licenses and tendering processes.

2. Approach for the 700 MHz

Telefónica agrees with the conclusion that in the mid-term it is appropriate to harmonize the 700 MHz band for mobile use, and with the legislative approach consisting of mandating two

⁷ "Use of commercial mobile networks and equipment for 'mission-critical' high-speed broadband communications in specific sectors". SCF for the European Commission.

separate deadlines across the EU, one for the assignment of the band and a second one for the availability.

Deadline for availability

We agree with RSPG that it would not be appropriate to set the deadline for availability earlier than 2020, because as explained in the RSPG draft opinion the transition costs outweigh the benefits of an early release in a relevant number of countries. However, we would like to highlight that postponing the deadline significantly beyond 2020 would have several negative consequences:

- A large window of availability across the EU would put at risk European economies of scale, to the detriment of operators who are willing to deploy trans-national networks.
- It would sterilize spectrum in border areas for a long period, due to differences in timing of clearance by neighboring administrations. Within the current Telefonica European footprint, this issue is especially relevant in Germany, where availability is heavily constrained by the different time-plans of its neighbours.
- It would put mobile operators in the “laggard countries” in a situation where they would need to make potentially inefficient investments in order to be able to cope with the increase in demand for wireless broadband services.

Assuming mid -2016 as a likely date for the approval of a review of the RSPG, four years and a half seems sufficient time for a smooth transition. This suggests that availability should not be postponed beyond Dec 31st 2020.

Deadline for assignment

Imposing a deadline for the assignment of the band has in our view a double rationale. First, it adds credibility to the deadline on availability. Second, it ensures that in “laggard” countries there is sufficient time between assignment and availability for operators to plan and optimize their networks in view of the outcome of the assignment process.

On the other hand, imposing an assignment significantly ahead of availability unnecessarily introduces a large uncertainty component in spectrum valuations, generating a risk of inefficient outcomes if the spectrum goes to the more optimistic bidders rather than the ones who can create more value.

In our view a time lapse of one year and a half between the two deadlines strikes the right balance. Assuming December 31st 2020 as the latest appropriate deadline for availability, the deadline for assignment should therefore not be set after June 30th 2019.

Setting the payment terms of spectrum licenses to induce a smooth transition

Whatever the time lapse between assignment and availability, the incentives of all involved parties should be aligned towards achieving the goal of a timely release. Based on our experience, the payment terms of the license are one of the best tools available to generate those incentives. In the case of the 700 MHz band, one could envisage several ways to use it, the common denominator being that after the assignment there should be an economic benefit for the treasury, possibly shared with incumbent users, in releasing the band as early as possible. As an illustration, the payment of the license could be delayed until the frequencies are actually available, with a penalty for late release that grows with time. This

scheme would be particularly appropriate in countries where the timing of the availability of the 700 MHz band is uncertain in border regions. A scheme of “pay upon availability” would not unduly penalize operators, mitigating the uncertainty at the time of the tender, and it would also generate more scope for Member States to introduce compensations in their international negotiations, making the end goal of timely release more likely.

It would in our view be appropriate for RSPG to incorporate in its current work streams a reflection on the role of payment terms in the attainment of the timely release of spectrum, in particular in the case of the 700 MHz band, with a view to include in the RSPP concrete provisions mandating Member States to delay the payment of the licenses, or at least part of it, until the frequencies are available, if that proves to be a suitable option.

3. Long term strategy for 470-694 MHz

We recognise that in a large number of European countries there are strong DTT platforms, and a political reality that in the medium term these will continue to exist. There is, we believe, a “core set” of DTT channels justified by the European will to preserve a set of cultural and social values. However, we are also convinced that there will be increasing scope to reduce the number of channels included in that “core set”, and we note that technological progress in broadcasting will diminish the spectrum needs per channel. We therefore encourage RSPG to periodically review the optimal size of the DTT platform and its spectrum needs, taking into account the possibility of combining DTT with other platforms in order to fulfil the social and cultural objectives that Europe wants to attain. In some Member States where DTT is not a strong platform, reserving spectrum for DTT will become an anachronism. In such circumstances, in the interests of the single market it is worth having technical solutions that allow some countries to progress migration of the 470-694 MHz band at a faster pace than others, without issues of cross-border interference

We also recognise that investors need certainty to invest in the upgrade of DTT platforms. However, in our opinion “freezing” a certain spectrum allocation for decades is a disproportionate way to provide certainty. We encourage RSPG to look into more focused measures aimed at generating sufficient incentives to invest without jeopardizing the future efficient allocation of the band. As an example, if the objective is to increase certainty, it would be enough to credibly ensure investors that they will be compensated in the future if their assets become stranded due to regulatory decisions.

Concerning the possible band plans for Wireless Broadband below 694 MHz, we are not fully convinced that downlink only will necessarily be the optimal band plan in the future. The case for committing to a SDL band-plan seems to rely on the insurmountable challenge of agreeing on an EU-wide release of spectrum below 694 MHz, not on the intrinsic benefits of that configuration for mobile use. However, it should not be ruled out that broadband penetration increases more rapidly than expected, and consumption habits change in favour of non-linear content all across Europe. In that context, it might be easier to agree on a common set of frequencies to be released below 694 MHz, facilitating coexistence between DTT and wireless broadband FDD. The long term strategy for the UHF band in the EU should be able to give an appropriate response in the event that possible scenario becomes real.

In any case, we agree with RSPG that SDL is a valuable alternative that should be explored. If available, it would provide additional capacity for mobile broadband networks and would mitigate the inefficiencies caused by a service and technology specific primary allocation of the UHF band below 694 MHz. We therefore would support further technical studies regarding co-existence of a downlink only IMT solution for the 470-694 MHz band, to determine how co-existence between IMT and DTT both within a country and in border regions can be achieved.

4. Migration issues

We fully support the measures described in section eight of the draft opinion, intended to minimize the costs of the transition from broadcasting to mobile broadband in the 700 MHz band, and thank the European Commission and RSPG for raising this issue and coordinating a European response to the challenges. The work-plan proposed should result in a lower number of homes being affected by disruptions in their DTT services as a result of the introduction of mobile emissions in the 700 MHz band, to the benefit of all parties involved.

We'd like to note that the preventive actions outlined in the draft report should be aligned with the nature of the preventive and corrective measures imposed on mobile operators before occupying the band. There are clear synergies between the two, and the EC should make sure that there is no duplication of efforts. The following three concrete initiatives would in our opinion be very valuable:

- Subsidies for the upgrade of DTT networks, receivers and end user equipment should be linked to the creation of an inventory of the DTT installations in communal buildings and single homes, allowing more focused mitigating actions when mobile stations are switched on in the 700 MHz band.
- Preventive actions should not be limited to TV sets, and should be extended to amplifiers in communal buildings. Whenever new amplifiers are installed, the choice of installation should take account of the future scenario, minimizing the need to install additional filters or replace the amplifiers again in the future.
- The experience of the 800 MHz band shows that the number of affected homes is lower than expected, and in our view the costly preventive measures imposed by some Member States have proved to be disproportionate. Given the knowledge gathered in the first digital dividend release, and the extent of the preventive measures described in the RSPG draft opinion, the RSPG should give clear guidance to avoid the imposition of additional and disproportionate preventive measures on mobile operators before switching on 700 MHz mobile base stations.