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RADIO SPECTRUM POLICY GROUP

3rd Progress Report of the RSPG Working Group on Efficient Awards and Spectrum Use

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The RSPG Working Group on Efficient Awards and Spectrum Use (WG Awards) met for the 3rd time in London on 16 December 2014.

The meeting discussed an initial draft of the report. This was based on the structure that was agreed at the November 2014 RSPG and which is attached at Annex A. A number of suggestions were proposed to develop the draft report and ideas were put forward for additional contributions that could be included. These are currently being developed and will be included in a next draft of the report which will be discussed at the next Working Group meeting which is being held in Brussels on 17 March.

As well as discussing the draft report, the Working Group meeting also provided an opportunity to consider the output from two recent activities related to this work. These were:

- The Joint RSPG/BEREC Workshop which was held in Brussels in November 2014 and which focused on the experience of Member States, over the past 20 years, of holding spectrum awards.
- A meeting with the GMSA and Mobile Network Operators which members of the Working Group held on 15 December (the day before the Working Group meeting) to discuss mobile operators' experience of participating in spectrum awards.

The workshop and meeting covered many issues relevant to the topic of spectrum awards. Some of the key points and themes that were raised are set out below. These will be considered further by the Working Group, not least in terms of what might be incorporated into the Report. In the meantime, any comments from the RSPG would also be welcome.

Joint RSPG/BEREC Workshop (Nov 2015)

The Workshop was attended by members of RSPG and BEREC but was not open to industry. Two external speakers did however attend – Dan Maldoom from DotEcon and David Salant from Toulouse School of Economics. In addition to the two external speakers, the workshop also provided an opportunity for a number of Member State representatives to present on their experience of spectrum awards.

Some messages and themes that emerged from the workshop include:

- Auctions are not the only way of awarding spectrum but they are increasingly popular and generally work well: they will continue to be the predominant method of award going forward.

- There is however no single right auction model and one size does not fit all. All formats (including SMRA, CCA and others) have merits depending upon circumstances.
- Identifying and articulating objectives up front is key – be clear about what you want to achieve and this will then help to inform auction design and other related decisions. This must be done within a robust legal framework.
- It is important to be transparent and to involve stakeholders in the decision making process. Careful and effective planning of spectrum awards is key to their success.

In terms of objectives, the following were identified

- Efficient use of spectrum (potentially including ensuring that all the spectrum be assigned)
- Enhancing Competition (including promoting new entrants/facilitating market entry)
- Increasing broadband penetration and promoting roll-out of broadband services
- Enhancing coverage in rural areas (regional development)
- Promoting innovation
- Promoting business opportunities and employment (economic development)

There are also some countries that have a specific objective to raise revenues or secure a reasonable return for the spectrum. However, while some countries include such an objective, others do not. Indeed, some administrations are explicitly prevented from considering revenues in undertaking a spectrum award.

The workshop also identified and considered some of the differences across Member States, including:

- License duration (which ranges from 15 yrs to indefinite)
- Different approaches to dealing with licences on expiry (as well as different dates for licence expiry)
- Many countries apply spectrum caps, some use set asides – David Salant however warned on the need to be aware of unintended consequences arising from caps or set asides – it was suggested by some that caps could be time limited.
- Approaches to promoting competition (eg over whether to mandate or incentivise MVNO access)
- Auction format: CCA, SMRA and single-round sealed-bid formats are most common but other options are also used (eg hybrid beauty contest/auction model in France).

Other topics discussed at the workshop included the effectiveness of spectrum trading, for example to resolve any inefficiencies in the award outcome. It was also noted that, while bands had different expiry dates across Europe, the expiry dates did tend to fall within certain clusters across countries.

Those that participated in the Workshop agreed that it had been a useful event and that there were benefits in sharing experience of spectrum awards across Member States. For example, it was noted that the risk of unintended consequences could be minimised by sharing best practice. Some Member States provided examples of where the auction experience in practice had not worked exactly as anticipated.

One point of unanimous agreement was that there is no 'one-size fits all', ie there is no single model that can simply be replicated across each and every Member State. Indeed even within a single country there will be different formats which will be most suitable to deal with different circumstances.

Meeting with MNOs (Dec 2015)

One point that the MNOs were keen to emphasise was their view that spectrum awards should seek to promote investment. The operators noted that they are global companies and, as a result, Europe was competing with other regions in terms of where and how much they invest. They also emphasised that 4G is not like 2G where operators initially invested heavily to roll out a network but were then able to sit back and take returns. Instead, for 4G, operators need to invest constantly in order to keep up with increasing demand. They need to recover last year's investment as well as that of 10 years ago.

There was discussion of the need to distinguish between regulatory and political decisions. In particular, concern was expressed by some MNOs about situations where spectrum is awarded and then, at a subsequent point, political decisions are taken which impact the terms of the award. Coverage is one example of where this has occurred, imposition of wholesale access obligations is another.

The operators were generally supportive of auctions as a mechanism to award spectrum and also agreed that all auction formats have their advantages, depending upon individual circumstances. As with the RSPG/BEREC Workshop there was a clear view from the operators that there is no one-size that fits all.

One MNO was concerned by (what they described as) seemingly ever increasing starting prices. There was a particular note of caution against benchmarking as operators felt there was a tendency to benchmark against high final auction prices that had been achieved elsewhere which was leading to an escalation of starting prices. On the contrary it was pointed out that low reserve prices allow opportunity for price discovery which can be an important aspect of an award process. This will also mitigate the risk of spectrum remaining unsold. The operators were keen to emphasise the benefits to the economy of releasing spectrum in a timely manner which they noted would greatly outweigh any immediate gain from revenues raised.

There was some discussion of the recent trend towards multi-band awards. While this can offer advantages, at least one operator had a concern that it can put operators in a difficult position, especially where it includes spectrum being re-awarded at the end of a licence period. Effectively the operator was concerned that it is being put in a situation where it has no choice but to bid for (and win) certain bands.

An emerging theme from some of the operators was that European mobile markets were generally highly competitive and, as a result, it was no longer necessary for European Regulators to seek to promote competition. As indicated above, the operators felt this could be a particular problem when they were having to bid for bands for which licences were expiring. The problem, they argued, can be made worse by spectrum caps and set asides. One operator argued that auction rules (especially reservation policies) need to be looked at more closely in the context of European competition policy.

On a related point, some operators felt that some administrations were too focused on attracting new entrants. At least one argued that, if administrations took such an approach to new entrants, they needed to take an equally flexible approach to companies wishing to exit the market. In short they wanted more lenient policies on consolidation. They noted that of the 20 new entrants that emerged between 2000 and 2003, only 6 remained.

There was discussion as to whether some Member States had a tendency to overcomplicate awards. Innovation is clearly important but there was concern that ‘unnecessary’ innovation and experimentation could have detrimental impact (through unintended consequences). One point on which all agreed was the need for clarity and certainty and the importance of giving bidders the tools well in advance so that they can be properly understood (one example was given where a bidder had not acquired spectrum because they did not understand the rules, even though they wanted the spectrum and were willing to pay).

Some other points that emerged from the discussions included:

- A desire from the operators to see longer-term licence durations – they suggested this would address some of the problems they face with re-auctioned spectrum (by giving sufficient time to recover investment).
- Debate over when is the right time to award spectrum: on the one hand there was a view that making spectrum available as early as possible had to be a good thing, but on the other it was noted that awarding spectrum too early (well before it is actually available) can create uncertainty.
- A desire for greater consistency between spectrum policy and competition policy: one example given was decisions to introduce wholesale access obligations in markets which had been found to be competitive.
- Differing views on spectrum trading: it was noted that this has been quite effective in the US but has been less successful in Europe. There was some suggestion that trading might become more prevalent in Europe as markets mature and, potentially become more aligned. Others however were sceptical noting that spectrum is an MNO’s most strategic asset and as such was the last thing they would be prepared to sell. It was noted that sufficiently long licence

durations might facilitate greater take-up of trading.

- Lots of interest in the US plans for an incentive auction in the 600 MHz band but quite a lot of scepticism as to whether such an approach, even if successful in the US, could be replicated in Europe.
- The issue of how to defragment bands, especially with an eye on 5G: it was noted that trading and re-auctioning might help to defragment.
- Concern expressed by the operators about overly prescriptive coverage obligations. The Operators emphasised the need for flexibility to determine how coverage obligations should be met and certainty over how coverage will be measured (eg choice of handset). It was noted that local planning issues can often be one of the determining factors in terms of coverage.

Finally, all operators noted the importance of clarity and certainty as well as consistency with existing laws and regulations. All operators were in favour of spectrum managers sharing experience of spectrum awards and seeking to increase their knowledge base.

Next Steps

A draft Report, based on the structure set out in Annex A, is currently being developed. This will be discussed at future Working Group meetings which have been scheduled for 17 March in Brussels and 6 May in London. The intention is to bring a draft of the Report to the RSPG in June which it is hoped can then be approved for public consultation.

The Report is currently divided into 5 sections;

- **Section 1: Suitability of current and future spectrum bands to meet future needs for mobile broadband**

The discussion in this section will note that a strategic approach to spectrum management is a complex balance between many factors (technology, policy, standards). It will explain that more spectrum alone is not the only answer to meeting the future needs of wireless broadband. The report will also build on previous RSPG Reports and Opinions across a range of issues including the mix of spectrum, appropriate ranges or amount of spectrum to meet coverage requirements, the timing of availability of new spectrum bands and the evolution of networks and technology.

- **Section 2: Best Practice for Spectrum Awards**

This section will attempt to map some of the risks and challenges of spectrum awards and address issues that Member States may have faced when designing and conducting awards. The report will aim to build on this common experience in an attempt to pull together some ‘guidelines’ for future award planning. Included in this section will be consideration of the following;

- Common award objectives – what are the overarching objectives that Member States are seeking to achieve?
- Risks and challenges – what are the risks or challenges that might undermine a successful award, resulting in a sub-optimal outcome?
- Formats – what are the different formats that Member States have used over recent years to award spectrum?
- Multi band awards – what has been Member State experience of undertaking multi-band awards (pros and cons)?
- Award criteria – including timing of awards, the benefits or disbenefits of European co-ordination, and the need to meet national policy objectives (eg coverage). How might such issues need to evolve for future awards?

- **Section 3: Promoting efficient use of spectrum, competition and coverage**

This section will consider various tools and mechanisms aimed at promoting efficient spectrum use. This will include:

- issues around trading and leasing of spectrum rights,
- spectrum pricing, incentive auctions and incentive fees,
- licence duration and licence renewal,
- implementation of technology and service neutrality – note that a separate questionnaire has been issued on this topic,
- spectrum caps, floors and set asides,
- coverage obligations,
- wholesale access obligations,
- national roaming requirements,
- standardisation and minimum performance standards.

- **Section 4: What role for spectrum sharing / pooling?**

The WG will draw upon previous work on spectrum sharing which has been undertaken by RSPG. However, we will also consider areas where thinking may have moved on or where new ideas are gaining momentum. For example, this section will consider the pros and cons of sharing / pooling and consider future network evolution and what that might mean for sharing and the implications for future spectrum awards. The focus will be on generic concepts but any relevant band specific analysis or experience from Member States will be included.

- **Section 5: Management of under-utilised spectrum**

Again, the Group notes that some RSPG work has already been undertaken on this issue in the RSPG Opinion on Wireless Broadband. However, it is worth revisiting this, specifically in terms of the question as to what level we should seek to harmonise spectrum availability across the EU and how to deal with significant variations in demand. This section will also consider mechanisms, such as use it or lose it obligations or a successful spectrum trading environment, to address inefficient award outcomes.