

Vodafone's response to Ofcom's consultation

"Award of the 600 MHz spectrum band"

April 2013

Award of the 600 MHz spectrum band

1. Summary and conclusions

Vodafone welcomes the opportunity to respond to this consultation by Ofcom on short-term use of the 600MHz band for DTT. The UHF spectrum, of which the 600MHz band forms part, falls in the “sweet spot” for many wireless applications, including mobile broadband. Vodafone therefore has interest in helping Ofcom to fulfil its statutory duty to secure the optimal use of the radio spectrum, and in a way that it does not take decisions that would sterilise spectrum from being used for more valuable applications in the future.

This consultation proposes the award of a short-term licence for the 600MHz band for use by ‘temporary’ DTT services, prior to its longer-term use as a ‘home’ for current DTT multiplexes, in order to enable the 700MHz band to be used for mobile broadband. It is proposed that this 600MHz licence would have a guaranteed period until 31st December 2018.

However, neither this consultation nor the previous consultation and statement¹ address the period required for the migration of multiplexes from 700MHz to 600MHz and the planning of this migration. Under Ofcom’s current proposals, this process could not start until 2019 and, based upon previous cases such as Digital Switchover, it could take 3 years or more to complete. In addition, there have been significant initiatives in Europe since the time of the previous consultation and statement - in EUⁱ, Germanyⁱⁱ ⁱⁱⁱ, EBU^{iv} and DVB-Forum^v. These are likely to build momentum for the early release of the 700MHz band for mobile broadband.

Subsequent to the publication of the current consultation, the future use of UHF spectrum is addressed more directly by the Ofcom consultation on Spectrum pricing for terrestrial broadcasting, which was published on 13th March, and by the publication of Ofcom’s annual plan on 28th March where planning for the 700MHz migration is identified as an Ofcom 2013/14 priority action. Vodafone intends to address the future demand for 700MHz mobile broadband spectrum more fully in its response to that consultation, and the two responses should be considered together.

In paragraph 1.4 of the current consultation, Ofcom states that: “*the UHF statement made it clear that any interim use of the 600 MHz band should be supportive of the long-term strategy.*” In Vodafone’s view, Ofcom’s proposals in the current consultation do not conform to this objective, and may in fact serve to frustrate it. It is entirely possible that under its current proposals Ofcom will find itself unable to make the 700MHz band available for mobile broadband by the time that it is needed, or indeed by the time that this is required by EU legislation.

¹ Securing long term benefits from scarce spectrum resources; consultation, 29 March 2012; statement, 16 November 2012.

^{i ii iii iv v} References with roman numerals can be found at the end of this document.

2. Inconsistency of Ofcom's proposal with its own policy objectives

In Figure 1 of Ofcom's annual plan for 2013/14, Ofcom identifies its priorities for the year. The second priority that it has set itself is to "secure optimum use of spectrum": under this heading one of the three elements is "**implement the UHF strategy to enable a potential release of 700 MHz for harmonised mobile use**"². We believe that the proposal in the current consultation may very well work to frustrate this priority activity. Our principal concerns are explained below.

The Ofcom "Spectrum Pricing for terrestrial broadcasting" consultation, which was published after the present consultation, contains new and relevant data on the relative value of the use of 700MHz for DTT and mobile – mobile is concluded by Ofcom to be a significantly more valuable use³ vi. We suggest that this new information should be taken into account in the overall evaluation of the consumer benefit from any temporary licensing of 600MHz band versus the consumer benefit from planning for the orderly transfer of the 700MHz band from DTT to mobile use.

We believe that Ofcom must retain sufficient flexibility to start the release of 700MHz spectrum earlier than 2019 if mobile data demand is stronger than it currently expects. This is a sensible precaution given the undoubted economic benefit of such use, the range of uncertainty in demand and recent developments in other EU countries. Ofcom must not repeat the experience of 800MHz of the UK being 'at the end of the queue' in clearing and releasing new spectrum.

Releasing 700MHz in a timely fashion requires Ofcom to take full account of any migration period needed to move multiplexes from 700MHz to 600MHz; something it surprisingly appears to consider to be instantaneous in the current consultation. We note in this context that the DTT opportunity cost study by Analysys Mason for Ofcom assumed in its base case a four-year conversion period with a start date of 2015.

Ofcom is clearly in agreement with the need for a proper plan for the orderly migration of DTT from 700MHz. Ofcom notes in fact in the subsequent March 2013 consultation "Spectrum Pricing for terrestrial broadcasting" in paragraph 1.18 that such a transfer is not a simple exercise:

"If DTT operators were to start using frequencies in the 600 MHz band as part of the wider DTT network, and stop using frequencies in the 700 MHz band, there would need to be a comprehensive re-planning of the DTT multi-frequency network (MFN), involving significant co-ordination between multiple stakeholders both in the UK and internationally. Moreover, in order to achieve a successful transition, multiplex operators would need to use the frequencies more efficiently due to the smaller amount of spectrum available to them."

² Vodafone emphasis

³ Figure 1.9 of the Analysys Mason report that is an annex to the spectrum pricing consultation suggests that the value in use for mobile is approximately 4 times the value in use for DTT

In 4.23 of the same consultation Ofcom concludes that *“achieving the best outcome for citizens and consumers may well require a managed process. Final decisions on the timing and the nature of any transition of DTT from the 700MHz to the 600MHz band have not yet been taken. However we do not anticipate implementation could happen before 2018”*. But this does not mean that it can be safely concluded that the 600MHz band will not be needed before the end of 2018 as part of the as yet undefined managed process.

Vodafone agrees with Ofcom that promotion of the take-up of DVB-T2 and MPEG4 technologies will be important elements of the transition from the 700MHz band. However, it is not clear how the proposals in this consultation will achieve this:

- i) While the consumers with DTT receivers that support HD (and therefore DVB-T2 and MPEG4) will tend to use this capability, there is little evidence that that consumers buy new receivers for this purpose. Indeed, viewers value HD most highly for sport and films, and viewers seeking this programme content are therefore likely to use satellite or cable platforms. This would mean that extra DTT HD channels would not drive take-up of DVB-T2 and MPEG4 capable receivers.
- ii) The terms of the proposed licence would allow the 600MHz multiplexes to be used for niche channels that would not drive general take-up of DVB-T2 and MPEG4 (and which would be difficult to relocate when the licence is revoked).

It is important therefore that in authorising temporary use of the 600MHz band for DTT, Ofcom does not inadvertently complicate the eventual transition, or remove the opportunity to make use of the spare 600MHz as a “migration pool” to assist in the management of the process. Therefore, the 600MHz band should not be awarded though a licence for unspecified temporary use, but as part of a managed migration plan. This plan does not as yet exist, but the 2013/14 Ofcom Annual Plan identifies that a series of actions will soon take place.

“4.27 To begin the implementation of this [UHF] strategy, we will undertake a range of activities to prepare for the potential future change of use of the 700 MHz band:

- *international engagement on harmonisation including future band plans for 700 MHz and frequency co-ordination negotiation relating to DTT uses;*
- *examining how and when a future change of use in 700 MHz can be secured to best serve consumer and citizen interests;*
- *exploring options to reduce costs and disruption associated with any future replan of UHF spectrum;*
- *working with multiplex operators to consider the necessary technical and regulatory changes to safeguard the benefits of DTT;*
- *enabling continued and future provision of PMSE and local TV services;*
and
- *supporting Government activities related to future decisions on spectrum allocation for emergency services.*

4.28 We plan to issue a Call for Inputs on UHF Strategy Implementation in Q1 2013/14.”

In the light of all this upcoming activity, licensing 600MHz to a use that may not be compatible with the overarching strategy quite simply seems to be premature. However, if Ofcom is determined to allow a temporary licence for 600MHz in advance of developing a migration plan, the 12 month notice period in any interim 600MHz licence to be awarded should apply immediately without a guaranteed term. This will give Ofcom the maximum flexibility it needs to react to 700MHz developments while providing benefits for citizens, consumers and broadcasters in the interim.

Given these concerns, Vodafone does not support Ofcom's proposal to leap straight to the grant of a licence. It needs to properly assess the risk that the 'interim' use of 600MHz could delay the timely clearance and release of 700MHz for mobile services, particularly in the light of the content and conclusions of the more recent Spectrum Pricing for terrestrial broadcasting consultation. Any non-negligible risk would make this a 'penny-wise and pound foolish' policy.

3. Responses to specific Ofcom questions

Q2: *Do you agree that the 600 MHz band should be awarded as a single 'lot'?*

Vodafone response: no. The spectrum should be devoted to DTT use that facilitates the long-term migration of DTT from the 700MHz band. Vodafone therefore does not support the award process as currently proposed.

This is the first time that Ofcom has consulted on this proposal to grant exclusive primary use of the 600MHz band for a period up to at least 31ST December 2018 for temporary DTT multiplexes. Therefore, the first question that Ofcom should ask in the consultation is whether stakeholders support this proposal.

In its consultations, Ofcom has not considered the timescale needs for migration of TV channels from the 700MHz band to the 600MHz band; indeed, para. 7.3 implies that Ofcom assumes that deployment in 700MHz band could start immediately once the 600MHz licence is revoked. However, based on experience of the digital switchover and the channel 61/62 clearance, this migration is likely to take three years or more, especially as it might well involve the replacement of rooftop TV reception antennas within the service areas of a number of main TV transmitters (something that has not been required for the digital switchover or channel 61/62 clearance). This could mean that the 700MHz band would not be available for deployment of mobile broadband until 2022 or later.

The Real Wireless study^{vii} commissioned by Ofcom as part of the consultation process identifies economic benefits from availability of the 700MHz band for mobile broadband by 2020. These benefits are significant, and are supported by other studies.

The consultation document identifies two related potential reasons for short term operation of DTT in the 600MHz band:

- Helping with the future clearance of DTT from the 700MHz band
- Accelerating the consumer take-up of DVB-T2 through additional popular HD channels.

These uses have clear societal benefits. Vodafone strongly supports the first of these objectives, and supports the second of these objectives ***provided that*** there is a clear path to move these channels out of the 600MHz band when it is needed for 700MHz migration.

However, the provision for more than one applicant suggests that Ofcom envisages that there might be other business models for use of this spectrum, which do not have these societal benefits, but the award process does not take these benefits into account.

Q3: Do you agree that the licence should have an end date of 2026, with a minimum term until 31 December 2018 and a clause enabling it to be revoked after that date, subject to at least 12 months notice having been given?

Vodafone response: no.

As discussed above, the migration from the 700MHz band may need to start before the end of 2018 in order for the band to be available by the time when this would create significant economic benefits through the deployment of mobile broadband, or when it is required by EU legislation.

The developments in Europe, described earlier in this response, are likely to accelerate the process of international coordination for DTT, needed for release of the 700MHz band. This would enable EU harmonisation measures to come into force earlier than Ofcom has previously envisaged.

If Ofcom is determined to award the 600MHz band for short term use, Vodafone believes that the licence should make provision for the migration from 700MHz band to start before the end of 2018, and to focus the short-term uses only on DTT services that are compatible with or enablers of this timescale. The response to Q6 gives a specific proposal on how this could be reflected in conditions for a licence.

Q6: Do you have any other comments on the non-technical licence conditions that are being proposed?

Vodafone response: If Ofcom is determined to proceed with the award as currently proposed, an additional sub-clause needs to be added to Section 3 of the draft licence (licence revocation and variation):

- (7) In order to enable Ofcom to comply with EU legislation without derogation.

Q10: Do you have any comments on the proposed award process in the case of more than one compliant Notice of Intention to Apply?

Vodafone response: The proposed licence conditions do not specify a fixed duration, but applicants will need to estimate the likely duration before revocation in order to determine how much to bid. This will create a situation akin to the “winners curse”, where the successful applicant is likely to be the one that most over-estimates the period before the licence will actually be revoked. This could create a situation in which the licence-holder has an incentive to artificially prolong the duration of the licence by a legal challenge of the revocation order.

4. Representations on the impact assessment

The consultation document states that the whole of the consultation document together with its annexes comprises an impact assessment, as defined in section 7 of the Communications Act 2003. The whole of this response constitutes representations on the impact assessment in accordance with Section 7 (7) a) and b) of that Act.

The key impact of the proposals in this consultation that Ofcom should consider is the potential delay in the availability of the 700MHz band for mobile broadband, and the opportunity cost of this delay. The study by Real Wireless provides a thorough analysis of the economic benefits of deploying mobile broadband in the 700MHz band, and the Analysys Mason report of March 2013 provides a measure of the relative in use values for DTT and mobile of that band, but Ofcom has not undertaken any analysis of the potential economic benefits of the proposed short-term use of the 600MHz band. It is therefore impossible for Ofcom to have undertaken any proper impact assessment of its proposals.

On 13th March, Ofcom published another consultation on Spectrum Pricing for terrestrial broadcasting, which considers opportunity costs for alternative uses of DTT spectrum. Vodafone will address the opportunity cost of delay in availability in its response to that consultation, which should therefore also be considered as representations on the impact assessment of the present consultation.

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April 2013

ⁱ Thinking European, and winning the wireless race; speech by Neelie Kroes to the Radio Spectrum Policy Group (RSPG), 20 Feb 2013;

http://europa.eu/rapid/press-release_SPEECH-13-140_en.htm

ⁱⁱ Mobile Informationsgesellschaft der Zukunft: Diskussionspapier - "Mobile Media 2020"; BMWi, 12 November 2012;

<http://www.bvft.de/wordpress/wp-content/uploads/2012/12/Medienstrategie-2020-BMWi.pdf>

ⁱⁱⁱ A study of future spectrum requirements for terrestrial TV and mobile services and other radio applications in the 470-790 MHz frequency band, including an evaluation of the options for sharing frequency use from a number of socioeconomic and frequency technology perspectives, particularly in the 694-790 MHz frequency sub-band; Technische Universität Braunschweig for BMWi, 21 January 2013;

<http://www.bmwi.de/English/Redaktion/Pdf/study-of-future-spectrum-requirements,property=pdf,bereich=bmwi,sprache=en,rwb=true.pdf>

^{iv} The future role of Broadcasting in a world of changing electronic communication; Roland Beutler; EBU Technical Review, 2013, Q1;

http://tech.ebu.ch/docs/techreview/trev_2013-Q1_Broadcasting_Beutler.pdf

^v DVB Forum: Report of Study Mission Group on Prospects of Terrestrial Broadcast Television, Oct 2012. Study mission on cooperative spectrum use, on-going.

^{vi} Opportunity cost of the spectrum used by digital terrestrial TV and digital audio broadcasting; Analysys Mason, 12 March 2013; page 42

<http://stakeholders.ofcom.org.uk/binaries/consultations/aip13/annexes/report.pdf>

^{vii} Techniques for increasing the capacity of wireless broadband networks: UK; 2012-2030; Real Wireless, March 2012.

<http://stakeholders.ofcom.org.uk/consultations/uhf-strategy/>