



Interim use of 600 MHz for DTT

Executive summary

The BBC, Channel 4 and Arqiva have developed a proposal to make interim use of the 600 MHz band to provide additional Digital Terrestrial Television (DTT) services to a significant proportion of UK TV viewers. Whilst this proposal carries risks for all parties concerned, we believe it will help sustain the longer term competitiveness of the DTT platform whilst delivering wider public and consumer benefit. However, this does not imply that we believe that the case for 700 MHz clearance has been made and we continue to hold the view that Ofcom's default position should be that the existing spectrum is retained for DTT.

Delivery of the interim proposal requires action from Ofcom.

- In order to make efficient use of the empty spectrum Ofcom will need to allocate two Multi-Frequency Networks (MFN) DTT licences to Arqiva
- The proposal is predicated on long term benefits so, given the risk to the parties, Ofcom should make a clear commitment to long-term use of 600 MHz for DTT in the event that 700 MHz is cleared

This paper expands on this proposal. It also includes an annex summarising the key conclusions from work commissioned from Mediatique to provide an analysis of the value of using the 600 MHz spectrum for interim broadcast services. Even based on Mediatique's conservative scenario there is a net benefit with a Net Present Value (NPV) of over £100m arising from the deployment of interim DTT services in 600 MHz. Their analysis excludes a number of potential benefits including those to consumers from earlier access to a wider range of 4G services, or to the mobile industry of more efficient site rollout programme, in the event that 700 MHz is deployed earlier for mobile data applications. As such, the net benefit is likely to be even greater. However, the net costs fall disproportionately on the broadcasting industry whilst the benefits reside outside broadcasting and principally with the public sector.



Introduction

The joint submission from BBC, Channel 4, ITV and Arqiva to Ofcom's March 2012 consultation "Securing long term benefits from scarce spectrum resources - A strategy for UHF bands IV and V" identified the role that interim use of 600 MHz could play in facilitating the transition of DTT to DVB-T2 and High Definition (HD). Since that consultation closed we have carried out further analysis to understand better how such interim use would be implemented.

We should be clear that we still hold the view that the case for 700 MHz clearance has not been made. As the joint submission noted, Ofcom has not undertaken a cost-benefit analysis that demonstrates that the transfer of 700 MHz from DTT to mobile use would be in the consumer and citizen interest. Clearance would involve very significant costs and disruption for the DTT platform and for the millions of UK households who have selected it to access digital television services.

Framework for the interim use of 600 MHz for DTT

To ensure that the platform can continue to provide the range of services that viewers have come to expect from DTT, in the event that 700 MHz is cleared in the future, it will be necessary to transition the network to DVB-T2. This will require many viewers to obtain some combination of new TVs, aerials or set-top boxes. To minimise the costs and disruption (to consumers, Government and industry), any transition should initially be consumer led.

To support this process the BBC, Channel 4 and Arqiva have developed a proposal to invest in additional TV services for viewers to encourage them to make the transition through launching two additional DTT multiplexes in the 600 MHz band. These two multiplexes would operate for the interim period until any transition of DTT from the 700 MHz band. Interim use of the 600 MHz band will facilitate an accelerated take-up of DVB-T2/HD receiving equipment as the launch of additional HD services makes households more likely to buy DVB-T2 equipment and manufacturers are more likely to produce it in greater volumes.

The key points of that proposal are summarised below.

- **Arqiva MuxCo:** Arqiva MuxCo will licence the two MFN DTT 600 MHz multiplexes for the interim period. It will look to secure additional channels – both PSB and commercial – for the interim multiplexes to further encourage consumer migration.
- **BBC:** The BBC already broadcasts two of its television services (namely BBC One and BBC HD, soon to be replaced by BBC Two) in HD on the DTT platform. The BBC Executive plans to simulcast a third BBC television service



and potentially the BBC Red Button video service in HD on the interim multiplex from its launch. The BBC Trust is aware of the proposed approach and any necessary regulatory approvals will be sought from it in due course.

- **Channel 4:** Channel 4 simulcasts Channel 4 in HD on the DTT platform. Channel 4 plans to simulcast at least one, and potentially two, television services on the interim multiplex.
- **Arqiva TransCo:** Arqiva TransCo will build a 20 site network for each interim multiplex on behalf of Arqiva MuxCo (although the number of sites could be extended if Arqiva, BBC and C4 agree to do so). Those 20 sites would cover around 63% of UK. The current view is that if Ofcom makes an allocation decision in January 2013 then rollout of the 20 sites could complete in 2014.

In addition Arqiva, BBC and C4 will work together to develop a wider package of initiatives to support the take-up of DVB-T2 equipment during the interim period.

In order to deliver these benefits for consumers and to minimise the costs Ofcom will need to allocate the interim licences to Arqiva MuxCo. The two new multiplexes are only expected to be temporary so Ofcom will need to ensure from the outset that there is a mechanism in place to revoke the licences (once certain conditions have been met) to ensure that any transition from the 700 MHz band progresses smoothly. Given the uncertainty over timing, particularly due to the early stage of the international discussions, a fixed end date without a mechanism to allow extension is unlikely to be appropriate.

This approach requires the BBC, Channel 4 and Arqiva to make significant commercial investments in pursuit of long term strategic objectives. Whilst there is no expectation that this will deliver benefits for broadcasters and multiplex operators in the short to medium term we are confident that the delivery of enhanced content to TV viewers is in the best interests of the DTT platform and more generally competition. However, this assumes that there will be suitable spectrum available for the long term use for DTT services. To date Ofcom has been robust in its appreciation of the importance of the DTT platform in the UK TV landscape. In particular it has rightly highlighted the critical need to allocate the 600 MHz band to DTT in the long term should the 700 MHz band be cleared.

Our proposal is predicated on long term benefits so, given the risk to the parties, Ofcom should make a clear commitment to long-term use of 600 MHz for DTT if and when 700 MHz cleared. However, we still hold the view that the case for 700 MHz clearance has not been made and consider that Ofcom's default position should be that existing spectrum is retained for DTT. We must also emphasise that whilst this proposal has the potential to appreciably reduce the costs of a clearance of 700 MHz, the costs of this transition would still be very significant and could not be funded by broadcasters or multiplex operators. In addition, all of our planning has been predicated on the top edge of the 600 MHz band being no lower than 694 MHz



i.e. Channel 48 is available for broadcast services. We would urge Ofcom to focus attention in the international discussions and negotiations to ensure that this happens.

We look forward to continuing to work closely with Ofcom over the coming months as Ofcom's policy in this area continues to develop.



Annex: Cost Benefit Analysis

Mediatique was commissioned to provide analysis of the value of using the 600 MHz spectrum for interim broadcast services up to 2017. A consumer survey conducted by YouGov, interrogating a base of 2,000 respondents, informs its analysis.

Mediatique looked at the costs and benefits to consumers, manufacturers, and broadcasters as well as the public policy impact. The analysis based on consumer research looked into the impact of launching 5 to 11 HD services on DTT against a counterfactual of no access to the 600 MHz band. Their counterfactual includes a natural progression of homes from DVB-T to DVB-T2.

Specifically Mediatique quantified the benefits and costs in the table below for this piece of work.

Benefits of interim use	Costs of interim use
Financial benefit to the commercial public service broadcasters (PSB)*	The additional transmission costs incurred by broadcasting HD channels on 600 MHz
Financial benefit to manufacturers from additional sales of equipment (e.g. TVs, aerials)	The opportunity costs of key HD PSB channels being Free-To-Air
Reduced cost of transitioning all homes to DVB-T2 post-2018	The cost to homes needing to upgrade equipment and wideband aerials to receive TV services at 600 MHz
Earlier release of 700 MHz	
Benefits to the consumer of access to valuable services at no subscription cost (consumer surplus)	

Source: Mediatique

** This is based on the incremental commercial impacts and revenue generation for the commercial PSBs as a consequence of Freeview maintaining a higher audience share than in the counterfactual, which in turn supports a higher audience share for the PSBs.*

The key conclusions of Mediatique's work were that:

- There are significant net benefits from the use of 600 MHz for DTT during the interim period. Mediatique modelled the net benefits under two scenarios; in their base case, the net benefit was £216m over the interim period up to



2017, stated in NPV terms. In their conservative sensitised case based on a reduced outperformance of DTT homes, the net benefit reduced to £104m.

- Relative to a counterfactual case of no additional HD services, the launch of HD channels on DTT in the interim generates benefits across a range of stakeholders that outweigh the operational, consumer and opportunity costs. Interim use of 600 leads to an accelerated take-up of DVB-T2/HD sets as the launch of HD services makes households more likely to buy DVB-T2 equipment (as opposed to DVB-T equipment) and further creates better incentives for manufacturers to produce/sell DVB-T2 equipment. This also benefits the broadcasters that will launch HD services on the interim multiplexes by delivering a higher (weighted) viewing share.
- There are clear public policy benefits from an interim use of 600 MHz by DTT in providing a catalyst for securing greater spectrum efficiency. The current scale of the DTT platform, across both primary and secondary sets, makes any wholesale migration to new broadcasting standards challenging for policy makers. However, the launch of HD services during the interim period lessens the cost to policy makers to secure a timely transition of all relevant DTT sets to DVB-T2/HD. Additionally, there will be further public benefit from enabling early release of 700MHz spectrum.
- Their research provides evidence that consumers value HD services, and that the launch (or indeed lack) of HD services plays an important role in maintaining competitiveness in the platform market. The launch of additional HD services on DTT secures the platform's robustness over the interim period, and as such provides a crucial foundation for DTT's role.
- However, whilst there is an overall net benefit arising from interim use of 600 MHz, the position for broadcasters and multiplex operators is financially challenging. Commercial broadcasters will need to forego revenues from pay TV platforms to make simulcast HD services available on the DTT platform – with no prospect of generating incremental advertising revenues from these services in the short term. The BBC will also incur extra costs to deliver such services. The multiplex operator has no certainty of being able to recover the costs of delivering the two interim multiplexes given their household coverage and current levels of DVB-T2 penetration. Mediatique's analysis concludes that there is a net cost to these parties up to 2017. Any longer term net benefit to broadcasters / multiplex operators is less certain and more difficult to quantify – and remains critically dependent on securing 600 MHz for long term DTT use in the event that 700 MHz is cleared in the future.
- The analysis excludes the potential benefits that would accrue to consumers from earlier access to a wider range of 4G services, or mobile operators from a more efficient site rollout programme, in the event that 700 MHz is deployed earlier for mobile data applications. As such, the net benefit is likely to be even greater.



In summary, interim use of 600 MHz for DTT results in a clear net benefit to the UK. However, the net costs fall disproportionately on the broadcasting industry whilst the benefits reside principally with the public sector or elsewhere.