

Consultation response form

Please complete this form in full and return via email to mobilecoverageconsultation2018@ofcom.org.uk or by post to:

Jack Hindley
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Your response

Question 1: Do you agree with our proposal to impose two geographic coverage obligations and a premises obligation in the 700MHz award?	-
Question 2: Do you agree with our proposed target for geographic coverage?	-
Question 3: Do you agree with our proposed target for in premises coverage?	-
Question 4: Do you agree with our proposed approach to targets for the Nations?	-

Question 5: Do you agree with our proposal that these obligations be met within 3 years of the 700MHz award?	-
Question 6: Do you agree that sharing information on the location of new sites in rural areas in advance of submitting a planning notice would be appropriate?	-
Question 7: Do you have any other comments?	See attached supporting document.

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Source: IET Communications Policy Panel

IET Position Paper on the Ofcom Consultation on improving mobile coverage via 700 MHz

WHICH WILL DELIVER BETTER MOBILE COVERAGE IMPROVEMENTS – PLANNING OR A LOTTERY?

Introduction

Ofcom are making a commendable effort to use the 700 MHz spectrum release to significantly improve UK mobile coverage for consumers in rural areas. However, the approach they are constrained to follow is leading to random coverage improvements, random data speed capacity and random coverage gaps. Ofcom “believe” the proposed complex obligations are likely to lead to dependable coverage on all roads. But the mobile operators are not under any duty to deliver it. The data speed capacity available to consumers served by one mast could be four times greater than those served from another mast or no coverage if they are on the wrong operator when passing through that location. Everyone will only know after the event where the coverage improvements have taken place and where gaps remain. It is a lottery.

France is taking a different approach: a “grand bargain” in which spectrum is being exchanged directly for their mobile operators building 5000 new masts. They are planning where the improved coverage will be. Their approach is simpler and may deliver far better value for money. The question we are raising is which is the better approach to deliver coverage improvements – planning or a lottery?

The 700 MHz release will be the last significant opportunity for a very long time to make a step change improvement in the limit of reach and reliability of the nation's basic universal mobile infrastructure. The 700 MHz band is very likely to serve as the 5G "central nervous system" for major industrial transformations, such as delivering the transport industry of the future. We are not questioning Ofcom's judgement but the limitation in Ofcom remit towards innovation that is leading them to those judgements.

Pros and Cons of a Spectrum Auction at 700 MHz

In theory, spectrum auctions put spectrum in the hands of the enterprise that will make the best use of the spectrum in the market. However, in practice:

- i. An auction does not mean best use is made of spectrum for rural coverage as there is no market in loss-making coverage
- ii. Coverage competition is constrained by the economic advantages of the two site sharing groups and that will more or less determine where the spectrum is deployed, irrespective of what an operator paid for it.
- iii. Whoever gets the spectrum will soon find it saturated with data traffic outside of urban areas i.e. no differences in actual utilisation between operators, irrespective of what they paid for it
- iv. as much as 80% of the UHF spectrum could be wasted for some new remote rural mast locations where only one site sharing group locates
- v. there will be gaps in contiguous coverage for many users on any one operator travelling from home to work or across rural regions.

In the specific instance of the 700 MHz band there appears no compelling case for an auction other than to raise money for the Treasury and even that could be a component of a “grand bargain”.

Further, even if an auction approach is preferred there are means of securing a more explicit infrastructure outcome, such as a reverse auction for say half the spectrum.

Basis Economics and number of new masts

The 800 and 700 MHz spectrum is directly comparable (the base stations will perform slightly better, but smartphones perform slightly worse). At the UK 4G auction Three paid £45m/MHz and O2 paid £55m/MHz i.e. an average of £50m/MHz of paired spectrum. We don't know what the other mobile operators paid but it is likely to be in the same ballpark. Both Ofcom and the French Government come out with a similar cost of £500k lifetime cost of a new 20m mast.

This would suggest the open market value of the 700 MHz spectrum is the equivalent of 3000 new masts (30 MHz times £50m divided by £500k). Ofcom are proposing coverage obligations on only three blocks of 5 MHz i.e. 15 MHz of spectrum. This suggests their approach would deliver in the order of 1500 new masts. But if two of the obligations finish on the same mast sharing group the number could be as little as 1000 new masts. In theory it could be even lower. *It is the number of new masts that matters, as it directly determines the extent of coverage improvements.*

Coverage of all road and rail links

Ofcom expect *coverage of all roads* to result from their proposed obligations because consumer demand will be higher and costs lower than more remote locations. But that higher consumer demand does not translate into any new revenue in an age of bundled voice and data. Further, other factors may drive decisions such as time running out, planning delays, greedy landlords and non-line of sight for back-haul or back-haul daisy chain advantages. Whilst Ofcom may expect all roads to be covered – at the end of the day *nobody is being given a duty to deliver it*. We would be surprised if some coverage gaps did not remain from a random planning approach. There is a separate effort going into coverage of rail routes but some branch lines in remote areas may be better served using 700 MHz.

Conclusions

The IET believes that:

1. If Ofcom had a wider mandate that included investment, innovation and resilience of the basic universal mobile infrastructure they would be proposing a quite different approach to improving coverage using the 700 MHz release. It is time for Ofcom's mandate to be extended beyond the needs of consumers/citizens to include the nation's basic universal mobile infrastructure that maximises economic growth and the industries of the future.
2. The option of a "grand bargain" should at least be explored with the industry. Another option might be a neutral host providing the rural infrastructure on behalf of the four MNO's. Another option might be a reverse auction against a specific list of site locations that ensure mobile coverage of all major roads in the UK.
3. As these new sites are an effective public subsidy (foregone revenue from the auction) we believe it is better value for tax payers for everyone to know, in advance, how many new masts and their location are to be secured for the money. The government should be explicit in the number of new masts they are prepared to effectively subsidise and we suggest a figure of 2000.
4. There is a lot of merit in a "neutral host" approach where all the 700 MHz spectrum capacity is available at every new rural mast location.

5. As some geographic areas will still remain uncovered, there should be a self-provision opportunity and those “self-providing” should run their base station as a “neutral host” (for visitors).