

IET Response to the Ofcom consultation on the proposed 3.4 GHz spectrum auction

1. Introduction

The auction of the MOD spectrum is combining two spectrum bands in very different states of planning uncertainty. The planning assumptions around the 2.3 GHz band are firm and the release of the band is timely. The 3.4 GHz band finds itself in a very different place. Ofcom is making a best endeavour to create stable planning assumptions for auction bidders. However, there are some very basic things still very fluid globally and it will be the global supply industries that will finally settle some key parameters for mass produced 3.4 GHz small-cells and smartphones. Ofcom's power in this area is limited only to aligning or cutting the UK market off from the best future mass produced low cost mobile products.

Telecommunications over the past 30 years has always been a mix of competition and cooperation. The need for cooperation over spectrum usage varies over time, between different bands and more likely at a time of very fluid technology change. There are future changes that an individual 3.4 GHz spectrum holder could unilaterally make for themselves but other changes may require TDD spectrum holders to act more collectively.

2. What is different about the 3.4 GHz Band?

- a) The band has been used for broadband fixed wireless networks and in the future the band is likely to become more important for small cell mobile services. In parallel with these market changes is a strengthening of interest in new TDD technology in a mobile world that has very largely based on long established FDD technology principles. Both contribute to greater planning uncertainty. This is in evidence in the Ofcom consultation document in respect of basic spectrum planning assumption that still remain to be settled and may not all be finalised by the time of the auction.
- b) Nobody today is taking 5G spectrum under 4 GHz very seriously since the focus of discussion is skewed toward mm Wave bands. In 2 years' time the 5G position will be a lot clearer. If the 3.4 GHz band gets divided between too many operators at the auction, the spectrum holders may want to join together and re-plan the band for themselves for 5G on the basis of much wider channel widths.
- c) Mobile operators have historically used their spectrum under one of two models. The first is to use "mobile" spectrum as a competitive weapon against other providers and the second is to use "fixed link" spectrum as a cooperative tool to solve particular individual (back haul) problems. The technical characteristics of 3.4 GHz make it a natural cross-over band between the two models with the substantial geographic gaps likely at 3.4 GHz offering a lot of space for creative cooperation.

3. IET Proposal for a 3.4 GHz Spectrum Interest Group

Ofcom is already proposing settling the synchronisation issue amongst the winning bidders within 12 months of the auction. This could be an ad hoc Ofcom sponsored

meeting or the first agenda item of a 3.4 GHz Spectrum Interest Group set-up to also manage future changes by mutual consent between 3.4 GHz licensees.

The IET recommends that a framework be created to consider future cooperation so making it more straightforward for the spectrum holders to evaluate opportunities for cooperation and then rapidly implement them.

4. Conclusion

The IET firmly believes the success of telecommunications market is founded on finding the right mix of competition and cooperation and this will change with time. Our proposal is aimed at enhancing the cooperative component in the mix to meet the unique challenges ahead. It takes the pressure off-Ofcom to second guess the technology outcome of the fluid global position on TDD in the 3.4 GHz band and puts in place a framework that could facilitate better alignment with emerging 5G technology or dynamic spectrum sharing on a voluntary basis between the 3.4 GHz spectrum user interests when the future technology enables it and market conditions makes it advantageous.

End of response