

# Ofcom consultation

## Coexistence of new services in the 800 MHz band with digital terrestrial television

Mandercom Ltd, a consultancy specialising in TV signal reception and distribution systems, is pleased to make this response to Ofcom's consultation on coexistence of new services in the 800MHz band with digital terrestrial television.

***Consultation question 1: Do you have any comments on our modelling approach and assessment of numbers of households affected?***

### **Impulsive interference**

- 1.1. No account seems to have been made of the effects of impulsive interference.
- 1.2. Impulsive interference is generated by light switches, central heating thermostats, engine ignition systems and many other electrical devices.
- 1.3. In most cases of impulsive interference, which are widespread, the interference enters TV reception systems via poor quality outlet plates and fly leads. Installers have found empirically that raising signal levels delivered to outlet plates to 45-50dB $\mu$ V provides an adequate signal to interference ratio in the great majority of installations. For comparison, in bench measurements reliable decoding can be achieved with 15-20dB lower signal levels.
- 1.4. There are many examples of receiving installations where normally impulsive interference causes very little or no disturbance to services, but when signals are degraded, for example by occasional co-channel interference, effects of the impulsive interference are seen.
- 1.5. There are likely to be numerous situations where received signals are degraded by LTE transmissions, which in themselves do not cause significant problems, but in the presence of impulsive interference cause intermittent and highly annoying disturbances to services.
- 1.6. Failing to account for this effect will cause a significant underestimate of the number of affected households.

### **Other points**

- 1.7. It is crucial that modelling is based on the absolute maximum emissions, both in band and out of band, permitted under the Technical Licence Conditions.
- 1.8. We strongly support the idea that the modelling should be independently validated by another organisation with extensive broadcast experience.
- 1.9. No account seems to have been made of emissions from user equipment (handsets, etc.). Given the poor screening quality of typical fly leads and outlet plates, and the proximity of these devices to TV receivers, it seems likely that significant numbers of households will be affected by handsets. This could include effective sensitisation to other interference sources, as described above.

***Consultation question 2: Do you agree with our high level conclusions on mitigation options?***

- 2.1. Broadly, yes. It is most likely that filtering will form the core of the mitigation actions, and that platform change could provide a technical fix in extreme cases. However, perhaps one in three people do not wish to have a satellite dish on their home, and may not accept migration to satellite.

***Consultation question 3: Do you have any comments, views or evidence that you would wish to be considered in our further work looking at the appropriate level of consumer support?***

- 3.1. In section 6.8 of the consultation document, you state “The main requirements for information would occur in advance of any interference (i.e. before new networks were activated), so that consumers were aware of the issue and knew what action to take. There would still be a need, albeit reduced, after interference has occurred, to provide advice and support.” We believe that the majority of people will take no action until interference occurs, at which point they will seek advice and expect a rapid solution.

***Consultation question 4: Do you have any comments or views on how we have assessed the approaches and our preference for the hybrid approach?***

- 4.1. We accept that the hybrid approach may provide best, but the emphasis must remain on protection of the consumer.

***Consultation question 5: Do you agree with the options, the assessment approach and our initial conclusions? What are your views on cost risks and how to deal with them?***

- 5.1. We would like to reiterate the point made at a recent stakeholders meeting: when Channel 5 carried out their re-tuning exercise, which bears some degree of similarity to the task MitCo will have to undertake, costs were “dramatically underestimated”.