Response to:

Consultation and information on technical licence conditions for 800 MHz and 2.6 GHz spectrum and related matters

General Comments

The 868 MHz frequency is widely used by Fire Systems for commercial premises and by smoke alarms in domestic premises (where interconnection between alarms is often mandatory). These products are obviously designed to protect life and therefore the reliability of the RF communication path is critical

The Ofcom estimated number of RF Fire detection units is very likely to be an underestimate as the number of RF installations is rapidly increasing as the costs reduce, as the number of manufacturers using RF increases and as users realise the far greater ease of installation.

The Ofcom report makes a number of statements that MFCN terminals are unlikely to transmit at their full power in a domestic environment. Given the shielding effects of a domestic household and the likely use of poor antennas, (especially in data dongles due to size limitations) it is highly likely that they will use close to full power especially in the start-up phase. Using the figures from the report interference can be expected up to 49.7M, this means that UE in adjacent rooms and buildings will cause interference (which will be out of the victims control).

This conclusion was reached long ago within the Joint CENELEC-ETSI working group

This would practically rule out the use of SRDs in the domestic and other environments. Many of these alarms are protecting low income families, the elderly and the infirm.

How does Ofcom propose that these users identify and fix problems with their alarms – are they expected to identify where the interference is coming from, solve the problem and if necessary pay for new equipment (when and if immune equipment becomes available).

Whilst there is a blanket statement that SRD's cannot claim protection from interference from licensed services , this is the first time as far as is known, where Ofcom policy will cause particular devices to become, in many cases, unusable. Ofcom has been aware of these problems for at least two years but has done nothing to initiate changes in equipment design and standards to solve the problems. Under these circumstances there appears to be a compelling moral, if not legal, case for Ofcom to **compensate or replace affected equipment**.

In addition these extensive costs to both consumers and industry, have been excluded from the "**costs** "of implementing Ofcom's plans for MFCN

There appears to be an argument put forward in the SRD report that because SRDs can interfere with other SRDs that the MFCN interference should be tolerated, **this is a totally spurious argument**. The 863-870 MHz band has been carefully planned to be spectrum efficient by CEPT in conjunction with ETSI SRD groups and has resulted in the band plan (a result of considerable compatibility testing by CEPT,ETSI and industry) separating disparate uses.

There is mention of the fact that many SRD devices have a “fade margin” of 10 dB or more and that this would possibly compensate to some extent for the new interference sources. However, these fade margins are rightly mandated by standards (e.g. EN54-25, EN 50131-5-3) to allow for the well known attenuation that can occur between RF devices due to the movement of people, doors, furniture, renovations etc. These fade margins cannot be used twice – if additional fade margins have to be included for the new interference they would have to be in addition to the present fade margins. This would not help with equipment that has been installed.

For new equipment, adding additional fade margins may require changes to standards to allow higher transmitting power, larger batteries, improved circuitry, additional cost – that is assuming it is practically feasible.

Will Ofcom be able to solve the problems this policy will cause with life saving equipment such as Fire Alarm Systems ?

Response to Questions

Technical licence conditions for the 800 MHz band

Question 1: Do you have any comment on the proposal to apply the limits defined in Case A of Commission Decision 2010/267/EU for out-of-block emissions from base stations into all frequencies in the range 470 to 790 MHz, as set out in Table 4.4?

Case A will be inadequate to mitigate interference. There appears to be a good case to tighten these figures by at least 3dB

Question 2: Do you have any comment on the proposal to set an in-block emission limit of 61dBm/(5 MHz) for base stations in the 800 MHz band?

This means that the base station will have three times the power (2511W) compared with the figures used in the impact analysis and modelling work.

Therefore the number of victims and cost should at least be multiplied by at least 3

Reduce base station power to 55dBm/5Mhz to reduce the impact of interference – though this will still not be enough to remove the problem completely.

Technical licence conditions for the 2.6 GHz band

Question 3: Do you agree with the proposed conditions on antenna placement that would permit the use of the alternative block-edge mask for restricted unpaired blocks? If not,

please explain your reasoning and your alternative proposals, bearing in mind the need to remain consistent with the framework provided in Commission Decision 2008/477/EC.

No comment

Question 4: Meeting the conditions on the use of the alternative block edge mask for restricted TDD blocks would require certain licensees to share information about the locations of their base stations. Do you agree with this proposed approach?

Yes

Low-power shared access in paired 2.6 GHz spectrum

Question 5: We welcome comments on stakeholders' preference for the dedicated or hybrid options for low-power shared access as discussed above.

Hybrid

Question 6: We welcome comments on the appropriate frequency placement for low-power spectrum blocks.

No comment

Question 7: Do you agree with our proposed technical licence conditions for low-power access?

Yes

Question 8: We welcome comments from stakeholders on the additional restrictions and technical measures we have outlined for the management of interference under the hybrid approach, and the technical licence conditions that would be necessary to implement them.

See general comments above.

Question 9: Do you agree that a Code of Practice on Engineering Coordination, as outlined, is the appropriate approach to manage the coexistence between low-power licensees?

Yes

Terminal stations

Question 10: Do you agree that we should proceed with the approach that terminal stations complying with the relevant technical parameters be exempted from the requirement for individual licensing?

No

- The so called fixed mobile terminal units should be individually licensed due to their higher interference potential because they will be closer to the devices they may block
- Licensees should make users aware they may render SRDs at the installation ineffective or seriously affect their performance, sometimes intermittently
- Other terminal stations should only be licence exempt if below 20dBm which has been shown to reduce interference to domestic equipment

A Quality Assurance requirement should be placed on manufacturers and /or network operators to ensure that these devices comply with the emission limits and other parameters

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