EMC Committee Report 2018

Our aims are to **provide advice and support** to those who suffer from RFI problems and to help **protect the spectrum** from Radio Frequency Interference (RFI).
Our top priorities are:

- **Providing Advice** through the EMC Helpdesk.
- **Protecting the spectrum,** by **tackling regulators, suppliers and service providers** to reduce RFI emissions and by **influencing standards committees** to specify acceptable RFI levels.
- **Hosting and moderating the EMC Matters Forum**, which encourages members to share and help each other.
- **Updating the website** to provide guidance on resolving RFI problems.
- **Increasing awareness of RFI.** We have an ongoing campaign to inform members of the growing RFI issues. We use the Web, social media, RadCom articles, convention papers and society handbooks to highlight the growing threat of RFI to the radio spectrum.
- **Investigating** emerging RFI pollution problems.

Major Achievements in 2018 Help and Advice

The EMC help desk has been busy this year giving assistance in some eighty cases. We gave face to face advise at the National Hamfest at Newark. Several articles on EMC/RFI were published in RadCom in addition to the bimonthly RadCom column, ‘EMC Matters’. The VDSL2 interference analysis software Lelantos was developed further and presented at the RSGB convention.

Standards

There are always new threats to the radio spectrum. To be effective one needs to influence matters at the formative stage. Upcoming threats include 11KW wireless charging of electric vehicles (WPT/EV). Existing problems evolve such as MIMO extensions to PLT which propose to inject signals between Live, Neutral AND Earth. The RSGB EMCC attended all 2018 BSI EMC Standards Committee meetings (GEL210/11). To strengthen our influence, we are now heavily involved via the IARU. This allowed us to attend international CISPR meetings in Busan and WPT/EV working groups in Ingolstadt. We work hard to guide committees towards acceptable outcomes at an early stage while collecting evidence at a national level.
We have a good working relation with the European Broadcasting Union and other national regulators who take a more proactive stance than Ofcom.

One key issue is the new way that interference limits are being set for upcoming standards such as WPT/EV. TR 16-4-4 specifies a statistical method for predicting the likely complaints levels against noise limits. The interpretation of these parameters is highly politically charged as the maths discriminates against minorities such as us in terms of our likelihood of complaining. Our response is to query the derivation of the many parameters from the philosophical viewpoint while also presenting technical papers and arguments about how these calculations are done. Our EMCC chairman is now a permanent member of the committees developing the WPT/EV standard and reviewing TR 16-4-4. Your contribution should be to ensure you make valid harmful interference (“HI”) complaints to register in the statistics!

Increasing awareness

We still have trouble trying to get Ofcom to respond to cases of HI to the Amateur Radio Service. Having had discussions with other national regulators at international meetings we are of the view that Ofcom are far worse than average at ignoring HI. Our efforts are therefore directed at raising awareness and empowering our members to complain convincingly. Ofcom will only respond if they get large numbers of complaints.

VDSL Broadband RFI

Following up on our VDSL2 survey of members last year we have worked with Ofcom to do a joint full survey of 6 members sites selected in the vicinity of Ofcom's Baldock listening station. We published our results in Radcom. That report clearly shows evidence of HI. We discussed our results with Ofcom who have not yet responded. Ofcom have yet to publish their measurements which should be very similar to ours.

WPT/EV & Induction cookers.

Not having access to a WPT vehicle charger we did a study on induction cookers. Though lower power the relative near field propagation characteristics of the harmonics gave great insight into the issues of WPT/EV and informed our discussions in committee. The report is available on the RSGB website.

Conclusion

The workload in this area is increasing. If you can help us in any way to fight this spectrum pollution, please contact emc.chairman@rsgb.org.uk

Dr Martin R. Sach, G8KDF
EMC Committee Chairman, February 2019