



# RAYNET Report

## Spectrum Forum – October 2016

This is a joint report submitted the RSGB's Emergency Communications Committee and The Radio Amateurs' Emergency Network.

Please accept our apologies for being unable to attend the meeting – the date of the planned RAYNET Convention and AGM shifted a week owing to the venue becoming unavailable on the chosen date, and as there are important decisions to be made at the meeting regarding the re-unification of the organisation under RAYNET-UK, and its proposed status as a Special Interest Group (SIG), it is somewhat vital that we are both in attendance in Cambridge.

### Membership

In total, there are approximately 200 groups active throughout the United Kingdom, with a membership of roughly 2300.

### Operational duties

There have been in excess of 530 operational duties carried out since 1<sup>st</sup> January 2016, and a further 33 are planned during November and December. Large-scale RAYNET operations in 2016 included Endurance 80 (80km day/night scout hike), Etapes du Dales (110km bike ride), LDWA walk (3-day 100 mile walk), Royal International Air Tattoo (5-day operation), the Ridgeway Challenge (30hr 87-mile ultra-run from Ivinghoe Beacon to Avebury) and Exercise SURGE for Kent Resilience.

Most events are conducted on behalf of other voluntary agencies as specified in the Civil Contingencies Act 2004, but there are a growing number of operations on behalf of the Police, Fire and Rescue Service and both county and local Resilience Teams.

### Central Government Liaison

Liaison with central government, through Cabinet Office and the Civil Contingencies Secretariat, remains strong, and we have regular meetings with them. This is particularly important as we enter the transition phase from the Statutory Services' use of Airwave to the new Emergency Services Network (ESN) in the next 12 months. The rollout has yet to commence, but as yet, there does not appear to be consideration given to the transition of voluntary organisations (such as BRC) who are users of the existing Airwave system.

RAYNET was given the opportunity to give a presentation on its work to the chairs of Telecommunications Sub Groups at the Cabinet Office's Ambition 16 conference in April in London and received favourable comments from both the Home Office and Cabinet Office itself for its supportive work in times of emergency.

### RAYNET Technologies

Groups are continuing to explore the use of other bands (such as 4m, 6m, and 23cm) and HF NVIS in difficult terrains, as well as technologies such as digital modes and MESH networking. The RAYNET-HF team continue to run a weekly net on voice, with the final net of the month exploring data modes.

A Technical survey was launched in August to ascertain the level of technologies already used within Network groups. The initial findings have indicated that most groups have either embraced new technologies or ways of working, or will be doing so within the next five years. Inevitably cost is a concern to groups who see such changes as something they must fund themselves as the requirements generally fall outside the normal equipment holdings of RAYNET members of 2/70 FM handhelds etc. When undertaking expenditure, a safety net of proven and tested designs should be available, as from the narrative comments and personal experience, some members will drop support and effort if systems don't work 'out of the box' and therefore will revert to older and more reliable technology. There is a strong preference for DMR, with small pockets of D-STAR and Fusion scattered

throughout the UK, but systems such as High Speed Data services do not feature prominently in the future plans of most groups.

Any change requires justification. RAYNET groups state 'requirements' from User Services or others but these are not necessarily substantiated or proven to exist outside the domain of a particular geographical area. There is also the problem of requirements changing as User Service management personnel change or they gain operational experience on a particular area and decide that ultimately a path chosen is not the right one.

Jennifer Cole, of the Royal United Services Institute (RUSI) dealt with this in her jointly-authored report 'Emergency Services Communications: Resilience for the Twenty-First Century'. Taking data from surveys in 2009 and 2014, the shift in requirements by the Emergency Services users surveys shows how an initial belief that voice communications would be irrelevant by a small but significant number of responders in 2009 is totally reversed in 2014 - with 100% stating that voice communications are 'very important'. A similar change can be seen in the demand for bandwidth intensive video streaming which has declined over the period.

The data-gathering will continue, with RSGB and independent groups invited to contribute between now and March, when the final report will be presented at the RAYNET Spring Convention.

**Points to consider**

- The spectrum requirements for RAYNET are likely to evolve over the next few years and consideration will need to be given as to how these are best met.
- It may be necessary to involve other specialist groups to assist us with our technological advances.

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