

# checkpoint



## The Magazine of RAYNET-UK



**ISSUE 10 – August**

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Judging by a fuller National Diary, and the many posts from groups on social media, members are relishing the opportunity to get back using their skills on events.

There are some interesting articles in this month's edition—Kent RAYNET on Exercise Golden Arrow, Northern Ireland's North West 100 and an off-grid data project being undertaken by SW Hants.

Happy reading!

*Cathy*

### **Deadline for next edition of Checkpoint**

The deadline for articles for the October edition of Checkpoint will be:

**Sunday 11th September 2022**

Articles and photos for inclusion should be sent to: [checkpoint@raynet-uk.net](mailto:checkpoint@raynet-uk.net)

**Cover photo— Skylink in use on Exercise Golden Arrow**

**(photo—Colin Spice 2E0CMS )**

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## Chairman's Column

Having just got back from 8 days volunteering at the lawn bowls and para bowls in Victoria Park in Royal Leamington Spa for the Commonwealth Games, I realised just what I had missed—the camaraderie, team work and meeting people. Video calls were fine when we couldn't do anything else but there is nothing like being able to have a face-to-face chat with friends, new and old, over a coffee.

I know initially RAYNET was approached to provide operators for the Venue Operational Centres, and that it fell through, but honestly, I think it would not have been a good use of volunteers' time. Our VOC was not busy and appeared to be over-staffed. This was also the case "out in the field" with too many volunteers and not enough jobs to do.

It has made me conscious of how precious volunteering time is, and how such people should be valued and utilised. No one wants to sit around with nothing to do. It was certainly exciting to be part of the Commonwealth Collective, but it was apparent that planning for the event had gone a little awry with no clear definition of our role or duties, and particularly no consideration of the demand for volunteers at particular sessions.

I am reminded of a saying I came across a few years ago

*"Volunteers are not paid because they are valueless—it's because they are priceless"*

So, next time you are planning an event, think about the best way of using your RAYNET volunteers and utilise them properly. Make them feel a valued and important part of the team and keep them active.

### **When was your last AGM?**

Throughout the pandemic, we were forced to resort to alternative ways of meeting, and as a Company, we were given dispensation to defer an AGM—but we still held a virtual one.

But when was the last time your group held an AGM either virtually or physically? Under your group's constitution, it is a requirement that you hold one at least annually, yet there are some groups who have not held one for years.

As things have eased and we have begun to accept COVID as part of everyday life, it's time to get back to some form of normality. There may be issues, such as the offer of community meeting rooms not being available, ensuring the safety of attendees by the wearing of face coverings and social distancing, the provision of hand sanitiser—but none of these are not insurmountable.

### **We're all volunteers!**

The entire RAYNET organisation is built around volunteers—we have no paid employees—and we fit in all our duties around our normal lifestyles, demanding jobs and family commitments. However, you can all do your part to help.

Delays with membership renewals and registrations are often caused by incomplete or incorrect paperwork. Please check that everything is in order before sending it to Gill—cards are usually issued in a matter of days, which become weeks, if not months, if there is an error which has to be sorted.

The same applies to membership enquiries—please deal with them promptly—potential members will lose interest if they are not responded to and every member is a valuable resource for the organisation. Don't let them slip under the radar.

*Cathy G1GQJ*

# Exercise Golden Arrow

Exercise Golden Arrow took place in Kent in July. It was originally planned pre-covid and had several postponements before being delivered. Based around a train crash scenario it was part of validation of plans for mutual aid across councils. The local council opened a rest centre and its emergency control room. The adjacent council provided mutual aid and opened its own control room with the County emergency room in the middle to help coordinate.

Members from each of the four groups in the county always come together as Kent RAYNET for response to EPO requests and the dozen operators volunteering for the day were mostly able to be tasked within their own groups' operational areas.

As with real-life scenarios the RAYNET requirements for the exercise shifted a few times from the original request for temporary picture and radio links across five sites. Past experience shows that whatever the exercise brief we always end up using radios alongside anyway. This was seized as the opportunity to test a few new provisional radio sites alongside the exercise in advance of the forthcoming review of the county resilient telecoms plan.

Our default approach for this sort of request is to set up a Zoom link and treat it as a net. We have discovered in the past that there is always a high chance of something on one net triggering, or coinciding, with something on the other (radio) net, so each gets an exclusive operator. Naturally they are co-located. Usually the operator will wear a headset. This means the link is always "open" but the audio doesn't go to the room adding to the noise. With the "normal" position for microphones being muted it also stops the vox from one site cutting the output of the others. The operators can "chat" in writing across Zoom if needed, or speak to each other, and the communication can really enhance situational awareness between sites. With multiple cameras available one can be pointed to the action or the situation board, and another can be switched in if someone comes to the operator position for a face-to-face. You can do the same with an auxiliary speaker/mic – using the headset until the sound is needed in the room. We own a couple of Jabra Pods for that purpose. An update meeting at the control centre can be relayed immediately to all sites, with contribution from all points.

When we have provided video links before we have found that most of the council sites do not allow their firewall to pass Zoom or similar programmes. The quickest solution is to provide our own independent internet feed. Our current plan is to first set up a hotspot before deploying the KaSat internet dish we hold on behalf of the county. This is stored centrally and needs space to transport it so would also delay the turnout time – it also needs about 15 minutes to set up once the right spot has been found. This spot has to have a clear line of sight to the right direction on the horizon. We were fortunate this year that Colin, 2EOCMS, offered his Starlink system to test. Colin runs Pro Heli Aerial Photography and uses Starlink for his business and makes it available for emergencies. It works out of the box. If you can find a bit of overhead sky it takes only a few seconds to connect to the satellites, and is almost as quick to set up as a hotspot

There are many devices designed to derive internet from mobile phone signals, and many people own one, or a phone hotspot. We have been trialling a Mikrotik wAP ac on events and this was used for the exercise. Conveniently, it runs on 12V so power can be derived from a battery, and it can also be powered over POE. On events it sits nicely on the mast and also beams w-fi around the area. As well as the height and siting it outdoors you can get a further advantage by pointing it at the correct cell site and find a signal where a hotspot may fail. On the day of the exercise though it worked just as well indoors

on its desk stand.

Kent RAYNET owns a few laptops and web cameras and headsets for several sites, although often members turn up with their own. Again the group ones are centrally stored and the response time can be shortened if a local member can deploy with their own kit.

With membership numbers slowly declining Kent is attempting to rely less on talk-through sites that need to be crewed more towards fixed site kit that can be remotely switched for links between areas. We have a system using 70cm repeaters “linked” across distant sites by a 2 metre input. During Golden Arrow one of the control rooms with fixed aerials able to access the main “backbone” also bounced radio traffic to a nearby Rest Centre –which enhances situational awareness and keeps the operators there involved.

A couple of members parked at one of our “backbone” sites and took calls from all directions and also ran a separate 6 metre station. Situational awareness is always enhanced if each operator can always hear both sides of every conversation as it mostly prevents people talking over each other. Although this is not always possible it does make things easier if you are controlling a very wide area net with no direct signals at the extremes.



One of the provisional sites was 20 miles from the central site and there was much delight when the signal came booming in at full strength, and also proved to be workable with a hand held. Some possible sites were eliminated and a couple are marked for further investigation.

The exercise demonstrated several things to us. We found a couple of aerials not working at one of the emergency centres, despite the annual tests only 3 months before. This did not impact the exercise. We also identified we need a little more prac-

tise as “No Duff”, “Exercise” and “Service” messages were not always accurately identified at all sites. Moving equipment to the right places beforehand and finding available staff with the right skillset needs a bit of preplanning. The pre event briefing had a few “holes” as not everyone was totally familiar with destinations and car parking rules.

The opportunity to be involved with the statutory planners is immeasurable. As at every exercise there were some professionals who had never heard of us, and others who were unaware of everything we can offer.

Clients always notice the usefulness of being able to see how busy the rest centre is or when the emergency control centre is mid-meeting, or being able to see when the person you want to get hold of finally puts down the phone. Several times in control rooms we have been told how pictures of evacuees etc really focus the minds of off-site responders

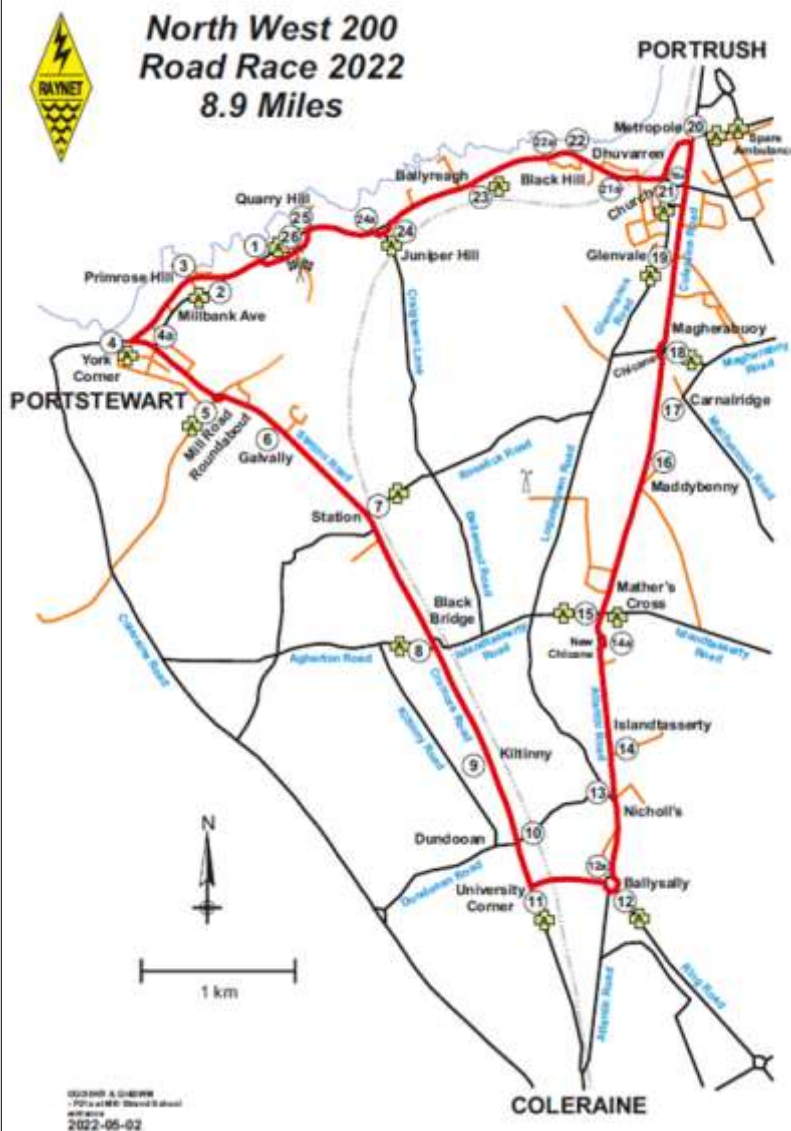
It was a very successful day, and the sun shone throughout.

Colin Bowman M0NLP  
Deputy Coordinator Kent RAYNET  
Controller West Kent RAYNET

# North West 200 Road Race 2022

The largest sporting event in Northern Ireland is the International North West 200 motorcycle road race where competitors take part in racing on closed public roads on the beautiful north coast, not far from the UNESCO site of the Giant's Causeway. Many months of planning go into this long-established event which was first run in 1929. RAYNET are an integral part of the safety advisory group which convenes to advise on all safety related matters.

Upwards of 100,000 people flock to the famous 8.9 miles triangle circuit formed by the roads linking the north coast towns of Coleraine, Portstewart and Portrush. Racers reach speeds of more than 200mph with circuit lap times of under four and a half minutes.



RAYNET NI has facilitated communications at this event for many years in conjunction with the User Services. Some 35 operators are sited along with the first aid parties and ambulances providing vital communications links to a control point which is co-located with the various agencies including the police, fire and rescue, coastguard, and council emergency planning officers.

Our controllers receive reports of incidents, pass these to the chief medical officer and the first aid liaison officer, and in return pass their directions to the services deployed on the ground. Constant contact is maintained with Race Control, both to apprise them of the situation at any incident, and to seek permission for the movement of any medical vehicle on to the course. A communication link is also maintained with Police control and other agencies as public order and other non-racing related incidents often arise. In the event of a major incident our resources may be put

at the disposal of the three emergency services and the Council Emergency Planning Officer.

High speed road racing is exciting to watch but is extremely hazardous requiring a very fast response to incidents and we have developed codes which allow for the rapid passing of information while providing some confidentiality as required by the medical services.

In 2016 we adopted the use of DMR in 70cms for all road racing events and this has proven to be very successful. The use of DMR IDs is particularly useful in identifying station calling in a high noise environment.





Road racing is extremely popular in Northern Ireland and there is nothing more exciting than to see dozens of riders setting off in front of a packed grandstand with the flags of the competitors countries flying in the strong coastal breeze.

RAYNET is very well regarded in the road racing fraternity and associated medical services, dur-

ing racing we are mandated in the operational planning order as the sole authority under the control of the Chief Medical Officer for the dispatching of medical resources.

Although there are 5 distinct RAYNET Groups in NI we work as one and support each other throughout the Zone. My thanks to the other Controllers and their members for all their assistance in this manpower intensive event.

John McCullagh GI4BWM  
Group Controller RAYNET NI North East

## RAYNET AGM 2022

As announced on the RAYNET News a few weeks ago, the RAYNET AGM will be held on **Saturday 22nd October 2022** at the Civil Service Sports and Social Club, Filton Avenue, Horfield, Bristol at 2pm.

It is hoped that arrangements can be made to facilitate a hybrid meeting, giving the option to either attend in person or via conference link. There will still be an option to return a proxy vote

Documentation will be sent out to all members in September, either electronically or by post for those who have opted to receive paper copies.



# Richard Welch G8NDD SK



Richard passed away on the evening of 24 June 2022 in Arrowe Park Hospital after failing to recover from a stroke seventeen days earlier. Richard had been a member of RAYNET for 42 years and was currently Merseyside County Co-ordinator, Wirral Group Controller, and a trustee and chair of Merseyside County RAYNET CIO; he had also served as Zone Treasurer in the past.

In recent years Richard's health had deteriorated, but to those who knew him his attitude to life did not change, private in his personal affairs, but open and generous to all those who knew him. RAYNET was an important part of Richard's life and he had recently been heavily involved over an

extended period of 18 months leading the revamping of our Articles of Association and Rules as part of Merseyside RAYNET moving forward to become a registered CIO. It is through this work, which encompassed his values, approaches, and priorities, that Richard's legacy will live on in RAYNET.

Richard was well known for his "just in time" approach to sending out details but he was always the first to arrive, and the last to leave an event or exercise.

After leaving school Richard first had a go at accountancy before finding his true love in IT and electronics, opening Northgate Electronics in Chester with a close friend and then moving to Wirral CAE where for many years he managed their IT systems throughout the Wirral. Subsequently Richard worked freelance and with his own company installing alarms, CCTV and other systems. Richard developed a very keen interest in computing before people had their own PC's and you had to build your own. Many will also remember Richard from his days at PRS (Progressive Radio Stores) in Liverpool, where he worked for a while, and where we all went to buy discrete components for our homebrew projects.

Outside of RAYNET Richard enjoyed sailing and he skippered many trips around the UK coast chartering a yacht with his friends, and eventually obtained his Yacht Master Ocean Qualification skippering a trip to Madeira. Trips to Scotland were one of Richard's favourites, not least for the opportunity to bring back some of the less well-known malt whiskies, but of course his main drink was beer and many did not know that he always dreamed of owning and running a pub of his own.

Richard has left a lasting legacy on Merseyside and will be greatly missed.

Alec Wood G8WHR  
Merseyside County Secretary

# Situations Vacant—we need you!

RAYNET-UK have actively been seeking to fill some important roles within the organisation for some time. So far, we have not found those all-important “right” candidates, so are now appealing to the wider membership. Can you help?

## **Minutes Secretary**

With all monthly CoM meetings held online (with the exception of the AGM), this task would ideally suit someone who has some spare time to listen to the audio recordings of the meetings and transcribe them in Word.

Applicants for both these posts should contact [chair@raynet-uk.net](mailto:chair@raynet-uk.net) in the first instance.

## **Company Secretary**

This is a vitally important role within the organisation. Applicants should be capable with dealing with the aspects of the legal requirements of running a company and a registered charity, filing annual returns and changes of directors and Trustees with both Companies House and the Charity Commission (all done online), compiling the Annual Report and notifying members of the AGM. Also, the Co Sec advises CoM of legislation which might affect the organisation.

Previous experience is desirable but not essential. They should be a MS365 user with a good knowledge of Word and Excel spreadsheets.

## **IT Team members**

Our IT Team Leader is seeking applicants to “spread the load” when it comes to the management and development of the various IT systems within the organisation.

Applicants should contact the IT Team Leader [Maurice.Eilec@raynet-uk.net](mailto:Maurice.Eilec@raynet-uk.net) with an expression of interest and a brief CV.

## **Training Team Leader**

The Training Team is seeking a Team Leader to drive the work forward. The group has a number of projects, but needs someone to oversee and further develop the ideas they have. Previous experience of producing training material is desirable; the position would suit an enthusiastic group or county training officer with a desire to see the development of national training for others to adopt.

Applicants should contact the Training Team Leader [training@raynet-uk.net](mailto:training@raynet-uk.net) with an expression of interest and a brief CV.

## **We are also looking for Zonal Co-ordinators for Zones 1, 2 and 3**

The applicants should reside in the relevant zone and ideally have experience of being either a group controller or county co-ordinator; however, others with management skills from outside the organisation will be considered.

It is important that the successful candidates have good communication skills, be a good listener and able to liaise with each group and report back at each CoM meeting on what is happening in their respective areas. They should be capable of organising meetings on a regular basis and initially be able to deal with zonal and individual enquiries. The role also involves being a Director of the company and a Trustee of the charity. If you think you fit the bill, please contact [chair@raynet-uk.net](mailto:chair@raynet-uk.net) for a full role description.

# SW Hants off-grid data project

A small group of members have been working very hard on an “off-grid” data project, so SW Hants RAYNET could run a demo of the system before the holidays at the end of June.

This was successfully demonstrated during a 20 min video call presentation with Q&As about the project.

## Testing and trial phase:

We had several Zoom calls and physical technical testing days at Zentive Ltd who allowed us access to their offices. This was conducted by Phil MODNY, Jason MOMZF, John G8UXW, Denis MOCYJ, Jackie G8IOK, Julian GOERI and Alan from the repeater group who was providing the group with access to a high point.

## Technical information:

The “standalone off grid server” for the network was run on an Raspberry Pi, as it does not require an internet connection for the system to work; however, until the network can be expanded for a direct link, we had remote access via Wireguard.

For the demo, the Raspberry Pi had the Asterisk phone software and Jitsi Meet. Other software such as a Citadel email server, text messaging, sharing EtherCalc spreadsheet are ideas so far.

## Phase One testing:

Phil MODNY had taken on the most of this load, assisted by John G8UXW for providing the 12v power box and Julian for several days of logistics and flashing kit with the necessary software.



The test was from Southampton City EC to Hampshire County Council EC. This required three 5Ghz hops and one Wi-Fi link at HCC. We were fortunate to have access to elevated locations managed by Southampton City Council, one of which is a repeater site.

One link was short using 14cm Ubiquiti Nanobeams. The other links used 40cm Ubiquiti Powerbeams. All Ubiquiti dishes were flashed with AREDN which gives more flexibility in the long term.

To get access to the network from Hampshire County Council Emergency Centre, which is a long way from the roof, there is only a long run of Heliac with no power at roof height; eventually power will be via the same cable run with DC isolation.

To get the network to the EC, we used two GL-AR300M mini routers back-to-back with reverse SMA connectors and a RF attenuator. This means we can provide cabled RJ45 connections to items such as phones, also WiFi via an access point.

Power requirements at various places will be challenging; this system will run on 12V at remote sites and 240v backup generator power at the EC.

The R-Pi server will have a small 12v Gel battery and charger for continuation of power.

The phones used were Cisco 7942 pictured here—if you know of any going spare, we would love to give them a home!



This test has left some items in place such as the dishes. Some cabling was temporary, so that needs to be made permanent.

When we have a fully functioning Phase One system, proved and tested, then our attention will turn to planning Phase 2, which we hope will start in October. This will involve other groups.

To contact us for information about this project or to provide the group with information:

Julian Shaw – [s.w.hampshire@raynet-uk.net](mailto:s.w.hampshire@raynet-uk.net)

John Benton – [john.benton@raynet-uk.net](mailto:john.benton@raynet-uk.net)

## **Membership Subscription Rate : £7.20 per annum (60p per month)**

**Current postal rates: (as of 4th April 2022)**

1 to 10 cards	<b>£1.50</b>
11 to 20 cards	<b>£2.30</b>
21 cards and over	<b>£5.00</b>

All cards are returned by second class post except for 21+ cards, these may be sent via courier for security.

### **RAYNET number for general RAYNET enquiries :**

0303 040 1080

### **RAYNET emergency number :**

0303 040 1080 (press emergency option)

## **RAYNET Zones**

**Zone 1:** Cleveland, County Durham, Northumberland, Tyne & Wear.

**Zone 2:** Humberside, North Yorkshire, South Yorkshire, West Yorkshire.

**Zone 3:** Derbyshire, Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire.

**Zone 4:** Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk, Suffolk.

**Zone 5:** All Greater London Boroughs.

**Zone 6:** Berkshire, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey, West Sussex.

**Zone 7:** Avon, Cornwall & Isles of Scilly, Devon, Dorset, Gloucestershire, Guernsey & Dependencies, Jersey, Somerset, Wiltshire.

**Zone 8:** South, West and Mid Wales regions.

**Zone 9:** Hereford & Worcester, Shropshire, Staffordshire, Warwickshire, West Midlands.

**Zone 10:** Cheshire, Cumbria, Greater Manchester, Isle of Man, Lancashire, Merseyside.

**Zone 11:** County Antrim, County Armagh, County Down, County Fermanagh, County Londonderry, County Tyrone.

**Zone 18:** Clwyd, Gwynedd.

**Zone 20:** Scotland.