SENDING PICTURES DURING EXERCISE KETLEY - Preparation & Learning in the Lead Up to the Event

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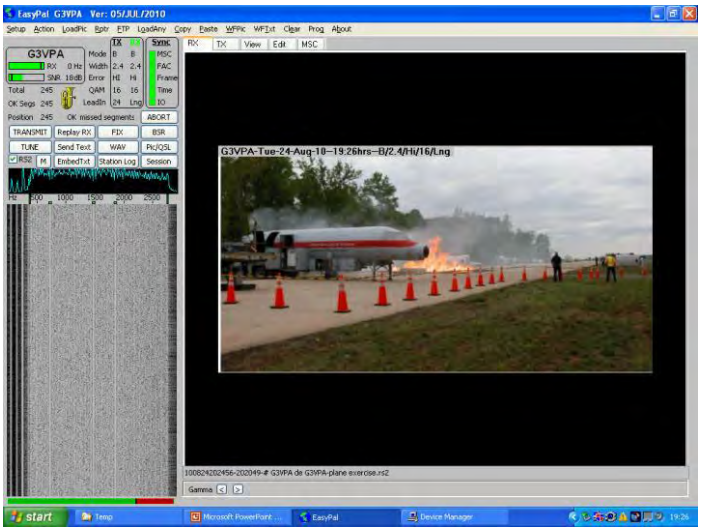
Introduction

Unfortunately the limitation on email attachments if they are not to be identified as spam restricts us to producing a condensed version of Mike Rose's comprehensive and fully illustrated article which details the planning and execution for Exercise Ketley. The full 11-page article *Exercise Ketley* can be downloaded from our web site http://www.raynet-uk.net/members/raylink.asp, then choose *Exercise Ketley*. This is essential reading for any inexperienced Group hoping to provide image or data transmission for a User Service.

Exercise Ketley was a high profile event involving RAYNET and other volunteer groups from across the county of Kent. The plan was to show how well the agencies all worked together.

There was very detailed planning in all aspects of the Exercise and this article only covers the transmission of pictures and data during the exercise, it shares the preparation and learning achieved on the data side in the run up to the exercise, with a hope that it helps other groups to achieve the transmission of files and pictures.



Photographs taken by a Sky Watch helicopter of the aftermath of a simulated collision between ships off the Kent coast were forwarded to County Emergency Control in Maidstone by RAYNET members using EasyPal software written in Australia by Erik Sundstrup, VK4AES.

The scenario for Exercise Ketley had 'blue light' emergency services engaged in dealing with the main affects of the incident. Meanwhile some of the casualties began drifting towards the Isle of Sheppey, which is on the opposite side of the North Downs in relation to Invicta House – Kent's County Hall in Maidstone.

Coastguard Cliff Rescue Teams were involved as casualties began coming ashore at Warden Point on the Isle of Sheppey where a triage station was set up and Salvation Army, St John Ambulance and other services were used. Boats landed casualties at the Queensborough All Tide Landing and a Rest Centre was established at Dorset Road.

Sky Watch - the voluntary civil air patrol which provides air search and observation to the emergency services - took photographs at sea and landed at Eastchurch airstrip where the images were handed to RAYNET for transmission to County Emergency Control.

Three Kent RAYNET groups took part in the exercise and there was considerable advance preparation under the leadership of G3VFC, who was Exercise Project Manager. The Medway Group had developed the use of EasyPal in Kent after trying it and DigTRX. South Kent Group had expertise in MMSSTV, while West Kent did not have experience of either.

G3FVC, 2E0DGW, G1OFL and G3VPA initially experimented with homemade interface units used with the Yaesu FT8900R, which has a six pin mini din data port. Eventually the Kent County Controller, G1JQH and G3VPA decided to use the G3LIV Isoterm interface. The Medway Group bought two interfaces and later another six were bought by members allowing the use of a standard unit.On the day of the exercise RAYNET members were briefed to identify the best photographs to send to County Emergency Control. They worked with Sky Watch and other suppliers to choose the best pictures, which were delivered in a variety of forms including USB, Memory Stick and SD cards.

Because of the large number of pictures available, RAYNET composed and sent thumbnail selections of the best. This allowed the County Emergency Planning Officer in Gold Control to see images quickly and ask for those of interest to be transmitted in full screen mode.

Detling on top of the North Downs was used as the repeater site. A separate EasyPal repeater was used at G3VPA's home to store all pictures and allow them to be called down by County Emergency Control if they were not received direct at the first attempt.

The EasyPal repeater ran a special version of the software produced for Medway RAYNET by Erik Sundstrup VK4AES. It had a shared directory which is now standard on all versions of EasyPal since September 2nd. The majority of the images were received at the County Emergency Centre with no problem and the photograph transmission part of the exercise was declared a great success.

In future it is intended to use a performance laptop with 4GByte memory, 500GByte hard drive and four USB ports. This will be used to run four separate instances of EasyPal with a shared directory. It will use its own soundcard output and three USB sound cards to drive four G3LIV interfaces and four radios with DRM Data tones. This will allow a far greater throughput and will not need a separate cross-band repeater as each of the four rigs will operate cross-band.

Footnote and Future Work

The preparation and knowledge gained in the weeks running up to the Exercise meant that the majority of images sent were received with no problems at County Emergency Centre in Maidstone, which made the picture sending part of the Exercise a great success.

The **EasyPal Repeater** (Data Store and Forward) was to have two instances of EasyPal running on the same machine, it was running a special version of EasyPal produced for us by Erik Sundstrup VK4AES, which had a shared directory between the two instances, it used a fast Netbook as this had a battery life of 9 hours.

As the above configuration had the same throughput as sending the files via a standard cross-band repeater it was decided to use the **EasyPal Repeater** (Store and Forward) deployed at G3VPA QTH to store all pictures and allow call-down by CEC should the pictures not get through to **CEC** at the first attempt.

(Note this shared directory feature is now standard on all EasyPal versions since 2nd September 2010).

The plan for future events is to use one of the HP power PCs like the HP DV6-2113 performance laptop which have:

Intel® Core™ i7-720QM Dual Core Processor- 1.6 GHz (2.8GHz 6Mbyte Cache), 4GByte memory. 500Gbyte Hard Drive and 4 USB ports

This will run 4 separate instances of EasyPal and a shared directory between all 4 instances.

The Isoterm Multi Com by G3LIV

It will use its own soundcard output and 3 USB sound cards to drive 4 G3LIV interfaces and 4 rigs with DRM Data tones, the fourth USB port will drive a 4 or more port hub to drive the 4 PTT drives of the G3LIV interfaces.

This will then allow a far greater throughput and will not need a separate Cross-band repeater as each of the 4 rigs will operate Cross-band.

As stated at the beginning there was very detailed planning in all aspects of the Exercise (thanks to Terry G3VFC who was Exercise Project Manager for his very detailed preparation work), this article only covers the transmission of pictures and data during the exercise. There was also a Voice and Engineering net.

Thanks to Ray G6RVS and the technical working group's signals plan to get all stations on Sheppey and Maidstone to transmit only on 70 cm and receive on 2 metres, communicating via the Voice and Data cross band repeaters on the top of the North Downs at Detling there were no interference issues.

The Engineering Net on 6 metres coordinated data transmission and dealt with welfare issues, as there were no Engineering issues to deal with!

In addition to our own website link given on the previous page, Mike's full article can also be found on http://vk4aes.com/ together with EasyPal software downloads. Also see: http://tinyurl.com/g3liv-isoterm.