

AUSTRALIAN AMATEUR PACKET RADIO ASSOCIATION

A Brief Report on the Implementation of ROSE Networking.

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History

When Net-Rom first became available this association obtained the software and installed it in two repeaters, **VK2RPH** in Sydney and **VK2RPN** in Newcastle 100 miles north of Sydney.

The tests were successful even though we did not reach the stage of having a uhf link installed. However we received the **"WORD"** from the Department of Communications that the software **was** in breach of the regulations in that the repeaters at one end adopted the callsigns of the users and at the other end did not identify both users. We therefore had to remove Net-Rom forthwith. I would like to take the opportunity to publicly thank Software 2000 for their help and consideration to our organisation at that time. Their response was beyond what could reasonably expected of any organisation.

Discussions with the Department followed **as** to what their requirements were in regard to packet radio and fortuitously I noticed a small item in **a** bulletin doing the rounds of the bbss regarding Rose. Upon further investigation and assistance from RATS the Department wrote their new regulations for packet in a **way** that satisfied their requirements and enabled Rose to be used. The requirement is that each packet shall identify the originator, the destination station and the station actually transmitting.

We obtained from RATS an early version of Rose and commenced testing and allowing for bugs it was obvious that it was able to satisfy our requirements and the Department subsequently approved its use.

The VKNET

Our initial intention is to expand the installation of Rose from Sydney outwards to Brisbane (600 miles) and to Melbourne (**580** miles). At present we have an installed link **from** Sydney to Orange in the Central West of **NSW** via

Kattoomba 80 miles, Mt Bindo a further 30 miles, then to Mt Canoblas another 120 miles. The performance of the network has been very encouraging especially when the level of competing traffic at the Sydney end is considered.

At present installation of UHF links is underway with the Sydney repeater VK2RPH completed and **three other** repeaters almost completed. The hardware being used is DR200s and one back to back TNC2 installation. These installations have been tested on the bench and should be installed by the end of August.

To achieve our aims nine Rose nodes will be required between Sydney and Brisbane and seven between Sydney and Melbourne. However these long links will not be **very** satisfactory at our initial installed speed of 1200 baud and it is our intention to install at a later time the G3RUH 9600 baud modems. However UHF linking will not solve our **major** problem of including more remote areas into a nation wide **VKNET**. Discussions have taken place with groups at **Townsville** in Northern Queensland (1500 **miles**) and Perth (2800 miles) regarding the installation of HF Rose nodes linked to the local VHF network. Preliminary discussions have favoured the **18mhz** band and the use of G3RUH 1200 **baud** PSK modems. Arrangements are presently being attempted to link the Rose node **N2EVW-10** with a Rose node at **VK2BBD** on 10 metres.

Discussions with the Department of Communications will have to be undertaken regarding the carrying of packets from Limited licensees on the HF network. Initially the Rose software is being modified to enable the locking out of certain classes of **licencees**, identified by their **callsign group**, from using the HF network.

#### Bandplans

The Wireless Institute of Australia has established a band plan for packet which in addition to **the** frequencies 147.575 mhz and 147.600 mhz allocates five frequencies from 144.800 to 144.900 **mhz** inclusive. Two extra channels will be needed in VK2 at 144.775 and 144.925 **mhz**. We have allocated these channels between the Local Area Networks **and each LAN** will be linked on UHF.

On HF we are proposing the use of **18mhz** for HF networking with 1200 baud psk. The success of the HF BBS forwarding using PSK has given guidance to the success possible with this mode. However some research into the propagation difficulties over very long paths at this speed is needed.