



**WICEN (Vic.) Inc.**

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Committee of Management

## **WICEN HF Data Systems**

There has been a lot of discussion recently, both by email and at the Coordinators' and Commanders' meetings of how WICEN should pursue the development of data transmission capabilities in general, and HF data capability in particular. After much experimentation and analysis of WICEN's possible requirements, two main options have emerged from the discussion: the EmComm system and the Winlink 2000 system. Unfortunately, these two systems are fundamentally incompatible.

Because those advocating the two systems have been unable to agree, the impasse was discussed at the WICEN Committee of Management meetings on September 13<sup>th</sup> and October 11<sup>th</sup>. As Secretary I have been asked to summarise the situation and arguments, and communicate the CoM's position.

Advocates of both systems base their selection on logical arguments. The differing conclusions appear to be a product of differing assumptions on the nature of WICEN and its Objective.

WICEN's objective as stated in our Incorporation documents is:

*"To make the resources of the Amateur Radio Service most effectively available to the community in times of disaster or sudden need."*

The nature of WICEN is harder to define, but we certainly couldn't be characterised as a "front-line" agency, responding to incidents every week or even every month. Why is this? Its because the "front-line" agencies are equipped with robust and reliable communications systems of their own, and its only in exceptional circumstances that these systems become overloaded or fail. Indeed, tax-payers who fund the front-line agencies would be right to criticise agencies who failed to invest in communications systems that were adequate for most contingencies.

Because of the reliability of the front-line agencies' communications, WICEN's members do not expect to be activated often. Members who are willing and able to be activated often, can and do join the front-line agencies such as CFA or SES to be involved with primary communications systems rather than backup systems. This "infrequent activation" nature is consistent with the "in times of disaster or sudden need" clause of our objective.

As part of this discussion, the question was posed: *"Are we radio hobbyists offering our services as the last resort when all else has failed or are we communications experts supporting the operation of professional agencies, as a backup to their own systems?"* These are two extremes on a spectrum, and as usual, reality is somewhere in between. The first characterisation denies the expertise available within WICEN, and the second denies WICEN's "infrequent activation" nature. A more accurate characterisation might be *"We are communications experts offering our services to professional agencies, as a backup to their own systems, when all else has failed."*

So how do the two proposed systems "fit" the objective and nature of WICEN?

The Winlink 2000 system is freely available to all holders of an amateur licence and is provided by the Amateur Radio Safety Foundation Inc. - a "Non-Profit, Public Benefit Corporation". Although expensive hardware can be effectively utilised with the Winlink 2000 system, the system can be accessed with just a radio, PC, and an interface between the two costing only a few dollars. The system is clearly a "resource of the Amateur Radio Service" referred to in WICEN's objective. The low cost threshold also fits in with WICEN's "infrequent activation" nature - Individual operators do not have to commit significant amounts of money to hardware which may not be used often.

By contrast, access to the EmComm system software is closely controlled by the EmComm "body". It is explicitly not available to all amateurs. Even if they have the software, individual operators are barred from the system when not considered to be current by EmComm. The nature of the the EmComm body is uncertain, but appears to be largely controlled by a single individual. To utilise the system, very expensive hardware is required. The firmware must then be changed to that provided by EmComm. This firmware is incompatible with the standard firmware, preventing modified and unmodified hardware from communicating. The highly restricted distribution of the software and firmware, the uncertain requirements for accessing the system and the firmware incompatibility means that the EmComm system cannot be characterised as a "resource of the Amateur Radio Service". The high cost and firmware incompatibility also conflicts with the "infrequent activation" nature of WICEN in that expensive hardware must be purchased and put aside solely for use with the EmComm system.

Despite this, the EmComm system has desirable features that Winlink 2000 lacks; automatic encryption, and very detailed auditing. However, the RMS Express client component of Winlink 2000 records all message transmission and reception. This would appear to be adequate audit-ability. Also, external encryption techniques which offer equivalent or better security than that within EmCommWin can easily be utilised in conjunction with the Winlink 2000 system by Australian stations should encryption be deemed necessary.

The suggestion that a "Quick Response Group" or similar utilise a different system to the rest of WICEN seems to disregard the likelihood personnel in that group would need to be relieved by "slower responding" members in a large activation.

Based on the discussion above, it is the WICEN Committee of Management's judgement that the EmComm system is unsuitable for utilisation by WICEN, and that WICEN should continue to pursue and facilitate the widespread adoption of the Winlink 2000 system.

Mark A. Dods, VK3ZR, Secretary  
*on behalf of*  
WICEN (Vic.) Inc. Committee of Management.