The Productivity Commission

Gentlemen,

I am a resident Australian citizen, a retired professional (communications) engineer with an interest in both amateur radio and ocean sailing. I am not affiliated with, nor do I represent in any way, any organisation mentioned in these proceedings.

I am apalled by the conclusion reached and the calibre of the arguments presented in that section of the Commissions Draft Report, Chapter 10, dealing with Winlink.

In the belief that the Commission's provisional views on this topic should not go into the public record unchallenged, I respectfully submit the attached response [WordPad pcresp210503.doc] for the Commission's consideration.

It is my earnest hope, that after reconsideration of the evidence, the Commission will adopt a more enlightened view in it's Final Report.

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Draft Report, Chapter 10, Other Issues, Restrictions on amateur radio operators

The concluding sentence in this section of the Commission's Draft Report reads:-

"Based on these arguments, the Commission does not intend to recommend changes to the amateur radio operator licence conditions to allow the use of Winlink 2000"

A number of arguments were presented. Each one is addressed here in the order in which it appeared.

Draft Report 1): *"Some conditions.....such as connecting to the public switched telecommunications network.....initially imposed during World War II.....prohibit amateur operators from using some new technologies, such as Winlink 2000"*

Comment:
The obvious (unanswered) question is:-

are security restrictions imposed some 60 years ago still appropriate today?

None of the publicly accessible submissions to the Commission suggest that they are. If one of the confidential submissions made such a claim, it is flawed for the following reasons:-

a) Identical technology is authorised and used in Australia by another service (SailMail). It differs from Winlink only in that access is less restricted and it's operating frequencies, while generally similar to Winlink's, are different. Apparently, no such security restrictions apply to this existing authorised service.

b) Any "real" Winlink security issue must therefore lie in these differences in accessibility or frequency. If these security issues are overt, then they are certainly not obvious.

c) Unfortunately, merely claiming the existence of security issues exposes any covert application.

In the absence of any evidence to the contrary, the conclusion can be reasonably drawn that:-

There is no current security issue restricting Winlink operation in Australia

Draft Report 2): *"The submissions' main argument is that Winlink could provide a safety-of-life service for recreational cruisers in Australian waters and nearby high seas.*

Comment:
The choice of words here is interesting.

a) Firstly, the choice of the word *main* in "*main argument*".

This is the *only* argument addressed in the Commission's report.
The primary submission in support of Winlink (Anthony Van Vught, sub14) cited several arguments in detail, with supporting information. Apparently, these arguments were not worthy of consideration.

b) Secondly, the choice of the word *could* in "*could provide.....service*".

Is the Commission not aware that Winlink *already does* provide safety services worldwide (including in the Australian region)? This, notwithstanding the handicap of having no PMBO sited in Australia and regulatory discouragement of Australian participation.

Draft Report 2.1): "*This raises a number of issues. First, the Winlink system has the potential to generate significant traffic, resulting in congestion in the amateur bands* "

Comment:
Clearly, the Commission did not intend this to be a serious technical argument. It provides no figures on the amount of traffic it imagines Winlink might produce, nor does it provide its view of the available band capacity, so no objective comparison of the two figures is possible to establish the validity this argument.

In this respect, the Commission may find the following facts and reasoning to be of interest:-

The technology used by Winlink 2000 is outstandingly (by a factor around 100:1) the most efficient means available to non-military/non-scientific/low-budget communicators to send/receive short messages over HF radio. It can communicate successfully at signal levels so low as to be inaudible (18dB below the noise floor), and does so very reliably with error correction producing close to zero error rates. It follows (from communications theory), that any available alternative technology would require higher power levels, or greater bandwidth, or longer band-occupancy time to achieve the same communication outcome. Thus the use of Winlink would produce less traffic demand and less risk of congestion than any other available technology.

Winlink users are generally severely limited in their usage of battery power. They are unlikely to waste it in generating unnecessary traffic. Useful communication *is already* taking place in the Australian region (over less than optimum HF links) to foreign PMBOs. No evidence has been presented to show that this traffic is either "*significant*" or results in "*congestion*".

Draft Report 2.2): "*This raises a number of issues.....significant additional traffic... congestion... could be generated by unlicensed users*"

Comment:
The Commission's attention is drawn to the following extract from page 5 of the Winlink submission (Anthony Van Vugt, sub14)

> "2. Only licensed amateur radio operators with a valid WinLink 2000 address can access the system. Others with an Internet Email address can *send* email messages to anyone with a WinLink 2000 address but they cannot access the system;"

On page 9 of the same submission, further information is given explaining the requirement of a licensed amateur call sign (verified against government licence databases) in order to access Winlink by radio.

It is highly improbable that anyone who is not a licensed amateur would succeed in bypassing these access restrictions, or at the very least would go undetected for any significant period. Furthermore, it is difficult to imagine what incentive there might be for anyone to attempt to do so. By no stretch of the imagination could such interlopers generate "significant additional traffic".

Draft Report 3): "*Second, a Winlink system may be ..... required..... to pay carrier licence fees ($10,000 a year)....*"

Comment:
If the Commission believes that Winlink may be subject to substantial fees, then it follows that other Australian services using identical technology and similar service models would also be subject to these same fees.

This argument presumably extends to other Australian voluntary services which do good works and employ radiocommunications in the process.Subjecting voluntary organisations to high fees would be a new, highly undesirable practice and may well lead to financial difficulty and the closing down of some very worthwhile services. The Commission is urged, in the national interest, to recommend against such fee impositions in its final report.

Draft Report 4): "*Third, transfer of third party traffic ..... must be authorised by international treaties ..... Australia currently has treaties with..... the United States, Canada, ...(ACA 2001b*)"

Comment:
This issue, raised by ACA, goes to the heart of the problem.

Unnecessary over-regulation of amateur operators by ACA (or it's predecessors) and the long-standing, overly-conservative and overly-restrictive interpretation of Australia's obligations under international treaties (particularly ITU) stifles progress and interest in amateur radio in Australia. It is undoubtedly a contributor to the significant decline in amateur numbers.

Contrast this with the situation in many other countries (notably in North America) where amateur radio operators and the skills and facilities they provide are regarded as national assets, strongly supported by the various arms of government (such as the Military Affiliate Radio System and the Canadian Emergency Management Agency). They are encouraged by the granting of long-term, free-of-charge licences and a far less restrictive environment. Amateur numbers are increasing in the United States. The American Radio Relay League (ARRL) attributes much of this to the employment of Winlink 2000.

Canada, Cayman, Croatia, France, Germany, New Zealand, South Africa, Sweden, Thailand, Trinidad & Tobago and the United States have all interpreted their international communications treaty obligations differently from Australia. They not only permit Winlink operation, but have PMBOs set up and operating in their territory. Many other countries also permit Winlink operation.

Why does Australia interpret its international obligations in such a way as to require regulations preventing Winlink operation, when so many other significant and respected countries do not?

Perhaps this is an opportune time for ACA to exit this field and pass it to a more open minded, sympathetic organisation. This would free up some of ACA's resources to concentrate on other important matters such as spectrum management in which it has acknowledged expertise and an enviable international reputation.

Draft Report 5.1): "*Fourth .... Winlink is not a safety-of-life service .... store and forward .... is a poor substitute for instantaneous communications*"

Comment:
On the contrary, there is *plenty* of evidence to show that Winlink *is* a "safety-of-life" service.

Winlink is mainly used to implement the *best* safety strategies - avoidance and prevention.

Both the US and Canadian Governments use it for this purpose and it has *proved* its usefulness. The Commission has hundreds of submissions confirming this.

Winlink's facility for reliably communicating weather data, hazard warnings, etc is extremely valuable to mariners and outback travellers, allowing them to avoid risks or to at least minimise their exposure. Similarly, availability of expert advice via Winlink on medical, technical, mechanical, navigational, etc matters, allows them to solve many problems and avoid situations developing to the stage where MAYDAY calls, activation of EPIRBs and rescue efforts are needed.

The argument that Winlink's store-and-forward mode of operation makes it a poor safety-of-life service is also invalid.

Firstly, in an emergency, *any* means of communication is valuable.
Secondly, Winlink's superior technology enables error-free reliable communications in circumstances where voice (or even morse code) communication is *impossible*.
Thirdly, in a full emergency situation (where outside help or rescue is needed) sending a rescue authority an e-mail via Winlink, can give them, in a single error-free message:-

a) confirmation that the alarm is real and not a false alarm
b) position information with typically 100m precision
c) a description of the problem, nominating the form of aid required
d) identification of the vessel in distress and the number of persons involved
e) a description of weather conditions at the scene and other relevant information
f) a file copy which can be easily and quickly copied to others without transcription errors
g) an accurate permanent record which can be re-examined in detail at leisure.

This is *far more valuable* to them than merely receiving a report of an EPIRB operating somewhere, and waiting hours to get an imprecise position fix, or receiving an unclear transcription of a weak voice message received in the presence of noise and interference. To gather necessary rescue information they would need to launch a search mission and await it's report. These delays are many times greater than Winlink's transmission delay of a few minutes.

Draft Report 5.2: *"In most instances, vessels in distress rely on voice transmissions via radio*"

Comment:
An historically correct statement. However,

a) the number of manned stations maintaining 24 hour emergency voice watch is dramatically declining. By the end of 2002 there will be very few such stations in and around Australia.

b) Winlink (a far more robust and reliable communication mode than voice) is too recent to have shown up in historical records (and is in any case not permitted in Australia). It does not rely on manned receiving stations.

Stating historical practice is not a valid argument against permitting superior technology in the future.

Draft Report 5.3): "*it is recommended that all vessels carry emergency-position-indicating beacons.(ACA 2001k)*"

Comment:
Most sea going recreational vessels and many inland travellers carry low-cost versions of these EPIRBs to transmit the equivalent of a MAYDAY call in life-threatening emergencies. They are of no help in avoiding emergencies.

Their weaknesses are that many EPIRB alarms are unintentional false alarms (not easily or quickly eliminated), the position information they provide is imprecise and they carry no other immediately useful information to responsible search and rescue authorities.

More sophisticated, more expensive, later model EPIRBs are available, but few recreational vessels carry them. They too are of no help in avoiding emergencies.

It is certainly prudent to carry an EPIRB as a means-of-last-resort to call for help. However, carrying an EPIRB is not a valid argument against also having the reliable two-way communication which Winlink provides.

Draft Report 6): "*Fifth, Winlink is only available to yachts with a registered amateur on board. Other commercial e-mail services are available to all yacht owners with a legitimate vessel call sign*"

Comment:
This statement is absolutely correct.

However, citing it as a reason for not supporting Winlink use implies that the Commission is either:-

a) opposed to communications systems which may compete with incumbent commercial interests. or
b) opposed to communications systems with limited (ie not universal) access, irrespective of their merits.

Conclusion:

I have great difficulty in understanding how the Commission views it's treatment of this topic (as reflected in it's Draft Report) as complying with these clauses in the Scope of Inquiry

3. The Commission is to report on appropriate arrangements for spectrum management taking into account the following:

a. legislation/regulation which restricts competition should be retained only if the benefits to the community as a whole outweigh the costs; and if the objectives of the legislation/regulation can be achieved only by restricting competition. Alternative approaches which may not restrict competition include quasi-regulation and self-regulation;

d. there should be explicit assessment of the suitability and impact of any standards made under the legislation and any standards referenced in the legislation, and justification of their retention if they are to remain;

I am led to conclude that (being a relatively minor matter in the extensive range of issues it was called upon to consider) the Commission may have disposed of the matter somewhat too readily, in dismissing without comment, most of the evidence presented to it in support of Winlink and simply adopting ACA's position as its own.

Hopefully, the Commission will review the merits of the Winlink case more thoroughly, recognise the many benefits it offers Australia, follow the lead set by more enlightened nations and recommend changes in amateur radio licence conditions to allow its use.