

From: Ross Herbert
Sent: Tuesday, 18 March 2008 3:37 PM
To: National Broadband Network Taskforce
Subject: Submission supporting FTTN

Dear Panel,

There are several important points which should be considered as paramount in determining the format of any national broadband network.

1. Don't fall into the trap of providing greater bandwidth to any user unless there are extremely good reasons for doing so.
2. Don't opt for any system which relies upon a domestic user having to provide a reliable power supply for continued operation of the broadband link to the premises.

The first point relates to the undeniable fact that for other than commercial and business organisations there is absolutely no good reason why domestic broadband users require, either now or in the future, the ultimate capabilities offered by providing fibre to the premises. This is simply not necessary and brings with it other problems.

Reasons:

Since the majority of Australian cities is devoted solely to a domestic urban environment comprising single households, there is no good reason why a passive connection eg, copper pair or coaxial cable cannot provide sufficient bandwidth for a high speed broadband network. For this reason alone there is no good reason why it will ever be necessary to provide fibre to the premises - the domestic user unlikely to ever utilise the bandwidth capability of fibre.

This leads into the second point;

A fibre to the node network operates in the same fashion as is currently the case for the existing PSTN network. The service provider is responsible for construction and maintenance of the copper network and exercises control and ownership of the copper pair right up to the premises boundary point. The bandwidth capability of a copper pair not more than 1km in length is entirely adequate to meet the needs of all domestic premises broadband requirements, and if it ultimately becomes necessary to increase the bandwidth requirements, all that is necessary is replacement of the copper pair with coaxial cable. We only have to consider that the existing Foxtel cable network is quite capable of providing all the bandwidth necessary for both broadband internet and digital television at the same time in order to see that fibre to the premises is not necessary.

The beauty of copper cables is that the domestic customer does not have the responsibility of providing and maintaining a powered node at every premises. Were a fibre to the premises system be implemented, the domestic customer would be responsible for the provision and ongoing maintenance of a node which interfaces the internal cabling to the incoming fibre. Whereas copper based links do not require any power at the premises in order to reliably operate 24 hrs, 7 days a week (power is provided and maintained at the node by

the network service provider), fibre based networks do require this provision.

A fibre to the premises network, in order to operate reliably, must have the premises node supplied by an un-interruptible power supply (UPS) powered from the domestic ac mains supply. The individual cost of this equipment to the customer is initially high and the ongoing cost of power provision is also borne by the customer (who is also responsible for its maintenance). If we then consider the cost to the environment due to the increased loading on power utilities from millions of homes having to provide power just to keep their broadband network operating, it is just too horrendous to think about. For 80% of the time the power consumed by the node would be doing absolutely nothing other than charging the UPS battery (ugh! another high maintenance item). All in all, a FTTP solution will add unjustifiable and ongoing costs to both the customer and the environment.

I urge the panel to not be swayed by proponents who are urging the ultimate technological solution of installing fibre to the premises in residential environments. This solution is only ever likely to be required by commercial business organisations where the bandwidth may be justified. A fibre to the node solution is environmentally sustainable, cheaper for the customer and provides all the bandwidth which is ever likely to be necessary in that environment.

I speak from my experience as an ex PMG/Telecom Australia/Telstra Technical Officer. I have a history in network construction and electronics design with 37 years experience in these organisations. I currently maintain a keen interest in new technology whilst in retirement.

Yours Sincerely,

Ross Herbert