



Australia's Academic and Research Network

10 February 2009

Department of Broadband, Communications and the Digital Economy
<DEFutureDirections@dbcde.gov.au>

Dear Sir/Madam

Response to the Digital Economy Future Directions Consultation Paper

It is with pleasure that AARNET responds to the Digital Economy Future Directions Consultation Paper which we consider to be a very important part of the strategic initiative of the development of the Digital Economy for the future prosperity of the Nation.

In summary, we support the findings and issues raised in the Paper as being both necessary and comprehensive. We applaud this initiative and believe AARNET's contribution is integral to the ongoing development of the Digital Economy in this country. In response, we highlight some specific points as follows:

1. We note that the Paper appears to convey a relatively static view of the Internet, whereas it is rapidly developing in a variety of ways (e.g. IPv6 versus IPv4, likely huge increases in speed, vast improvements in identity management systems). These and many other developments will have a profound impact on the way the Internet is used in the near and long-term future. This requires constant vigilance in reassessing the current status of the Internet and the issues that emerge or recede. It is not sufficient to have a one-time response to the future directions of the Digital Economy – I am sure you will agree that this must be an ongoing process.
2. AARNET wishes to draw attention to the fact that the Education and Research sector has always pioneered networks that are orders of magnitude faster than used by governments, industry and the public. We believe that the types of uses, applications and impact of Internet use within this sector will and does provide a useful indicator of future use within the broader community. For instance, this sector pioneered use of the Internet as a first for Australia 20 years ago this year and subsequently pioneered broadband Internet access. Currently, this sector is employing Internet access speeds that are up to 1000 times the orders of magnitude greater than currently available through ADSL2+ (with most universities and research establishments connected at speeds of between 1 and 10Gbps). When one considers the impact that broadband has had compared to dial-up internet, there is likely to be a similar step-function increase in capability, activity, innovation, etc. when the speeds that this sector currently enjoys become more widely available. We are now planning to implement in the coming years a national backbone that will have the capability of between 40 and 100 gigabits per second. In the light of these developments we recommend that the government keeps a watching brief and works with AARNET to initiate a formal study of the sorts of impacts and applications being experienced now in this sector.
3. Equally, the current plans for identity management in this sector are likely to constitute a pilot for wider deployment of such identity federation technologies and systems in other sectors

and should be monitored and copied to ensure Australia can stay at or near world's best practice in this area of network development.

4. Finally, it should be noted that AARNet, in common with National Research and Education Networks (NRENs) worldwide, has relentlessly pursued a strategy of owning fibre for its network services wherever possible. This has been absolutely vital to meet the rapidly expanding needs of the sector, as compared to acquiring services from the conventional network providers which typically have not been able to provide services at the speeds required. There are two implications of this for this current Consultation process:
 - a. We believe that Fibre to the Premises/Home or at least Fibre to the Node is essential for the future of the Internet in Australia. Furthermore, we strongly commend the view of some industry observers that Customer Owned Fibre Local Loops is an appropriate way to develop improved Internet access for Australian businesses and homes (see <http://free-fiber-to-the-home.blogspot.com/2008/11/home-with-tails-what-if-you-could-own.html>). A great example of the way that fibre-to-the-home can open new possibilities is given by Swisscom's and others' plans for multiple fibres to the home (see http://lw.pennnet.com/display_article/343957/13/ARCHI/none/XMARK/1/FTTH-to-undercut-ADSL2+-services-in-Europe/ – registration required).
 - b. We very strongly recommend the practice of deploying fibre in every form of infrastructure build (roads, bridges, rail, power, etc.) making it "smart infrastructure", and enabling both the ability to implement remote monitoring of that infrastructure, and the capability of utilising that fibre for other applications.

Again, congratulations on your initiative to ensure that the Digital Economy is an integral part of all future Government Policy and AARNet stands ready as this Nation's Research and Education Network to work closely to support the development of the internet to enable us to compete on all levels of the Global stage

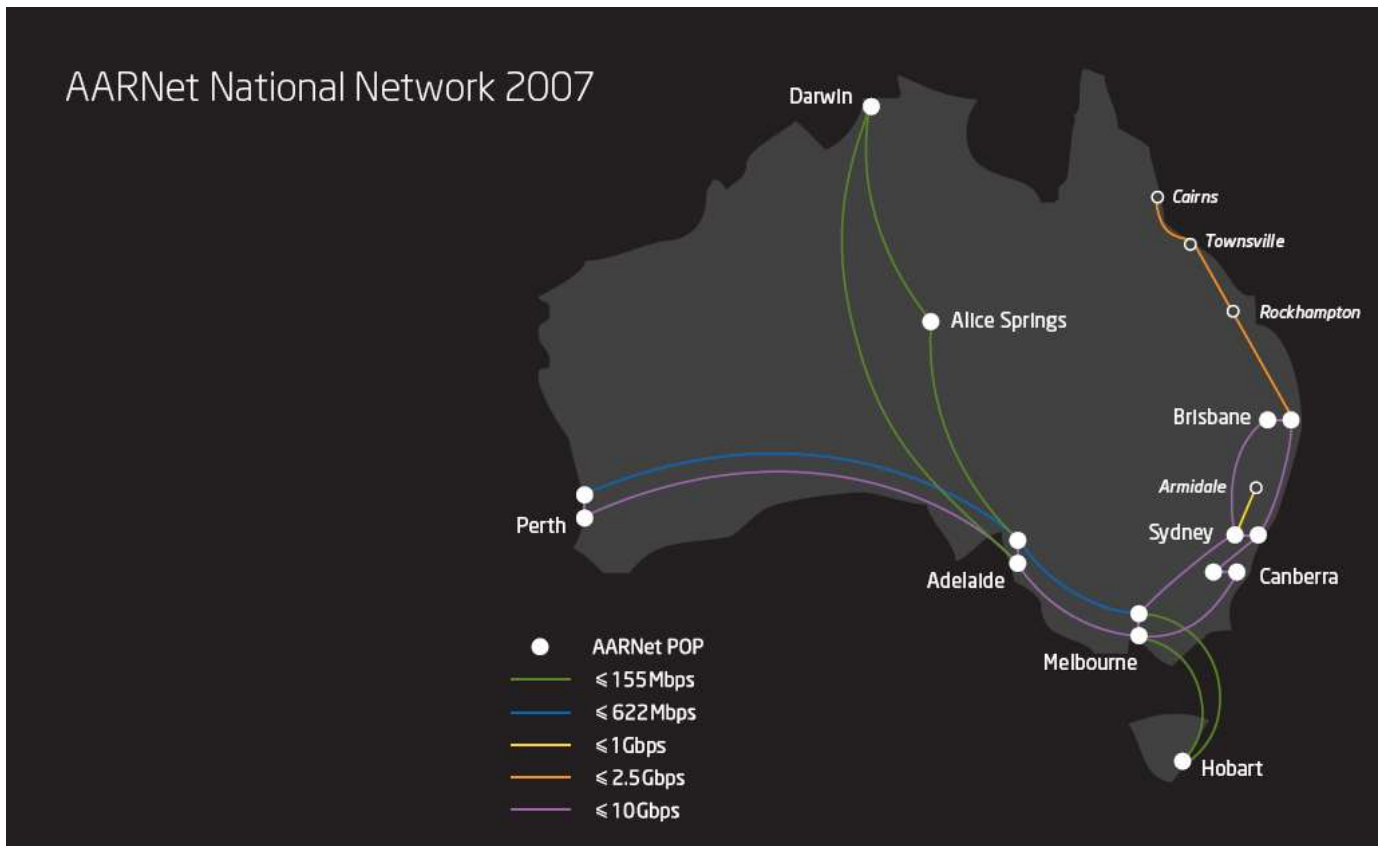
Yours faithfully



Chris Hancock
Chief Executive Officer

About AARNet

AARNet Pty Ltd (APL) is the company that operates Australia's Academic and Research Network (AARNet). It is a not-for-profit company limited by shares. The shareholders are 37 Australian universities and the CSIRO. AARNet provides high-capacity leading edge Internet services for the tertiary education and research sector communities and their research partners. AARNet serves more than one million end users who access the network through local area networks at member institutions. For further information, please visit: www.aarnet.edu.au



One of AARNet's Points of Presence (PoP) is located in the Parkville precinct, in a University of Melbourne data centre.

