



TELSTRA CORPORATION LIMITED

Digital Economy Future Directions

**Submission to the Department of Broadband Communications
and the Digital Economy**

PUBLIC

20 February 2009

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Introduction

Telstra welcomes the opportunity to make a submission to the Australian Government in response to its Digital Economy Future Directions Paper.

As Australia's largest media-comms company and provider of broadband and online services, Telstra shares the Government's commitment "to increase the effective use of networked information communication technologies (ICTs), especially the internet, by consumers and businesses to drive higher productivity growth and community participation in the digital economy". This commitment is reflected by Telstra's significant investment in:

- Next generation infrastructure — including its Next GTM mobile network and its Next IPTM network.
- Online and mobile content and applications — in our transition to a media-comms company Telstra has not only invested in a range of compelling content and applications, but has also identified ways to package and deliver this content on a range of devices that meets the needs of our customers.

Since the earliest days of telecommunications in Australia, Telstra's nationwide copper, fibre and wireless networks have served as major arteries in support of business and social activities. In more recent years, Telstra's substantial investments in content and applications have given all Australians the opportunity to do more in more places¹. Additionally, Telstra is a significant employer of highly skilled ICT and engineering professionals. In short, Telstra has been central to Australia's communications past and will continue to play a significant role in Australia's digital future.

Telstra also plays an important role in the wider community, backing social innovation, raising awareness of the benefits of ICTs and building the capacity of community organisations. Through its philanthropic arm, the Telstra Foundation, Telstra has financially supported over 4,400 community projects to the value of \$25.6 million since 2002².

This submission responds to a number of important issues raised in the Department's Consultation Paper. Key messages include:

- The role of Government should be to facilitate the evolution of a long term sustainable digital economy which will drive economic growth and productivity gains. Given the dynamic nature of both technological change and consumer preferences caution should be exercised when considering regulatory interventions.
- While there is merit in monitoring and reporting the progress of Australia's transition to a digital economy it is incumbent on Government to use this

¹ Perhaps the best example of this is; thanks to BigPond Sport and Telstra's Next GTM Network, football fans are no longer confined to their living rooms on Saturday afternoon. Instead they can choose to watch the game via their laptop or mobile handset wherever they may be.

² Telstra Corporation 2008, *Corporate Responsibility Report 2008*, Australia, P.30

information to underpin informed policy action and regulatory reform including, where appropriate, the roll back of regulation.

- Government has a key leadership role in addressing issues of e-security and cyber-safety. It is uniquely placed to work with industry, law enforcement agencies (both in Australia and overseas) and the wider community to effectively address and mitigate e-security and cyber-safety risks.
- Both Government and Industry are well placed to improve digital literacy and increase user awareness of the many benefits associated with ICT use. Accordingly, Government should explore ways it can work most effectively with industry to achieve this objective.
- Maximising the benefits of the digital economy requires a regulatory framework which facilitates pro-competitive investment by removing barriers to entry and allowing investors to earn a rate of return commensurate with the risks they face. In addition, regulation and government intervention must be competitively neutral.
- There is merit in widening the existing copyright safe harbour scheme to include websites, such as social networking sites and user generated content sites.
- Telstra shares the concerns of other industry participants regarding the current campaign by rights holders to alter section 39B and 112E of the Copyright Act in a manner which will compel ISPs to police the activities of their end users and also to accept liability for the actions of their end users.
- Action is required in order to liberate much needed radio-communications spectrum that is essential to the long-term development of wireless broadband. Failure to act in this regard will mean that Australia will forgo the significant economic benefits associated with Long Term Evolution (LTE) wireless broadband.
- Significant opportunities exist for Australian consumers and businesses to utilise networked ICTs to reduce or avoid the release of carbon emissions into the atmosphere. Government has a central role to play in ensuring that these opportunities are taken-up.

A Success and measuring progress

Section B of the consultation paper discusses ways to measure the extent to which Australians use networked ICTs and participate in the digital economy. It also poses the question of “how will we know when we have maximised the potential of Australia’s participation in the digital economy?” That is, how do we define success? Both of these are important issues for policy makers and the wider policy debate.

While it is laudable that Government seeks to measure Australia’s transition to a digital economy, caution should be exercised in “defining success”. History has taught us that innovation and ongoing economic and social change means that what might be the right policy prescription for today is unlikely to be right for tomorrow. For example, Government policies to facilitate further expansion of the railways in the United States in the early 20th century, helped drive economic and social development. Just a few decades later, however, such policies would have had very different impacts given that rail was quickly surpassed by alternative forms of transport that were preferred by many businesses and consumers.

Policy makers should aim to facilitate the evolution of a long term sustainable digital economy by:

- Promoting competition via a pro-investment policy agenda and eliminating barriers to competition in network services and broadband infrastructure.
- Supporting entrepreneurship by removing regulatory barriers and other impediments to investment and risk taking. Perhaps more than anything else entrepreneurship is the critical factor in achieving a creative and innovative digital economy. The antithesis to this is regulators and bureaucrats attempting to engineer a prescribed market structure or outcome. The market must be permitted to reward those whose innovation is most highly valued by consumers.
- Taking measures to support cultural diversity.
- Facilitating content creation capabilities through ongoing skills development and maximising digital literacy.
- Fostering of an appropriate ‘pro-digital content’ business environment by addressing market failures that hamper Research and Development (R&D), innovation and education and skills development.

Telstra believes there is merit in monitoring and reporting the progress of Australia’s transition to a digital economy. Regular benchmarking of Australia’s progress has the potential to inform decision making not only by policy makers but by all market participants. It is important to note however, that monitoring and reporting in the absence of policy action and regulatory change amounts to little more than red tape which is both inefficient and costly. It is incumbent on Government to use the data it collects from industry, to benchmark Australia’s participation in the digital economy, to inform policy and regulatory decision making including, where appropriate, the roll back of regulation.

Telstra believes that the following indicators would be relevant and useful to policy makers and industry participants:

- the contribution of ICT to GDP and productivity growth;
- ICT use by business and consumers (such measures should highlight the use of ICTs by small and medium sized enterprises (SMEs));
- the value and volume of online commerce both business-to-business (B2B) and business-to-consumer (B2C);
- the value of ICT related imports and exports;
- levels of ICT related investment by industry type;
- investment in ICT related infrastructure (including telecommunications networks);
- measures of ICT related expenditure by household;
- changes in broadband penetration, speeds and geographic coverage;
- the number of ICT graduates and the quality of Australia's ICT training courses relative to international benchmarks;
- the number of people employed in the ICT industry and in ICT related roles throughout the economy; and
- a measure of ICT literacy (national, state and local government areas).

B Digital confidence

Building digital confidence among consumers and business comprises two related, but separate policy areas: e-security and cyber-safety. E-security refers to the process of ensuring the confidentiality, integrity, and availability of electronic information and protecting it against malicious attackers who could use or alter the information to disrupt critical national infrastructure and industry. E-security also encompasses protection of physical networks and information systems. Cyber-safety refers to protecting users of communication systems and protecting them from such things as online fraud, exposure to inappropriate content, cyber-bullying, online stalking and phishing.

Government has a key leadership role in addressing issues of e-security and cyber-safety. It is uniquely placed to work with industry, law enforcement agencies (both in Australia and overseas), and the wider community to mitigate e-security and cyber-safety risks, raise community awareness of the relevant issues and, where applicable, empower users to minimise these risks

E-security

In August 2008 Telstra provided a comprehensive submission in response to the Government's whole-of-Government review of e-security. This submission made several recommendations which Telstra believes will strengthen Australia's national e-security framework.

Cyber-Safety

Effectively addressing the issues of Cyber-safety requires a holistic approach whereby all participants in the digital world, regardless of age or demographic, are not only made aware of the risks they face, but importantly that they are also provided with the necessary tools to mitigate and minimise these risks. There is also a need for increased law enforcement measures as well as ongoing international co-operation on cyber-safety issues.

As Australia's largest broadband provider and ISP Telstra places a high priority on issues of cyber-safety. Ongoing initiatives designed to protect our three million plus internet customers and broader members from the many risks they face in the online environment include:

- **Spotlight on cyber-safety program**³ — This Telstra Foundation program focuses on building the protective factors for children and young people so they can develop their skills and enjoy the use of modern communications technology in safe, supported environments. For Telstra this program represents a three million dollar commitment over three years and includes the following initiatives:
 - **SuperClubsPLUS Australia** is the only Australian, age-verified and actively protected Social Learning Network where young children can meet friends, make new ones, have fun and learn at the same time. This is a joint initiative of the Telstra Foundation La Trobe University and Intuitive Media.
 - **Telstra Foundation's cyber safety grants.** The Telstra Foundation has allocated \$1.5million to support numerous programs and research initiatives aimed at helping kids to be safe when online and using mobile phones while making the most of what technology has to offer.
- **Restricting access to adult content by minors** — As required by law, Telstra restricts access to stored content classified MA15+ or R18+, which it makes available to customers on its websites or mobile platform. Content classified MA15+ is legally restricted to people aged 15 years and over and content classified R18+ is legally restricted to people aged at least 18 years. Telstra has also implemented processes and protections to ensure that people under 18 cannot access telephone sex services.
- **Rating of adult content sites** — Pursuant to Schedule 7 of the Broadcasting Services Act 1992, Telstra's trained content assessors are authorised to classify

³ See www.telstrafoundation.com/dir148/tfweb.nsf/communitydevelopmentfund/spotlightoncybersafety

stored content in accordance with the OFLC Guidelines before it is made available to the public.

- **Monitoring of chat rooms** — Telstra has well established processes in place to monitor complaints received from users of Telstra hosted chat rooms.
- **Enabling devices for parental control** — BigPond provides a number of security products to help protect its customers from receiving inappropriate content, spam, viruses, and phishing attacks.
- **Participation in the Virtual Global Taskforce (VGT)** — BigPond is an original partner of the VGT, an international alliance of law enforcement agencies working together to prevent and deter online child abuse. In joining the VGT as an industry partner, Telstra demonstrated how it is working with law enforcement agencies to help reduce the threat to children on-line and our commitment to community safety and crime reduction. BigPond is the only ISP accredited as an industry partner in Australia.

C ICT knowledge and skills

The realisation of economic and social benefits from the use of networked ICTs requires end users to understand:

- **How to use and operate ICTs** — such as how to use and access the Internet.
- **The value of ICT use** — for example online banking means less travel time and travel related expenditure.

Accordingly, there is strong merit in developing programs to drive widespread digital literacy through ongoing skills development.

While the Government has a central role to play in ensuring that Australians are digitally literate, several industry stakeholders (such as ISPs, software vendors, universities and TAFEs) are also well placed to help achieve this objective. For example, the Telstra Learning Academy was recently named a winner of the prestigious *Bersin & Associates Learning Leaders Award* in recognition of it being a global leader in the learning and development of engineering, technical and operational employees⁴.

The Government should explore ways in which it can work most effectively with industry to improve digital literacy and increase user awareness of the many benefits associated with the use of networked ICTs.

⁴ Bersin & Associates 2009, *Bersin & Associates Announces the 2008 Learning Leaders Winners*: Press Release, 29 January 2009. www.bersin.com/News/Content.aspx?id=8482

D An optimal regulatory framework

Maximising the benefits of Australia's participation in the digital economy necessitates ongoing investment in ICT related infrastructure, R&D and the production and distribution of digital content and applications. It is, therefore, crucial that regulation and government policy facilitates pro-competitive investment by removing barriers to entry and allowing investors to earn a rate of return commensurate with the risks they face.

Regulation should also be competitively neutral. That is, regulation should not favour a particular technology, market participant, type of content or business model over another.

Significant costs arise when incorrect regulatory settings are put in place. In particular, regulation and/or policy intervention often has unintended consequences which may directly or indirectly stifle innovation and/or chill investment. Consequently, regulation should be the option of last resort to rectify durable market failure. Importantly, in network industries, such as telecommunications and broadband, this includes ensuring access to bottleneck facilities on reasonable terms and conditions.

The OECD *Seoul Declaration for the Future of the Internet Economy* provides some important guidance on the most appropriate approach to regulating the digital economy⁵. Specifically it declares that OECD member nations will:

- Establish a regulatory environment that assures a level playing field for competition.
- Stimulate investment and competition in the development of high capacity information and communication infrastructures and the delivery of Internet-enabled services.
- Ensure that broadband networks and services are developed to attain the greatest practical national coverage and use.
- Encourage a more efficient use of the radio frequency spectrum to facilitate access to the Internet and the introduction of new and innovative services, while taking into account public interest objectives.
- Strengthen confidence and security, through policies that:
 - Ensures the protection of digital identities and personal data as well as the privacy of individuals online.
 - Reduces malicious activity online through reinforced national and international co-operation among all stakeholder communities.

As reflected in OECD's Declaration, the role of Government is one of enabling and facilitation. The goal of government should be to support the development of a

⁵ OECD 2008, *Seoul Declaration for the Future of the Internet Economy*, Seoul. www.oecd.org/dataoecd/49/28/40839436.pdf

vibrant, innovative, entrepreneurial and competitive industry that is both long term sustainable and globally competitive. This will not be achieved by excessive regulation or by regulation which is not competitively neutral.

Copyright

Telstra supports the proposal to widen the existing copyright safe harbour scheme to include websites, such as social networking sites and user generated content sites.

Currently, the safe harbour protections only apply to 'Carriage Service Providers' as defined in section 87 of the Telecommunications Act 1997 (namely, persons supplying a listed carriage service to the public (such as Internet Service Providers, 'ISPs'). However many online service providers, such as universities and online content platforms, currently provide transmission, hosting and caching services similar to ISPs.

Extending the existing safe harbour scheme to all providers of online services would:

- Benefit both copyright owners and online service providers.
- Harmonise the Australian safe harbour scheme with the US scheme.
- Provide greater protection to consumers of online content.

As discussed in a separate industry submission, Telstra shares the concerns of Service providers regarding the current campaign by rights holders to alter section 39B and 112E of the Copyright Act. The proposed changes would compel ISPs to:

- monitor or police the activities of their end users; and
- accept liability for the actions of end users even where the ISP was acting as a mere conduit.

Telstra submits that service providers would benefit from the Government's confirmation that they are not the internet police and are not required to monitor their customers' use of the internet. This is not the role of commercial organisations but of the Government or its legislative bodies.

Other regulatory barriers

Increasingly, people want information and services at their fingertips whenever and wherever they are. This is being made possible by rapid advances in wireless technologies. Accordingly, there is little doubt that wireless broadband will play an important role in the development of Australia's digital economy

Despite being a world leader in wireless broadband, fourth generation wireless broadband or Long Term Evolution (LTE) is already at our doorstep. LTE can deliver peak downlink speeds of 100-150Mbps enabling the delivery of real-time, high-resolution multimedia services via wireless networks.

More importantly, the deployment and use of LTE wireless broadband will deliver significant economic benefits. A study by Ovum estimated that, in the US, wireless

broadband will drive productivity improvements of over \$27 billion by 2016 in the health sector alone.

If Australia is to capture the significant economic benefits that will flow from investment in LTE wireless broadband the required spectrum needs to be brought on to the market in an orderly and timely fashion. This will not be without its challenges as much of the needed spectrum is currently in the hands of the broadcasters pending the switch-off of analogue television over the next five years. In addition, it is crucial that this spectrum is priced sensibly. While entitled to a fair return on this spectrum, Governments must resist the temptation to artificially limit the supply of the spectrum in the hope of greater revenue.

Telstra therefore submits that action is required on two fronts. First, a review of the policy and process around the allocation of spectrum is needed to ensure the timely and efficient allocation of spectrum to its highest value use. Second, specific effort should be directed at providing certainty as to the availability of spectrum for wireless broadband.

E Digital economy and the environment

A recent study, commissioned by Telstra found that telecommunications networks provide Australian businesses and households with a unique opportunity to reduce their collective greenhouse gas emissions by almost five per cent by 2015 and deliver energy and travel cost savings of up to \$6.6 billion a year⁶.

The study authored by Climate Risk identifies seven major opportunities for Australian consumers and businesses to utilise networked ICTs to reduce or avoid the release of carbon emissions into the atmosphere. If implemented by 2015, these opportunities could assist reduce Australia's greenhouse gas emissions by around 27 million carbon tonnes per year. Individually, each opportunity could deliver per annum carbon emission savings of:

- 1.8 million tonnes (Mt) by using broadband to remotely manage power for appliances not in use or on "stand-by";
- 2.4Mt by improving business productivity with "in-person" high-definition videoconferencing;
- 2.9Mt with broadband based, real-time freight allocation systems to fill empty freight vehicles;
- 3.0Mt with presence-detecting services that turn off devices that are "on" but not being used;
- 3.1Mt with tele-working and working in regional centres by reducing commuter car traffic;

⁶ Climate Risk 2008, *Towards a High Bandwidth, Low Carbon Future: Telecommunications-based Opportunities to Reduce Greenhouse Gas Emissions*, Australia.

- 3.9Mt by bringing integrated personalised public transport to your door with a phone call; and
- 10.1Mt by increasing renewable energy use with networked demand side management.

This report is but one which highlights how the ICT industry can help Government achieve its climate change policy objectives. It also highlights the importance of ongoing investment in next generation broadband infrastructure in order to facilitate the greater adoption of tele-working and video-conferencing.

As noted in the Department's consultation paper, Government has an important leadership role to play in encouraging greater use of ICTs to mitigate climate change and promote sustainable environmental practices. Telstra submits that the seven opportunities highlighted in its *Towards a High Bandwidth, Low-Carbon Future* report are worthy of further consideration by Government, industry and households.