Virtual Local® Group

Submission

Inquiry into the Performance of the Australian Telecommunications Regulatory Regime

Directed to Committee Secretary Senate Environment, Communications, Information Technology and the Arts References Committee

Department of the Senate Parliament House
Canberra ACT 2600
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Dear Committee

Thank you for the opportunity to make a submission to this inquiry.

Recently confidential presentations to sections of both State and Federal Governments outlining the conceptual framework promoting the "Virtualization " of suburban and regional areas within Australia, using emerging Information and Communications Technologies has occurred.
Also the Group has engaged with world class technologists and researchers within Australia, who have provided advice, expertise and guidance to achieve this outcome.
The reasons for seeking counsel from Governments regarding this approach to networking in the Australian context are;

A. The rapid shift to communication using Internet Protocols within Australian jurisdictions between citizens , business and Governments. This requires policies recommending minimum standards of security, authentication and rights to information particularly in the Government domain.
B. Localization of ICT infrastructure has technical, business and cultural benefits. Governments have powers to create incentives to invest in in " Virtual " regional jurisdictions.
C. Businesses planning in ICT, if engaging with Governments need to know what standards they are to work with, particularly in database management and the higher level emerging XML computer languages.
D. New forms of powerful distributive computing methods including parallel and grid computing, is enabling remarkable abilities to process complex technical information for both positive and potentially negative reasons. Governments have the power to determine access and potential trade of these resources within and outside the Australian domain. Governments have the power to determine that the ICT infrastructure including networks are a National Strategic Resource. In the Virtual Local® model, localization has technical and security advantages to effectively utilize these resources.
E. High speed broadband access is required to utilize these resources maximally. New business, community and cultural progression and innovation will also be served utilizing quality broadband connectivity.

An ICT regulatory regime is a difficult equation in a technologically advanced society that Australia is. Due to the rapidity of technological advancement, Governments are seeing the need to change the way they manage communication with their constituents.
Therefore an ICT regulatory regime is required to manage and understand this rate of technological change for the benefit of all sections of our society.

There are complex considerations of privacy, security and the rights of access to consumers and citizens to information managed by Governments and organizations generally.
The integration of communication and data processing and its storage is so intimately entwined to our living environment, that it would be impossible to function in a modern society without this infrastructure and the benefits it provides.
As ICT and Australias networks are intimately interlinked, to so many aspects of our lives, should the regulatory regime, widen its focus to recognize this fact?

The rate of technological change and progression in communications methodologies is remarkable. A few short years ago the plain old telephone system - POTS – was the main form of

immediate communication over vast geographical distance.
This rate of change and technological development has enabled, through digital means, a variety of communication methods.
A signification of the rate of change is the recent announcement that British Telecom, one of the world's largest telcos, is to migrate its telephony to Voice over IP – internet protocol.
This organization is accepting, that the future is in internet communication.

Experts agree that the original internet was not built with security in mind.

In the POTS (particularly analog) days, information storage was achieved by either memorizing the conversation, writing it down, or storing on non networked tape recorders legally or illegally.
In the internet age, information storage is, often networked, and entails massive database storage of multiple data repositories. These data repositories include information pertaining to business, organizations and citizens, including links to Government services.
That is, it represents, virtually, the regions, States and Nations information pool.
The virtual representation of suburban and regional geographical jurisdictions, using leading edge ICT security will enable finer grained protection of utility infrastructure, as well as Government linked businesses , organizations and citizens data.
This approach will therefore, enable the same level of security used by large corporations whom utilize Virtual Private Networks -VPN's and high level security to protect their networked clients. The implementation of Virtual Local Private Networks nationally will, with Government leadership enable greater assurity of data transmission and protection.

With predictions of ever increasing vulnerabilities on the standard internet, including cyber terrorism, it makes sense to create a policy framework that puts security first and foremost. Thus maximizing protection of business, organizations, Governments and citizens communication and associated communicated data.
The strategic question of appropriate standards of secure communication with other jurisdictions- that is, States, regions and Countries should be in the realm of the Federal authorities.

In lieu of the above, might the ICT regulatory framework;-

Consider Australias ICT infrastructure as a “National Strategic Resource” to be utilized for the benefit of all Australians and therefore to use all reasonable approaches to protect this resource?
Oversee strict laws pertaining to privacy protection and minimum standards of security, particularly within those networks that are foreign owned and providing services in the Australian domain?
Consider how security of communication with other jurisdictions - that is, regions, States and Countries be administered?
If so, should this be with trading partners and or jurisdictions that recognize a basic set of standards relating to intercommunication and exchange of digital processing and data?

Broadband Infrastructure.

The greatest impediment for innovation and provision of new and cutting edge technical / business processes and community services is the lack of genuine broadband cable infrastructure. The newer copper based technologies are heading towards a degree of

functionality. Cable though, will enable higher level services, including medical and industry based haptics - for example remote medical operations on line over Internet Protocol.

With the aging of the population, virtual communication using either voice and or vision over IP may ease the cost burden and inconvenience of traveling to appointments.
A medical consultation or the access to Government and or private services using this technology is an obvious example . Should this for instance be made a requirement of the USO - Universal Service Obligation. Should Digital Data Service Obligation (DDSO), that is minimum data delivery rates recognize this technical capability?
This technology is available now. The only technical impediment to include this a required service in the USO is lack of universal broadband access.

In meetings and correspondence with the Western Australian Government , particularly the WA Department of Industry and Resources, it is evident that the promotion and uptake of cable broadband in new developments is limited.
Essentially, in the Western Australian environment , new developments and the provision of communication infrastructure – particularly cable for broadband is most often the domain of the developers.
The developers are not prepared to bear the extra cost of providing cable services, as the consumer bears the end cost. The result is, most often, no cable broadband infrastructure, in new developments. Unsatisfactory for the developers and a missed opportunity for the local consumers.

According to WA DOIR there are some progressive Councils who see that broadband cable is crucial to their constituents and businesses and have promoted strategies for its roll out , including direct Council investment. This is a rarity, as communications and its infrastructure is most often regarded as a Federal responsibility.

To create the economic incentives for telecommunications companies who have the expertise to cover those areas of Australia who have no access to high bandwidth cable, innovative policies need to be implemented.

One approach is to consider virtual local private networks - the representations of geographical jurisdictions - that is suburbs, regions and States as economic zones.

With this recognition, promotion, uptake and placement of ICT infrastructure in these zones by Government incentives, either through the taxation system or by direct funding to organizations, business and Government entities would ensue.
These incentives would also target international investors. The promotion of Western Australia (and indeed Australia) as a politically and geographically stable environment with close proximity to South East Asian markets adds a further dimension.
The ICT infrastructure incentives would target, broadband cable and associated compute resources and people (jobs).

The consideration of high quality broadband infrastructure roll out as a basic national infrastructure requirement and necessity would assist in this strategy.

In this enabling environment, a State such as Western Australia, with its vast geography and disbursed population centers would have more than the 'suggestion” to developers at its disposal. That is, to include this ' future proof” strategic infrastructure -high quality cable broadband as an integral part of the local built environment.

This broadband roll out will enable new business, community and communication models, value adding to the Australian network. This will also encourage uptake of emerging ICT technologies particularly high throughput, grid and distributive wide area networking that requires high speed broadband for maximum benefit and utility.
In this environment, the regional areas would be able to be immersed in this network and in doing so potentially attract infrastructure and jobs. This immersion will also link the regions to new and emerging business processes, enabling fair access to compete.

In summary, should this regulatory body create the conditions for investment, innovation and promotion of the provision of world class leading edge ICT infrastructure in the Australian domain.
Consider the Virtual Local® construct of creating secure virtual private networks to virtualize suburban and regional geographical jurisdictions, particularly those networks interfacing with Government agencies.
Consider these virtual representations of geographical jurisdictions, that is suburbs, regions and States as economic zones.
Promote the uptake and placement of ICT infrastructure in these zones by Government incentives, either through the taxation system or by direct funding to organizations, business and Government entities.
Seriously consider high quality broadband infrastructure roll out as a basic national infrastructure requirement and necessity.

Therefore;

Is it appropriate that the ICT regulatory authority with regard to section ;-

(e) **whether regulators of the Australian telecommunications sector are currently provided with the powers and resources required in order to perform their role in the regulatory regime;**

1. Provide guidance and policies in respect to the minimum standards of security, authentication and access to citizens, businesses and organizations data, particularly relating to Government services within Australia.
2. Provide guidance and policies in respect to the standards that ensure long term readability of documents and files and their security - and that associated databases and database management systems that store these files are inter operable.
3. Ensure the Australian ICT infrastructure is considered a Strategic National Resource.
4. That, utilization of local ICT infrastructure including distributive compute processing and storage be regarded as a tradeable resource to international jurisdictions.
   That conditions be placed on the export and import of these resources.
5. That strict legal requirements be placed on foreign owners of networks and service providers in regard to privacy protection of Government, business and citizens data.
6. Regard high speed broadband delivery as national infrastructure.
7. That the regulatory body review the Universal Service Obligation and the Digital Data Service Obligation (DDSO) at intervals in line with technological advancements. The principle of universal access should be extended to all.

Therefore;

Is it appropriate that the ICT regulatory authority with regard to section ;-

The Performance of the Australian Telecommunications Regulatory Regime

(h) whether the current regulatory environment provides participants with adequate certainty to promote investment, most particularly in infrastructure such as optical fibre cable networks;

1. Consider virtual local suburban and regional areas as economic zones.
   Promote within these economic zones incentives to provide ICT infrastructure, including cable for broadband.
2. To promote international investment in virtual local economic zones.
   Within that investment regime promote the political and geographical stability, ICT expertise and proximity to South East Asian regional and economic zones.
3. To assist local telecommunication and ICT service providers whom have appropriate technical skills to invest in this ICT infrastructure – including quality broadband cable, in the first instance.

Thank you for your consideration.

Yours sincerely

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