

Ó *Paul Budde Communication Pty Ltd*

Australia - Digital Economy Industry Group

1. SYNOPSIS

In October 2007 BuddeComm organised an industry networking dinner, which was attended by the then Shadow Minister for Communications, Senator Stephen Conroy (now Minister for Broadband, Communications and the Digital Economy). The Minister accepted the industry's offer to assist him in the process of developing the National Broadband Network plan. Consequently the industry formed the FttH SIG, which has since been renamed into Digital Economy Industry Working Group. This group represents 200 people from 140 companies, 40 people actively participated in the project, 600 pages of submissions were provided. That report was presented to the Minister in March 2008. In the following months further recommendations and submissions were presented to the Government.

2. WORKING GROUPS

The current activities of the Industry Working Group concentrate on the following areas:

- **Greenfield Workgroup** – this is in the process of becoming more formal.
- **Smart Grid Australia** – is up and running, with close to 15 members – it is in the process of becoming a separate association.
- **CEO Forum** – high-level CEO involvement from 10 telecoms and media (services) companies.
- **Digital Economy Applications Workgroup**. A key objective here is to further engage the Federal Departments of Health and Education, State Governments and others in the development of the transformation process needed to maximise the social and economic benefits of the new broadband infrastructure.
- The **Brownfield Workgroup** – this is currently inactive but can be revived when needed.

3. GOVERNMENT'S NATIONAL BROADBAND PLAN (SEPARATE REPORT)

In early 2007 the Labor Party proposed its National Broadband Network (NBN). Under the proposal a rollout of a new Fibre-to-the-Node (FttN) network would deliver high-speed broadband at 40 times faster than current speeds to 98% of Australians. The remaining 2% of Australian's in regional and rural areas not covered by the FttN network would have improved broadband services through wireless and satellite. The key part of the proposal is to roll out a nationwide backbone network that would be able to services local access networks.

For more information on the National Broadband Network (NBN) plan, see separate report: [*Australia - Government's National Broadband Plan*](#).

4. DIGITAL ECONOMY CEO FORUM

In April 2008 the Digital Economy CEO Forum was established by a group of CEOs from the media and telco industries.

The aim of this Forum is to present its views and discuss with the government the longer-term vision of the broadband and digital economy industry, and establish the blueprint for such an environment.

They would like to hear from the Minister for Broadband as to how they can assist him in getting this vision across to others within the government, ministers, advisors and bureaucracies, as well as the broader community. As a high-level CEO Forum they envisage that they will be able to obtain access to the key decision-makers.

Without these national benefits being properly addressed, the future for competition looks dire and

significant political effort is necessary to save competition and avoid another ten years of ongoing regulatory and legal battles. This would damage, not only the telecoms industry, but the wider economy as well.

The CEO Forum has formulated a vision statement, which it will discuss with the Minister for Broadband. It will then request meetings with the Prime Minister, the Ministers for Health, Education and other decision-makers.

The Forum strongly believes that without some very serious lobbying at CEO level, the NBN will largely be defined by Telstra, and this would result in a continuation (with only a few changes) of the current regulatory environment.

5. SMART GRIDS, E-HEALTH, E-LEARNING –NEW SUBMISSIONS

Smart Grid Australia and the FttH Applications Group both decided at the end of April 2008 to prepare further Federal Government submissions.

At the Smart Grid events a week earlier, the decision was taken to prepare a submission for the Department of Energy, arguing the case for smart grids and, if necessary, for changes to the regulations that would allow utilities to invest in smart grids.

A second submission will be prepared for the Department of Broadband aimed at securing regulations that will promote the use of the NBN for smart grid applications. Below is an outline of this submission.

The FttH Applications group will work on a submission along similar lines.

We believe that the key issue here is end-to-end independent network access for telemetry-type IP applications such as smart meters, video monitoring and diagnostic equipment. In order for these applications to take off on the NBN a utility-type access regime is required.

It is estimated that, if such access were to be required under the current regulatory regime, the cost would be double what it would be if that utility facility was provided based on the rate of return on investment required by other utility investments.

Under the current regulatory regime electricity utilities are unlikely to use the NBN for their smart grid requirements. If the Department of Health or Education were forced to use the infrastructure under the current regulatory conditions the costs of providing these services would double.

At the Smart Grid Roundtable the industry was able to engage the Department of Climate Change in our discussions. We hope that we have been able to convince them of the positive contributions that smart meters and the NBN can make to the environment and we have asked them to involve their colleagues at the Departments of Energy and Broadband in support of our vision and submissions.

For more information on Smart Grids, see separate report: [Australia - Smart Grids - The market in 2008](#).

6. INDUSTRY FIGHTING FOR OPEN ACCESS FTTH

At the BuddeComm Roundtable in October 2007, Senator Conroy had promised the industry that if Labor were to win the election he would invite us to come back to him with an industry vision on his plans for the national broadband network.

The industry was honoured to have the opportunity to have a 3½ hour meeting with the Minister. Thus

far he has not given so much time to any single industry meeting. This clearly demonstrated his commitment to the industry and his interest in its input. The core of the report consists of seventeen recommendations that the industry would like the Minister to consider for inclusion in his tender document for the NBN. The single most important message the industry put to the Minister related to the need for regulatory clarity around his open access model – this would allow companies to develop a serious response to the tender document.

The Minister invited the industry to elaborate on the recommendations so that they can be considered by the Expert Group.

A lengthy discussion took place around ways to best engage other ministers and their departments in this process, since e-health, e-learning, energy saving and green telecoms (the role the NBN can play in reducing CO² emissions) all depend on leveraging the related government initiatives.

The Minister was very open in speaking of the problems he is facing here, and the industry concluded that they should put more effort into educating and lobbying other departments about the benefits of the NBN in relation to current health, educational and environmental issues.

The NBN can be a catalyst in all of this. While there definitely is interest from other ministers and their advisors the opportunities created by the NBN around these issues are not yet fully understood by most of them.

The synergistic effects of an NBN could be enormous if a whole-of-government approach could be achieved.

The industry decided to set up special working groups to this end, and the Minister has promised to assist us in contacting the people we should be talking to.

6.1 THE 17 NATIONAL BROADBAND NETWORK PRINCIPLES

The aim of the industry's report is to establish the critical parameters for the tender document that will be issued within the next two months for a National Broadband Network (at stake is a \$4.7 billion government subsidy). The Minister is very interested in international participation as well as national proposals.

Underlying all of the recommendations in this report is a fundamental message and recognition that broadband is more than just faster Internet connections. Real broadband is about provisioning ubiquitous levels of connectivity that provide a catalyst for further developing a wide range of other industries. These include health, education and other utilities in addition to telecommunications.

The FttP group has identified the following 17 recommendations for the special attention of the Minister.

6.1.1 Ubiquity

Establish an advanced, scalable, and long-term sustainable broadband network infrastructure that has national coverage and is accessible to all Australians.

6.1.2 Open Access Network Environment

Open Access Networks – Promote a strong commitment towards 'Open Access Networks', with a clear enabling set of rules attached to it. These rules will provide access seekers with equal opportunities to deliver content and services as well as to be provide them with equal access to the network at identified demarcation points.

Fair Access Pricing – Ensure fair access pricing caps are in place for uncontested markets.

Consumer Flexibility – Establish necessary legislative and regulatory structures that support a *longterm* capability to maximise consumer choice of service providers.

Competition and innovation – Promote competition and a culture of innovation between service providers who access the open network environment.

Appropriate Governance – Establish appropriate changes to telecommunications and competition legislation to support an Open Access Network environment. Appoint an independent body, such as the Australian Competition and Consumer Commission (ACCC), to oversee this legislation. While changes are sought, the resulting environment should be one of minimal regulation. Once balanced NBN markets have been established, competitive market forces and industry self-regulation should be the main method of achieving outcomes for network deployments and network operations in that market.

Network Layer Approach – Arrange the current ‘broadband’ industry into two independent ‘access’ and ‘applications’ sectors. Establish the necessary legislative and regulatory framework that will support each sector’s requirements.

6.1.3 Industry Benefits

Multi-Industry Benefits – Formally recognise that the NBN offers multiple industry opportunities and is far more significant for Australia than just a faster means to access the Internet. Through appropriate government policy, new NBN applications can play a pivotal role in addressing e-education, e-health, climate change, communication, smart utility grids, and entertainment services as well as high bandwidth Internet access.

6.1.4 Technology

Realistic Time Frames – Establish realistic timeframes for the implementation of a comprehensive FttP plan. The concern here is a need to ensure successful outcomes. A well executed plan will involve timely policy making, detailed and considered planning and a delivery timeframe that recognises the commercial needs of bidders.

Technology Neutral – Recognise that the technology choice for a NBN should come down to an evaluation of which solution will deliver Australians the most scalable and long-term sustainable answer. While the NBN is ultimately expected to deliver FttP to many parts of Australia, this solution may have to initially involve some hybrid technology components.

Stepping Stones - Recognise that in order to reach the end vision of a national FttP solution, that a staged approach to an infrastructure build may have to be undertaken in some areas. An FttP solution will be a 5-10 year process and may therefore require a number of stepping stones to achieve. Accordingly, the industry accepts FttN as a necessary step but not as a goal in itself. A staged approach towards an agreed end goal of FttP, should result in avoiding an overbuild of infrastructure, promote more realistic investments and avoid endless regulatory debate along the way.

Clear Technical Specifications – Require NBN bidders to provide clear technical and standards driven specifications of their proposed services. The specifications should be sufficient for potential access seekers to assess the capability of the NBN, engineer and plan migration to the NBN, and to develop new and innovative services that utilise high speed connectivity speeds offered by FttP technology. The services should also adhere to strict privacy and security standards.

Promote Shared Industry Plans – Require NBN bidders to indicate and coordinate their plans for investment with other bidders. When building a national infrastructure, cooperation is essential either voluntarily or via legislation. As a country, Australia can’t afford to waste resources through overbuilding where it is not economically viable (as is the case for most of regional Australia). For example, the Wholesale Industry Group has promoted industry cooperation by working together with the Government to map the locations of existing infrastructure to highlight the gaps that will need

funding and to indicated where the interconnect points between the various networks could or should be (meet-me-points).

A Holistic Approach – Develop a holistic approach to the NBN that also includes social, industrial and commercial requirements in addition to technical and financial considerations. The industry would prefer the government to set affordability goals, coverage targets and time frames for initiatives such as e-health, e-education and smart grids, so that the industry can develop appropriate infrastructure plans to support them. In addition, the Government should build upon initiatives like these and link together various other related governments plans in a whole-of-government approach. (eg national smart grids for the utilities, \$100 million for e-learning infrastructure, e-health infrastructure etc.).

6.1.5 Leveraging Government Investment

Alignment with Other Programs – Ensure a seamless integration with the National Regional Backbone project (OPEL).

Leverage Investment – Leverage as many government resources and initiatives as possible to attract investment in a national broadband network infrastructure. By developing a visionary government strategy to co-ordinate a range of related government initiatives under one umbrella (such as OPEL, NBN, health, education and smart grids) it will be possible to maximise the effectiveness of the proposed investment of \$4.7 billion of government funding.

6.1.6 Education

Industry Education – Ensure industry training programs on NBN technologies are established that will address the current shortfall in skills available in the marketplace. The winning bidder should also promote the benefits and uses of an advanced broadband network infrastructure to all Australians.

6.1.7 Working Groups

At the meeting the following working groups were established to take the report further from here:

- **Open Access** issues for the tender document. (Access Seekers);
- **Smart Grid Australia** especially aimed at lobbying politicians and bureaucrats involved in environmental issues such as climate change, energy savings, CO2 emissions, etc;
- **Greenfield FttP** (Develop a model that guarantees FttP in all Greenfield housing developments);
- **Applications** (incl. e-health, e-learning, digital media) especially aimed at lobbying politicians and bureaucrats outside the ICT industry;
- **Migration** between old and new telco environments (brownfield issues, backhaul).

7. FTTH WORKGROUP RECOMMENDATIONS TO EXPERT PANEL

Three weeks later, the groups provided supplementary recommendations to the report.

The timing of the NBN initiative is critical to Australia's future.

- Australia's current copper based telecommunications infrastructure is aging and is unable to keep up with the demands of broadband users.
- Australia is beginning to fall behind in Brownfield high-speed broadband because of a lack of open access regulations.
- At the time of writing this report there have already been 114 planned or implemented FttP communities on Greenfield sites involving some 157,000 lots.
- Over the next 6 years there is projected to be one million additional new homes built in Australia.
- The need for a robust, high speed, scalable telecommunications infrastructure is seen as the foundation for many other government and industry led initiatives such as:

- ⇒ e-education;
- ⇒ e-health;
- ⇒ e-government;
- ⇒ affordable housing;
- ⇒ environmental monitoring;
- ⇒ access to social services;
- ⇒ public security and safety;
- ⇒ climate change;
- ⇒ communication;
- ⇒ smart utility grids; and
- ⇒ entertainment services.

While the demand and necessity for new telecommunications utility is growing rapidly, the current processes for implementing solutions towards this aim have been far from straight forward and are certainly not to the same level of maturity as other utilities such as power, water and gas.

In the transition to new telecommunications infrastructure technologies, the industry has already encountered a significant number of obstacles that have been encountered by all stakeholders including developers, councils, providers, ISP's and vendors. Examples of some of the issues include:

- A lack of financial incentives for deployment of open access FttP high speed networks;
- Ignorance of and options for back haul network solutions used to connect FttP Communities.
- Anti-competitive conduct by some retail carriers that wish to monopolise access to connected communities through the use of FttP;
- A lack of education, motivation and funding for community aggregation to drive FttP Open Access Network Solutions.
- Legislative and Regulatory obstacles to FttP Network deployments.
- Inconsistent approaches by various State Government, State Authorities and Local Councils towards the planning and regulating of community infrastructure and land use management required for FttP deployments.
- A need for important changes to the regulatory regime for access seekers.

In order to address issues such as these, the Panel of Experts and the Government will need to consider many of the experiences and knowledge that the Australian industry has gained so far in the implementation of FttP solutions for both Greenfield and Brownfield sites as well. This report has captured a wide range of these key issues and proposes a number of recommendations based upon their collective first hand industry experience.

In summary, the FttH Special Interest Group believes that the successful rollout of an advanced 'open access' National Broadband Network in Australia will require the provision of incentives, a range of assistance for stakeholders, the removal of a range of impediments by all levels of Government and critical changes to the regulatory regime. Accordingly, this group has identified the following list of 24 key recommendations for the special attention of the Expert Panel and Minister.

7.1 COMMON RECOMMENDATIONS BETWEEN GREENFIELD AND BROWNFIELD

- Establish a national network basic topology standard.
- Establish a Central Co-ordination Office.

7.2 KEY GREENFIELD FTTP RECOMMENDATIONS

- Establish a sustainable funding model for backhaul networks.
- Establish a sustainable funding model for community networks.
- Reduce anti-competitive conduct by offering funding and rebates only for true open access networks.
- Promote education and support for the industry at all levels regarding NBN topics such as benefits, capabilities, standards, services, funding etc.

- Reduce Legislative and Regulatory Obstacles.
- Improve Coordination of Government Agencies at all levels).

7.3 KEY BROWNFIELD FTTP RECOMMENDATIONS

- Only provide funding for ‘open access’ FttP infrastructures within Brownfield environments.
- Source minor funding for connecting homes from the consumer (both residential and commercial).
- Source major funding for connecting homes from the network operator and/or the retail service providers.
- Only consider proposals in Brownfield environments that are based on overbuild scenarios.
- Funding should only be provided where new distribution network infrastructure is provided and not using existing infrastructure from incumbent telecommunications operators.
- Select a basic network architecture that utilises an end-to-end multi-layer planning approach.
- Allow use of existing electrical infrastructure such as overhead power, existing dark fibre and ducts.
- Address the use of existing Telstra ducts.
- Address the use of colocation facilities such as Telstra exchanges.
- Develop standards for the connection and hand off from the neighbourhood network to the customer service lead.
- Define the location of the service demarcation point near the Customer Premise Equipment (CPE).
- Any current ducting or leads used for service leads should be unambiguously declared the property of the End User (land lord, home owner).

7.4 KEY ACCESS SEEKER RECOMMENDATIONS

- Establish reasonable access terms.
- Improve the efficiency of the arbitration process.
- Reduce the ability of parties to ‘game’ regulatory processes.
- Eliminate conflicts of interest between commercial interests and regulatory compliance.

8. SMART GRID AUSTRALIA AND FTTH APPLICATIONS WORK GROUPS

8.1 SMART GRID AUSTRALIA (SEPARATE REPORT)

Smart Grid Australia is a non-profit, non-partisan alliance dedicated to an enhanced, modernised electric system. This alliance holds meetings, organises committees, assists with government initiatives, and issues communications to accelerate progress. It can be an important source of ideas, inspiration, and influence for any organisation interested in this burgeoning sector. The Alliance was formerly launched in April 2007 and is open for memberships to all participants in government, research and industry.

For more information on Smart Grid Australia, see separate (free) report: [Australia - Smart Grid Australia](#).

8.2 FTTH APPLICATIONS

The debate around e-health and e-learning took a very interesting turn at the Fibre-to-the Home (FttH) industry meeting with the Minister on 6 March 2008.

At this meeting The Hon Stephen Conroy, Australian Minister for Broadband, Communications and the Digital Economy, urged the industry, several times, to put maximum effort into e-health and e-learning developments as key applications over the new National Broadband Network..

While many of our leaders fully understand their benefits, to date it has not been possible to use the concept of new fibre networks as an ICT tool to address problems such as home-care, HD video consults, training, remote diagnostics, etc.

In consultation with the Minister de industry decided to start a plan of action on how best to lobby, inform and educate related Federal Departments, State Government and Local Councils.

The Minister's office has pledged to assist us in making contact with advisors and bureaucrats who are critical in this process. The aim of the FttH Applications Workgroup is to canvass these key people, and enunciate clearly that the NBN can be an excellent tool to solve contemporary problems in their own domain. The NBN will enhance, and in some cases, facilitate the projects that they each administer.

Through the NBN/ICT approach we hope to highlight applications which immediately lend themselves to an NBN model, and thereby allow those involved to score some early wins in championing that model.

9. RELATED REPORTS

For more information, see separate reports:

- [Australia - Digital Media - E-education](#);
- [Australia - Digital Media - E-health](#);
- [Australia - FttH and FttN Market and Industry Analyses](#);
- [Australia - FttH Greenfield Projects & Providers](#);
- [Australia - FttH Models, Overview, Costs, Forecasts](#);
- [Australia - FttH Projects and Developments](#);
- [Australia - FttH Special Interest Group](#);
- [Australia - FttX Plans from Telstra and G9](#);
- [Australia - Government's National Broadband Network](#);
- [Australia - Smart Grid Australia](#).

Other reports:

- [Australia - Broadband - ADSL - Overview and Statistics](#);
- [Australia - Broadband - Cable Modems](#);
- [Australia - Broadband - Infrastructure - Analyses](#);
- [Australia - Broadband - Statistical Overview and Forecast](#);
- [Australia - Business Market - Customer Relation Management and Permission Based Models](#) (archived research);
- [Australia - Digital Media - Research and Marketing](#);
- [Australia - FttH Greenfield Projects & Providers](#);
- [Australia - FttH Projects and Developments](#);
- [Australia - Internet Infrastructure](#) (archived research);
- [Australia - Regional Infrastructure Overview](#) (archived research);
- [Australia - Telecommunications Infrastructure - Analysis, Issues](#) (archived research);
- [Australia - Telecommunications Infrastructure CAN and CBD Networks](#) (archived research);
- [Australia - Telecommunications Infrastructure Inter-City Networks](#);
- [Australia - Telecommunications Infrastructure International Networks](#);
- [Australia Telecommunications - Market Forecasts 2005-2015](#) (archived research).

For more technical information see:

- [Technology - Infrastructure - Last Mile 2 - Fibre - FTTP, Passive Optical Networks](#);
- [Technology - Infrastructure - Last Mile 7 - FTTC, VDSL Principles](#).

For information relating to:

- Worldwide activities in the telecommunications industry, see: [Global Overviews](#);
- Technical information relating to the telecommunications industry, see: [Telecommunications Technologies Library](#)

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