COMMUNICATIONS ALLIANCE LTD

NBN INDUSTRY CONNECTION DISCUSSION PAPER NO. 2

TACKLING THE NBN QUESTIONS – PROPOSED WAY FORWARD FOR INDUSTRY

9 JUNE 2009

NBN Industry Connection Discussion Paper No. 2: Outcomes of NBN Industry Discussion Forums and Proposed Way Forward

JUNE 2009

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After an initial career with Telstra and Siemens, Gary joined broadband start-up RequestDSL in 2001 where he was General Manager for Product Management, Carrier Relations and Regulatory.

Since 2004 Gary has been providing consulting services to various companies in the telecommunications and IT sectors with an emphasis on commercialization of new technologies.

Gary is a director of IProvide, a company that has developed VoIP products tailored for the SME market, and Utiba a company that provides mobile commerce solutions to mobile carriers.

With professional qualifications from the highly regarded University of Melbourne in Engineering and Law, Gary brings a range of experience across the technical, marketing and commercial aspects of IT&T businesses.

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1 INTRODUCTION

This is the second discussion paper as part of the Communications Alliance's NBN Industry Connection program that addresses industry issues related to the Government's announced policy on building a National Broadband Network.

The first paper covered the topic of how the industry can develop an open-access wholesale service model for the NBN and was a primer for two industry forums on the same topic held in Sydney and Melbourne on the 19th and 20th 2009.

This paper focuses on the feedback received during the NBN Industry Connection forums and the proposed way forward to answer the questions regarding the NBN.

It covers the following key areas which were discussed during the forum:

1. What are the work areas industry should focus on?

2. What are the priorities for industry in these work areas?

3. What resources can be used to perform the work?

4. How can industry undertake the work?

The overall objective of the NBN Industry Connection process is to facilitate discussion and debate on a range of issues and options concerning the NBN. Where there are different views in the industry these can be captured and presented as options for wider consultation with government, regulators, and the public.

Comms Alliance is seeking comments and feedback on the proposed way forward outlined in this paper. Please submit comments to info@commalliance.com.au prior to 22nd June 2009.
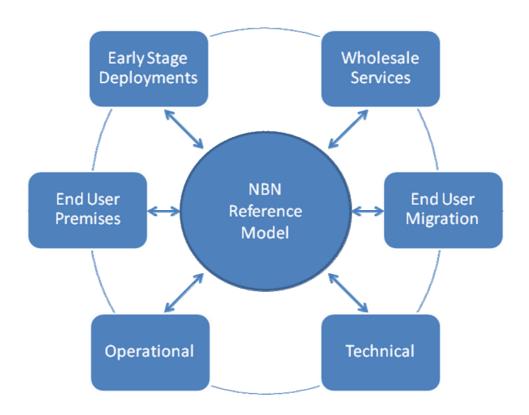
In parallel Comms Alliance would like to hear from members and prospective members on their ability to provide resources in the respective work areas outlined in this paper. Please also submit information on the individuals and their backgrounds to info@commsalliance.com.au

It is anticipated work will commence on the identified priority work areas shortly after Comms Alliance receives the feedback and resourcing information identified above.

2   NBN WORK AREAS

The NBN Industry Connection forums provided a range of views on the work areas that should be addressed by industry during the next 6 to 9 months as the Government undertakes its Implementation Study.

Based on the views provided and the healthy discussion at the forums, Comms Alliance proposes the following work areas for further discussion and analysis by industry.

2.1   NBN Reference Model

At the centre of the work going forward is the development of an NBN Reference Model which seeks to define key aspects of the NBN framework, including the following:

- Roles and Responsibilities of Service Providers

- Roles and Responsibilities of NBN Co

- Key Principles related to End Users

- Key Principles related to Services

- Key Principles related to Interconnection of Networks

These key aspects are fundamental concepts that describe and clarify how the different parties involved in the NBN framework interact, transact and co-operate to deliver services to end users.

The NBN Reference Model provides the framework which informs and contributes to the other key areas described below which cover specific aspects of the NBN.

However, the NBN Reference Model needs to be developed in an iterative and dynamic manner so that questions / clarifications from the other work areas can be resolved in a way which considers related areas as well.

The output from this work area would be a document that captures the key aspects described above in a clear and concise manner in much the same way that the ACIF Interconnect Model[1] described the competitive framework for long-distance telephony in the mid-to-late 1990s.

2.2 Wholesale Services

This work area would focus on the development and description of the key wholesale services that would be supplied in under the "open-access wholesale only" policy proposed by the Government.

Of particular importance will be the discussion and definition of the passive, active and resaleable wholesale services[2] necessary to support a competitive market place for the ultimate provision of services to end users.

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[1] See ACIF Interconnect Model – G538 – 1999 available at www.commsalliance.com.au
Also referred to as AUSTEL Interconnect Model

[2] See NBN Industry Connection – Discussion Paper No. 1 available at www.commsalliance.com.au

The scope of the services should cover access and transmission (or backhaul) services and cover technologies based on fibre, wireless and satellite technologies.

An initial focus of the work will be on the wholesale services that NBN Co should supply to other service providers in the market. Further work may also be necessary on the wholesale services that other service providers may supply to enable the development of a competitive market for retail and wholesale services.

The output from this work area would include service definitions and descriptions that form a basis for the technical, operational and commercial arrangements necessary to facilitate interworking of networks in the NBN framework. Issues such as quality of service, security, numbering, addressing and interworking requirements with customer and network equipment are likely to be covered as part of this process.

2.3   Early Stage Deployments

The "Early State Deployment" work area would provide a forum to focus on the initial early deployments of NBN type networks in the Australian market.

At the time of writing the announcements regarding pilot FTTP networks in Tasmania and the deployment of FTTP in new Greenfield estates from 1 July 2010 would be examples of such Early Stage Deployments.

The work area would enable a range of immediate questions to be raised and debated amongst interested parties.

Key learnings from these Early Stage Deployments could be collated and evaluated in order to inform developments in other work areas as appropriate.

The output would, where possible, be guidelines that are developed to assist key parties involved in the Early Stage Deployments such as councils, developers, network builders, equipment suppliers etc.

2.4   End User Migration

The migration or transfer of end users to, from and within the NBN will require planning, co-ordination and agreed processes in order to be both efficient and effective (ie. avoid service disruptions).

The Australian industry has over 10 years of experience in a competitive environment which has seen the development of processes that enable end users to move between service providers on existing networks.

This work area will focus on which existing processes can be re-used and which new processes will need to be developed to enable end users to migrate to and from the NBN as well between different service providers within the NBN.

The output would focus on guidelines and specifications that describe the processes and IT system that are involved in End User Migration.

2.5   End User Premises

The delivery of services using the NBN to end users will require the installation of new customer premises equipment (CPE) and possibly new or upgraded cabling

(external and internal) in residential, business and multi-dwelling environments. These new CPE and cabling requirements will require the definition of new technical standards, training arrangements and installation practices.

The roles and responsibilities of NBN Co and Service Providers with respect to CPE will need to be clarified and defined, including any review of the definition of the network boundary point.

The installation, management and support (remote and on-site) of CPE will be important in ensuring that services can be efficiently and effectively delivered using a combination of intelligent and passive devices on end user premises.

The output from this work area should involve development of standards, guidelines and work practices for use across the industry in the NBN environment.

2.6   Operational

The operational requirements under an NBN framework will require investigation, analysis and development of processes and procedures to enable:

- Service Ordering

- Service Provisioning

- Service Assurance

- Service Billing

Much of the above will require close co-ordination between service providers in an NBN environment where wholesale services from NBN Co are integral to the delivery of services to end users.

The IT systems and interfaces deployed to enable the processes and procedures outlined above will be critical to the efficient and effective management of services in an NBN.

By sharing information, developing common processes and procedures and guiding the development of IT systems contributors to this work area will be able to develop a shared operational framework for the NBN.

The output in this work area will include guidelines, protocols, schemas and other definitions that can be used to guide the development of processes, procedures and IT systems in the NBN environment.

2.7   Technical

The "Technical" work area will focus on the development of specifications, standards and guidelines using internationally accepted work wherever possible to develop the technical aspects for the interworking of networks and the implementation of wholesale services.

The development of these technical aspects will involve input from equipment suppliers, service providers and other relevant parties that implement the wholesale services to be supplied by the NBN Co and used by service providers to deliver end user services.

It is anticipated that the technical aspects of passive, active and resaleable wholesale services will be defined were relevant and cover such issues as quality of service, security, numbering, addressing and interworking requirements.

The output of the work area will include specifications, standards, guidelines and other documents as required to define the necessary technical aspects.

3   PRIORITIES AND INITIAL FOCUS

During the Comms Alliance NBN Industry Connection forums the industry identified a number of key areas where there needs to be an initial focus to be able to plot the way forward. Topics that need to be addressed as a priority include:

- NBN Co Scope

- Service Definitions

- Greenfields developments

- Key principles governing NBN framework

3.1   NBN Reference Model

It is clear that the NBN Reference Model work will be a critical aspect of developing the necessary concepts and scoping the role of the NBN Co. Other work areas will be looking for guidance in order to develop more specific concepts and definitions.

However, there are likely to be a number of key topics in the NBN Reference Model which are going to be difficult to reach consensus agreement on at an early stage. In order to explore and provide a forum for debate about these topics it may be useful to develop a number of options to feed into the industry debate.

An example of this may be the considerations around how multiple retail service providers deliver NBN services to one customer using the access supplied by NBN Co. Will there be a concept of a "Prime Retail Service Provider" that has the responsibility for the underlying access service and Network Termination Unit (NTU) required to support the multiple services? Or will there be a framework that allows each retail service provider to take responsibility for only its service provision and there are other mechanisms to ensure that the underlying access service is supplied and supported?

Other similar questions will arise at the interworking point for NBN Co and upstream service providers. Will each upstream service provider need to connect its own network equipment to the NBN Co network directly? Or can an upstream service provider connect to NBN Co services in a "virtual" sense through third party networks? Will such third party network services be delivered as transmission type "point-to-point" services or can they be provided using layer 2 or 3 network services.

To facilitate this discussion and debate a range of options for the NBN Reference Model could be developed to progress issues forward and obtain feedback. Where there are different views in industry these can be captured and presented as options for wider consultation with government, regulators, and the public.

3.2   Early Stage Deployments

It is clear from feedback received at the NBN Industry Connection forums that the announced policy requiring Greenfield estates to deploy FTTP technology in order to obtain planning from 1 July 2010 has created some considerable uncertainty.

Questions have been raised about what type of network architecture and services will be required in order to comply with the policy.

The Government has provided more background to this policy through the release of a consultation paper titled "Fibre-to-the-premises in greenfield estates" in which industry feedback is sought on a number of aspects concerning implementation of the policy.

As a result it is important that industry and the various stakeholders (local government, developers, contractors, equipment suppliers) commence discussion and analysis of the issues as soon as possible.

Comms Alliance can bring together many of these parties in a way that seeks to quickly define areas where there is consensus and provide mechanisms to resolve issues that are uncertain or contentious. The participants at the NBN Industry Connection forums showed a willingness to tackle these issues as soon as possible to provide clarity and certainty for the stakeholders involved.

Although no participants at the NBN Industry Connection forums were able to comment directly on the projects being undertaken in Tasmania, it was felt that everyone would benefit from early work to clarify and resolve issues related to the early deployment of FTTP technologies and services as has been publicly announced.

3.3   Wholesale Services

The description and definition of the wholesale services to be delivered by an "open-access wholesale only" NBN Co are seen as critical in allowing other Service Providers to plan and manage their respective business plans incorporating the NBN.

Early work on defining the types of passive, active and resaleable wholesale services supplied by NBN Co will be pivotal in progressing work in other work areas involving technical, operational and end-user premises issues.

Clarity on how the geographic (metro, regional, rural) and end user markets (consumer, small business, large business) effect the types of wholesale services to be supplied will be important in establishing baselines for further investment by service providers in networks, systems and products.

Work in this area can be progressed in parallel with and also inform the discussions regarding the NBN Reference Model and the Early Stage Deployments. An iterative approach (rather than a sequential, hierarchical process) to this work in the early stage is to be expected to achieve more effective and efficient outcomes.

The first discussion paper raised the possibility of using the wholesale service models developed by respondents to the FTTN NBN RFP process as a starting point for the discussion on Wholesale Services. At the NBN Industry Connection forums Optus indicated that they were willing to share details of their proposed wholesale service model from the FTTN NBN RFP process. This, along with other input from the FTTN NBN RFP participants could be used to advance the discussion on Wholesale Services at an early stage.

4   RESOURCES

A range of organisations were represented at the NBN Industry Connection forums including service providers, equipment suppliers, IT system integrators, consultants, government and regulators.

The discussion on resourcing the work recognised that a wide range of input and opinion will need to be considered in developing the NBN framework.

A number of organisations indicated they would be prepared to commit resources into different work areas in order to make progress as soon as possible.

Comms Alliance will manage the resourcing with its membership organisations in a way which seeks to maximize the diversity and range of views within the industry.

The following principles will be used to manage resources which are contributing to the NBN work areas:

- participants are required to keep the discussions and documents of the work confidential, except to the extent that they are required to report to or consult within their organisations as required;

- all participants agree to maintain the integrity of the process at all times during the work of the project;

- encourage and facilitate wide consultation with all stakeholders;

- encourage prospective organisations to participate leading to membership of Comms Alliance;

- As the functioning of Communications Alliance and the activities it undertakes are funded by the fees paid by its members, membership of Comms Alliance is a prerequisite for participation at working group level. (Contact Helen Bailey at h.bailey@commsallaince.com.au or visit our website at http://commsalliance.com.au/membership).

5   HOW?

The discussion at the NBN Industry Connection forums on how the industry can address these NBN questions focused on the following key requirements:

- Quick

- Flexible

- Dynamic

- Open

- Leadership

- Outcome driven

Anne Hurley, CEO of Comms Alliance, reinforced to the participants of the NBN Industry Connection that the process to be used did not need to be constrained by how Comms Alliance has worked in the past. Instead new ways of working that can deliver on the above requirements would be encouraged.
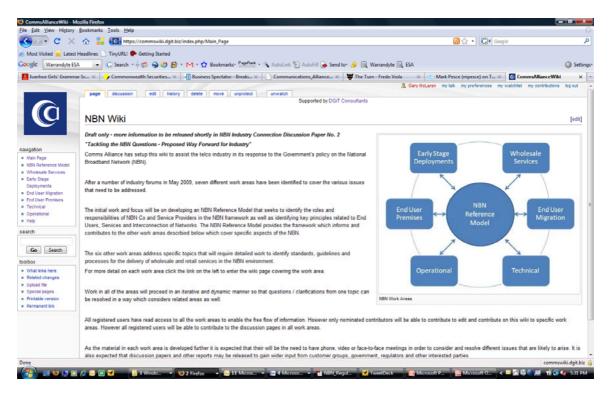
After some discussion within Comms Alliance a proposed way forward is described below.

5.1   Online Collaboration Tools – the "NBN Wiki"

Comms Alliance will establish an online collaboration "NBN Wiki" to facilitate input and discussion for each of the work areas described in section 2. Many industry participants will have used this type of tool in their own work environments and many will have been exposed to public wikis such as "Wikipedia".

The emphasis will be on open, flexible and dynamic collaboration of participants in the work areas.

To facilitate discussion and debate through the NBN Wiki a number of topics with background information in the respective work areas will be used to seed the dialogue between participants.

Access to the NBN Wiki will be on a restricted basis and managed by the Comms Alliance executive team. Comms Alliance member organisations will be granted access to contribute via nominated individuals who are familiar with and able to play a part in the different proposed work areas. In addition, other individuals from an organisation may have access to follow the discussions.

Organisations who are eligible for Comms Alliance membership can apply for read-only access for an initial period of time so that they are aware of the issues and discussions being undertaken, however they will not be able to contribute through the NBN Wiki without becoming members of Comms Alliance.

These online discussions in the relevant work areas will be the initial focus for gaining input, feedback and direction on the answering the industry questions regarding the NBN.

5.2 Work Area Meetings and Forums

It is anticipated that there will still be a need to have meetings and forums focused on particular work areas to progress discussion and debate. These meetings may take place via phone, video or face-to-face depending on the availability of people and facilities.

Discussion in meetings needs to be focused on achieving outcomes rather than sharing information or establishing facts which can be more readily be achieved using the NBN Wiki.

5.3 Public Discussion Papers

As the discussion proceeds on the NBN Wiki and in work area meetings and forums it is likely that significant milestones will be reached which will prompt the need to publish the outcomes more broadly.

These discussion papers will represent agreed positions and principles or various options which need to be considered more broadly across stakeholder groups such as customers, suppliers, government and regulators.

5.4 Dialogue with Government, Regulators etc

It is anticipated that early and ongoing engagement with the government and regulators will be undertaken to ensure a sharing of directions. This will be facilitated by Comms Alliance and will involve contributors to the different work areas as required.

6 SUMMARY

This paper has discussed a proposed way forward for industry to begin answering many of the outstanding questions related to the NBN.

A number of work areas have been proposed along with priorities, resourcing and the process for engaging with industry to be able to have an open and valuable discussion on the NBN.

Feedback from industry stakeholders is encouraged on the process and the resourcing they will be able to provide in order to carry out the work involved.

It is anticipated that work will commence in earnest by the end of June 2009.

7   APPENDIX 1 : RAW INFORMATION FROM NBN INDUSTRY CONNECTION FORUM NO. 1

Communications Alliance NBN Industry Connection

Planning how the industry can shape the NBN - Outcomes

Sydney 19 May 2009	Melbourne 20 May 2009
Work areas	
- International experience - NZ, Singapore - Canada, USA - China - Criteria for success - Efficiency - Contestability - Strawman model – access against Criteria for success - Define services - Map customer requirements - Top down approach - Industries – pay TV, health - Multiple technologies - Policy goals - Explore - Understand business and Technical models - Interconnect model - Lay out roles/responsibilities/interactions - Regulatory reform - Telco Act - Convergence framework - Process for inclusion/exclusion of assets in NBN - Assets to tip in - Shape of network - Points of interconnection 3 tiers - Market structures - Government subsidy - Tasmania - Greenfields - Early adopters - Involvement of leaders of education, health, etc - Business plan (i) Passive (ii) Active (iii) Resaleable - Business plan	- Services - Systems - Customer migration - Activities/actors/relationships - Telephony – portability, USO, etc - Basic principles: - Open access - Full competition - Connectivity - Facilitate customer choice - Etc - Set of options - Dynamic approach - End user requirements - Choice of multiple providers for each service - Interconnects - Fault finding/tracing - Accountability/ "Purpose statement"/ Business plan - Identification of Dividing Line

• Cost • Pricing regime • Regulatory environment	

Priorities	

• Services
• Systems
• Timeline
• Key principles
   ▪ Need to agree upfront
   ▪ Work on areas of agreement
	• Service definitions and Framework
	• Reference/Interconnect model
	• Greenfields – installation standards
	• Minimum requirements for Tasmania rollout and Greenfields
	• Dynamic approach for Tasmania rollout and Greenfields
	• Local government information requirements
	• EIE

Resourcing	

• Cross section to include:
   ▪ NZ
   ▪ ISPs
   ▪ Telstra
   ▪ Optus
• Common voice
	• Telstra
	• David Havyatt
	• Juniper Networks
	• Optus
	• Ericsson
	• TITAB (Training, cabling)
	• DGIT (provisioning assurance)
	• iiNet
	• Telecom NZ/AAPT
	• Primus
	• C-COR (Intelligent CPE)
	• Bearing Point (Reference Framework)
	• Telarus (CSP/Interconnect)

How	
• Quick • Blog (with structure) • Consensus? • Define vision	• Means to generate outcomes • IT driven • Specify requirements to drive solution design • Dialogue with regulators **or** render regulators irrelevant? • Architect – develop framework • No decisions by committee • Committee representation by sector not organisation • Quickly • Champion

Communications Alliance was formed in 2006 to provide a unified voice for the Australian communications industry and to lead it into the next generation of converging networks, technologies and services.

In pursuing its goals, Communications Alliance offers a forum for the industry to make coherent and constructive contributions to policy development and debate.

Communications Alliance seeks to facilitate open, effective and ethical competition between service providers while ensuring efficient, safe operation of networks, the provision of innovative services and the enhancement of consumer outcomes.

It is committed to the achievement of the policy objective of the Telecommunications Act 1997 - the greatest practicable use of industry self-regulation without imposing undue financial and administrative burdens on industry.