

Submission on the National Broadband Network Regulatory Environment



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About this submission

This submission aims to inform the Government and NBN Expert Panel on Vodafone's experience as a global telecommunications provider. Vodafone has focused this submission on the structural and regulatory settings that would promote the greatest consumer benefit and business certainty in the development of the NBN. The submission draws on Vodafone's experience as a fixed and mobile broadband provider and Vodafone's experience of both domestic and international regulation of telecommunications.

1. EXECUTIVE SUMMARY

- 1.1 Vodafone is the world's largest mobile company, Europe's largest buyer of unbundled local loop access, and one of the world's leading providers of total communications services. Vodafone has a perspective on the NBN that is informed by its leading international position in mobile communications and its understanding of the manner in which next generation wireless and fixed communications networks and services will be integrated and deployed over the next 10 years and beyond.
- 1.2 Vodafone believes the NBN project is of fundamental importance to the economic future of Australia.
- 1.3 There is a clear and growing trend globally that mobile communications are replacing fixed line communications. Therefore the NBN will directly affect competition in the supply of mobile communications services, whether fixed or mobile. It is important to understand that this issue is not about fixed line communications: it is about *all* forms of telecommunications:
 - (a) Mobile and fixed communications use the same terrestrial infrastructure: only the extremities of the network are different in either case. Therefore both mobile and fixed forms of telecommunications will be delivered via the NBN;
 - (b) Fixed and mobile services are already bundled together and customers will increasingly substitute between voice and broadband on mobile and fixed networks;
 - (c) The architecture of mobile and fixed networks will be increasingly integrated and may incorporate transmitters located close to the home, possibly collocated with FTTN nodes; and

- (d) The broadband services generated by the NBN will use the same core network and backhaul elements as mobile services.
- 1.4 Vodafone is a significant participant in the Australian communications market, has and has a direct and growing stake in the NBN and the regulatory framework.
- 1.5 The NBN RFP proposes that up to \$4.7 billion of Commonwealth funding will be allocated to an NBN deployment. Potential investors have been invited to make submissions on the regulatory environment in the context of their bids. Implicit in this process is the potential interplay between the regulatory environment and investment decisions and a negotiated outcome with financial sponsors of the successful bid.
- 1.6 The objective of the Government should be to ensure the market power of the NBN is confined to enduring bottlenecks and the NBN operator does not damage competition in communications markets.
- 1.7 To the extent that the successful NBN operator is associated with a vertically and horizontally integrated carrier, the market power of the NBN operator may be exercised to adversely affect competition in the delivery of other communications networks and services. Accordingly, to protect competition Vodafone is firmly of the view that structural separation between the NBN and other telecommunications services is the by far the best, and perhaps the only truly viable, option to maximise the benefits for all Australians. Failing this, and as a significantly less effective measure, the Government should institute true functional separation supported by a robust access regime.
- 1.8 If the NBN is not structurally separated, the owner/operator will have clear and compelling incentives to:
 - (a) Obfuscate the distinction between its NBN assets and its other business assets;
 - (b) Use the NBN assets to serve its own business, by way of economies of scale, information sharing and preferential access; and
 - (c) Delay and block access by challenging the judgments of regulators and courts.
- 1.9 In addition, the Government should seek to create the greatest possible economic value for the network by ensuring it can be fully utilised to deliver services to consumers by:
 - (a) providing for open and non-discriminatory access on price and non-price terms;
 - (b) promoting competition by requiring that any NBN operator configure its network and access arrangements to facilitate next generation mobile network infrastructure deployment and other competing infrastructure, services and applications; and

- (c) enhancing business certainty by substantially reviewing Part XIC of the *Trade Practices Act 1974 (TPA)*.

1.10 Finally the NBN process should be subject to further consultations and submissions from interested and affected parties. It would be inappropriate for a project of such long-term economic significance to the future of all players in the telecommunications market if a decision as to the structure of the project were made without full consultation, bearing in mind the level of economic investment made to date, and planned in the future.

2. INTRODUCTION

2.1 Vodafone Australia (**Vodafone**) welcomes this opportunity to provide its submission on the regulatory issues associated with the National Broadband Network (**NBN**).

2.2 The NBN, and its associated backhaul capacity, will represent significant network infrastructure for the broader communications sector in Australia, incorporating the essential access to homes and businesses and driving fibre connectivity closer to customers. The roll out of the NBN is a once in a generation opportunity to implement a model that will promote competition, innovation and encourage investment across the entire communications landscape in Australia.

2.3 It is critically important to the welfare of all Australians that:

- (a) competing service providers have open and non-discriminatory access to all components of the NBN; and
- (b) the market power of the NBN operator is appropriately regulated.

2.4 Mobile communications are now so integral to the day to day lives of Australian consumers that there are more mobile service subscriptions than Australia's total population, with the Australian Communications and Media Authority (**ACMA**) reporting 21.26 million mobile phone services in operation at 30 June 2007. This compares to only 10.92 million fixed line services for the same period.

2.5 It is essential that the regulation of the NBN is based on appropriate consideration of the long-term future of communications networks and services, rather than merely a short term interest in increasing the speeds of fixed line broadband services. In considering the regulatory issues associated with the NBN it is therefore important to consider the interests of both customers and service providers over the next ten to twenty years.¹

¹ As noted in the RFP: *"Not only will the NBN provide the primary platform for delivering fixed high-speed broadband services, but it is also likely to provide the platform for basic services like voice as well as many other new and innovative services for decades*

- 2.6 Australia's communications future will be determined by a combination of converged fixed and wireless networks. Therefore, a policy that favours fixed line over mobile network investment, constrains competition in the supply of mobile networks or services or allows a vertically and horizontally integrated NBN operator to favour the interests of affiliated downstream fixed and mobile businesses, may prove to be harmful to Australia's broadband development.
- 2.7 In this submission Vodafone provides a perspective on the NBN debate that is informed by its understanding of the manner in which next generation wireless and fixed communications networks and services will develop and integrate over the next 10 years and beyond, in Australia and internationally.
- 2.8 It is Vodafone's view that the decisions that the Federal Government makes now in relation to the NBN process may optimise, but could also potentially damage, broader consumer welfare benefits over the long term. In this context it is important that the exigencies of facilitating an appropriate short term outcome from the NBN Request for Proposals (RFP) process do not come at a significant long term cost to the competitive environment and to consumers.

Vodafone's global perspective

- 2.9 Vodafone Group and its subsidiaries (**Vodafone Group**) comprise the world's leading mobile communications service provider, and the second largest communications company in the world, with a significant presence in Europe, the Middle East, Africa, Asia Pacific and the United States.
- (a) At 31 December 2007, the Vodafone Group had 252 million customers worldwide² and in Australia the Vodafone direct customer base was 3.572 million subsidiaries.
- (b) In Europe the Vodafone Group is the largest acquirer of unbundled local loop access and is the fifth largest broadband provider.
- 2.10 In Australia Vodafone:
- (a) has invested significantly in communications infrastructure for over 15 years and is the third largest participant in the Australian telecommunications sector; and
- (b) is currently undertaking a national 3G mobile broadband rollout using High-Speed Packet Access (**HSPA**) which will provide coverage to 95% of the population, giving Vodafone a significant presence in regional and rural Australia.

to come. The economic and social implications of the NBN are therefore profound."

² Calculated based on the registered customers of mobile telecommunications ventures in which it had ownership interests at that date, calculated on a proportionate basis in accordance with the Company's percentage interest in these ventures.

2.11 As a major communications infrastructure provider in Australia and world wide, with significant knowledge and experience in the communications sector, Vodafone has a unique perspective on the regulatory issues associated with the proposed NBN, and in particular on the impact of fibre-to-the-node (FTTN) or fibre-to-the-home (FTTH) networks on mobile networks and services in the context of both current and future generations of technology.

Optimising long term consumer welfare

2.12 As the Government has identified in the RFP, the NBN has the potential to provide significant benefits to the welfare of all Australians, through enhanced access to news and information, social interaction, entertainment, e-commerce, and improving productivity, the international competitiveness of Australian businesses, the delivery of essential services such as health, education and emergency services and addressing rural/regional isolation and dislocation.

2.13 The correct regulatory settings for the NBN will create a vibrant and competitive communications environment in Australia, which will encourage additional investment, and the evolution of further communication services and applications by multiple network, service and content providers.

2.14 Conversely, if an appropriate regulatory environment is not applied to the NBN, this may result in significant detriment to net consumer welfare, in comparison with optimal long term outcomes that could otherwise have been achieved. A monopoly NBN controlled by a vertically and horizontally integrated entity, could significantly constrain competition across a range of telecommunications and media services, in the absence of appropriate regulatory intervention.

2.15 If the Government does not separate the owner/operator of the NBN from other services in the market, the Government runs the very real risk of permanently damaging the ability of Australian consumers to gain access to an optimal range of telecommunications services, by creating a permanent competitive imbalance in the Australian telecommunications market.

2.16 The Government has indicated that in selecting a successful proponent it will focus on "value for money" (based on a broad range of considerations). A suitable interpretation of "value for money" would be an outcome that best optimises net consumer welfare in the long term. Vodafone submits that if, following an analysis of all the proposals, the Government does not have a high degree of confidence that the best RFP proposal also reflects an optimal net consumer welfare outcome, then it should not pursue *any* proposal at this time.

Given the significance of the NBN to the communications industry and the community Vodafone recommends that prior to the selection of the successful NBN proposal, a further opportunity for public and industry consultation should occur. This further
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consultation should be conducted on the basis of the details of the relevant proposal(s). This will be necessary to ensure that the Government is aware of the potential long term implications of decisions that are made in relation to the NBN.

An opportunity to shift the emphasis from regulatory intervention to structural separation

- 2.17 Vodafone submits that in setting the objectives for regulation of the NBN, the Government should be aiming, not just to minimise potential competitive disruption and maintain the industry status quo, but to re-focus telecommunications regulation to provide a more appropriate balance between the need to maintain incentives to invest and innovate and the need to provide maximum services to the public, by way of allowing competitors access to essential bottleneck services.

The NBN RFP process represents a unique opportunity to move towards structural separation rather than regulatory intervention, as a primary means of achieving socially optimal levels of competition and investment.

3. THE INTERACTION OF FIXED AND MOBILE NETWORKS AND SERVICES

Government funding decisions and regulation should be underpinned by consistent principles

- 3.1 Vodafone does not dispute that the availability of increased data speeds on fixed line services is of significant value to consumers and to productivity. However the value of mobility cannot be overstated. Australia's future prosperity and the growth of the digital economy will be supported through a combination of fixed and wireless networks. In this environment it is important to avoid a regulatory regime that inconsistently applies the principles on which it is based. For example, by maintaining higher levels of regulation in respect of privately funded mobile networks operating in highly competitive markets, while conceding lower levels of regulation to monopoly infrastructure that has also enjoyed the benefits of Government funding.
- 3.2 The Government has proposed to allocate up to \$4.7 billion of Commonwealth funding to support the deployment of the NBN and to grant a unique opportunity to build bottleneck fixed line infrastructure in the customer access network. By comparison, the deployment of mobile networks, including 3G HSPDA has always proceeded on the basis of *both* competing infrastructure and private sector funding.
- 3.3 The provision of government funding for fixed line network infrastructure risks skewing efficient economic build/buy decisions in favour of fixed line services, to the competitive disadvantage of mobile network operators such as Vodafone, and more, importantly to the detriment of consumers who value mobility.

- 3.4 Vodafone's key concern is therefore to ensure that regulation of the NBN promotes and enables – rather than inhibits – the development and provision of innovative communications networks and services that may not be copper/fibre based fixed line services. In particular it is critical to ensure that appropriate regulation preserves the competitiveness of independent mobile services, which are likely to be the only true infrastructure based competition to the NBN.
- 3.5 In considering the regulation of the NBN there has been a tendency to focus primarily on its impact on competition in the retail provision of fixed telecommunications services and to propose measures specifically designed to address those concerns, such as the provision of wholesale services to fixed line telephony and broadband resellers. However, the NBN will also impact on the provision of mobile services as a result of:
- (a) a growing shift in the marketplace from fixed services to mobile services – a trend that is gathering pace and will continue into the future;
 - (b) improving mobile service bandwidth and functionality, such that they are more comparable with the capabilities of fixed line services, and are ongoing complementary services to those supported by the NBN;
 - (c) bundling and the continued convergence of services, devices and content, driven by IP based services and consumer interest in multi-function devices; and
 - (d) mobile network infrastructure being increasingly integrated with fixed network architecture such that the NBN will be a vital wholesale input into the provision of 3G and LTE mobile services.
- 3.6 The Government's proposed NBN process could result in a vertically and horizontally integrated operator receiving a \$4.7 billion subsidy (or at least funding on more attractive terms than could be achieved from financial markets). By potentially negotiating the regulatory environment with NBN proponents, the Government's decision could have far reaching impacts on associated markets by, at best, creating an uneven playing field, and at worst, facilitating anti-competitive behaviour.

The Government's investment should be directed solely to the roll out of broadband networks in areas where it would not otherwise be economic to do so, and not towards general, co-mingled infrastructure. Further, appropriate regulatory measures must be put in place to ensure that competition in the broader communications industry is maintained.

Mobile services will remain both substitutable and complementary services to NBN services

- 3.7 The manner in which consumers use fixed and mobile services is complex and changing:
- (a) Digitisation has made it possible to deliver the same communications services (voice, video and data) over both fixed and mobile networks.
 - (b) Standard 3G data rates are approximately seven times faster than a fixed line dial-up connection. This is suitable for offering a range of communications services including high-speed internet and email access, video calling, full track music downloads and mobile television.
 - (c) The roll out of 3G HSPA will significantly enhance the services that can be provided to customers over the Vodafone network, providing data transmission speeds of up to 1.8 Mbps (similar to DSL broadband over Australia's existing copper network for many consumers) with HSPA technology increasingly being incorporated in laptops and other sophisticated portable devices.
 - (d) Beyond these existing commercially deployed technologies next generation networks and services will continue this process (see below).
- 3.8 While Vodafone does not currently provide residential fixed line telecommunications services in Australia, Vodafone operating companies in other markets do provide these services, which are often bundled with mobile services. Forms of these bundled products will be introduced in Australia, such as the Vodafone Business One Service that was launched on the date of this submission (see below).
- 3.9 Importantly, Vodafone is currently is a provider of 3G mobile broadband services, which are a substitute service for some consumers as well as being a complementary service for others. Some consumers value mobility over data speeds and have fully substituted their fixed line services for mobile voice and broadband services. Other consumers value the higher speed and data capacity of fixed line networks, but want to supplement that service with mobile access services for use over a broader geographic area.

The long term impacts of fixed-mobile convergence

- 3.10 Fixed-mobile convergence (FMC) will continue to occur over the life of the NBN, driven by a number of factors including consumer demand for integrated devices and services and mobility.
- 3.11 The impact of FMC is particularly salient to the NBN given that the NBN will be the distribution platform for both fixed and mobile services. Therefore, even if fixed to

mobile substitution did not grow, the NBN would still be crucial to the mobile economy since it would provide the core network elements that mobile services rely on. The fact that FMC is occurring, and will grow over the life of the NBN, means that:

- (a) Mobile operators such as Vodafone have a crucial stake in the design and structure of the NBN; and
- (b) A vertically integrated NBN operator which is not structurally separated, but also provides mobile services (such as Telstra, if it were to be selected as the NBN operator) has an even greater incentive to cross-subsidise one business to the other, co-mingle its NBN assets with other of its network assets, and delay any challenge to its practices by challenging regulatory and court decisions – all of which will block and delay the development of competitive services. In this way it will be able to advantage both its fixed and mobile businesses, at the expense of competitors and the Australian consumer.

3.12 The growth of FMC was discussed in the OECD Committee for Information, Computer and Communications Policy paper on *'Fixed-Mobile Convergence: Market Developments and Policy'* (23 March 2007). The paper refers to the following stages of FMC, many of which are already occurring:

- **Service bundling**
 - Bundle of fixed and mobile services
 - Bundle of voice (cellular) and data (Wi-Fi) services
 - Services such as single voice mailbox offered over both fixed and mobile networks
 - Offering discounts for calls made between fixed and mobile networks to specific members
- **FMC using broadband/Wi-Fi connections (cellular/Wi-Fi dual-mode service)**
 - Dual-mode services using a mobile handset and using Wi-Fi modems in the home environment to access VoIP through ADSL connections
 - ADSL through self-provision
 - ADSL through LLU (local loop unbundling)
 - Dual-mode services using handsets that do not have a handover function from one mode to another, offering each mode separately
 - Dual-mode voice service which has a handover function from one mode to another, but does not utilise a fixed voice or broadband network in the home
- **Mobile based 'dual-mode' services**
- **Network convergence**

3.13 The first stage of FMC has already occurred and the second and third stages are already being commercially implemented, with a variety of competing technologies under review for the final stages of network convergence.

Dual mode services

3.14 Vodafone is at the forefront of dual mode service developments, which relate to the combining of both fixed and mobile elements, within one handset or device. For example, in a number of international markets Vodafone currently offers DSL

broadband to residential customers packaged with voice offerings that include zonal tariffs and fixed line telephony³.

- 3.15 Under such zonal tariffs customers may make calls from a defined geographic area to fixed line numbers and defined mobile networks at rates similar to fixed line providers. A fixed line number lets customers receive incoming calls when in their designated Vodafone "At Home" geographic area.
- 3.16 In Italy, Vodafone has recently launched a dual purpose broadband access service, which is essentially a device that connects to a customer's home DSL internet connection to transmit both Wi-Fi and 3G services. Similar products will eventually be released across other regions.
- 3.17 On 25 June 2008, Vodafone, with Cisco and Research In Motion, announced a three-way initiative to deliver integrated business communications services in Australia, to be marketed as Vodafone Business One. Launching later this year, Vodafone Business One will combine all telecommunication services – fixed and mobile, voice and data, services and equipment – into one simple, managed solution with single-point accountability on installation, technical support and fleet management and one monthly invoice. With the announcement of Vodafone Business One, Vodafone has evolved from being a 'mobile-only' provider, to the world of full-service telecommunications services, enabling Vodafone to bring the principles of innovation and competition it has delivered in the mobile space to the fixed-line arena.
- 3.18 Through convergent services of this nature the services of mobile network operators and fixed network operators are already becoming blurred.

"Long Term Evolution" and fully converged fixed and mobile networks

- 3.19 Over the life of the NBN, the traffic carried on mobile networks is likely to increase exponentially, with the progression to 4G and beyond. The benefits of 4G will include a totally IP based network (replacing circuit switch calling) supporting mobile broadband speeds of greater than 100Mbps and more efficient use of spectrum.
- 3.20 Long Term Evolution (LTE) is a form of 4G technology which will comprise a total replacement of current 3G networks. LTE will enable seamless IP based integration between mobile networks and the NBN. LTE could also be complementary to the NBN, providing the benefits of NBN bandwidth to customer premises, without the expense of deploying FTTP solutions.

³ These offers are provided by Arcor in Germany, ihug in New Zealand, as well as in partnership with BT in the UK, Fastweb in Italy and Melita in Malta.

Leveraging NBN market power across mobile LTE developments

- 3.21 To the extent that the NBN owner is also a mobile network operator, there is potential for the NBN to be configured in a manner that, through co-location of fixed and mobile network elements, will provide the NBN owner with a competitive advantage.
- 3.22 The construction of the NBN will involve a substantial deployment of fibre optic cable into local communities in metropolitan and regional areas enabling the installation of broadband equipment close to homes. This same fibre and other infrastructure can be used for the deployment of mobile base stations that support high bandwidth services to homes and businesses. Vodafone would expect that if Telstra or Optus is the successful NBN operator, they would seek to deploy or enhance their mobile network deployment as an overlay network integrated with the NBN.
- 3.23 In effect, the FTTN will extend the fibre network that may ultimately comprise backhaul transmission for next generation wireless networks. While these fibre transmission elements are part of the fixed customer access network, they will also comprise an essential facility for the backhaul of wireless services from micro transmitters located close to customer premises. Therefore, these fibre transmission elements, and associated upstream transmission capacity connected to efficient points of interconnection, will comprise essential access services for next generation mobile networks.
- 3.24 If it is the case that a horizontally integrated operator becomes or is associated with the NBN operator then it is important that the NBN operator is required to provide open access to competing mobile network operators. This means more than simply supporting MVNO style resale models. The NBN must support open access to allow competing infrastructure operators to install equivalent equipment at nodes and access to dark fibre backhaul over the NBN to allow, as far as possible, a continuation of mobile infrastructure competition.

At a minimum, the Government should:

- (a) require access to be provided to competing infrastructure operators on open and non-discriminatory terms, including both price and non-price terms; and
- (b) facilitate competing wireless network infrastructure by requiring that any NBN operator configure its network to allow:
 - the collection of wireless transmitters and other equipment at FTTN nodes; and
 - access to dark fibre transmission between the nodes and appropriate points of interconnection;

4. THE NBN AND THE PROMOTION OF COMPETITION

- 4.1 Given the NBN's natural monopoly characteristics and its potential to stifle competition across a range of communications markets Vodafone wishes to address four key regulatory aspects:
- (a) The impact of the ownership and operation model for the NBN;
 - (b) The open access arrangements for the services provided by the NBN that are needed to promote competition;
 - (c) Strengthening the regulatory regime by delivering increased certainty through amendments to Part XIC; and
 - (d) The uncertainty surrounding proponent driven regulatory change and the need to avoid any fundamental changes to the existing regulatory regime in response to RFP proposals.

Structural Separation

- 4.2 Structural separation is the only ownership model that will provide the Government with sufficient transparency to safeguard its investment in the NBN and ensure that the NBN is operated in a manner that meets the Government's objectives. It is also the optimum way to ensure that the NBN promotes competition.
- 4.3 The NBN regulatory environment provides a unique opportunity to implement such structural measures and for the Government to become a global leader in reforming the telecommunications sector in a manner which enhances economic growth and consumer welfare, as well as providing incentives for continued innovation and investment in the sector. In particular, the Government's financial interest in the NBN provides a natural opportunity to secure structural separation, by requiring the establishment of a separate entity in which it will invest.
- 4.4 It is relatively incontrovertible that the NBN will exhibit natural monopoly characteristics for those services which it is economically efficient for the NBN alone to provide. As a result, the NBN will act as a bottleneck for service providers that need access to those services to compete in downstream markets. Those downstream markets include both fixed and mobile network based services.
- 4.5 A vertically integrated owner of a bottleneck facility has a well recognised incentive to exclude rival competitors in a vertically related market in order to leverage its monopoly

power into other potentially competitive markets. The bottleneck facility owner may choose to maximise its monopoly profits by limiting access to the facility thereby avoiding the profit dissipation that may arise from competition between multiple users resulting in the devaluation of access to the facility due to a lack of exclusivity.

- 4.6 Consequently, if the NBN operator is associated with a participant in a downstream market then it will have both the opportunity and the commercial incentive to offer preferential pricing and services to its affiliate at the expense of independent competitors. An unconstrained vertically integrated NBN operator with commercial interests in a number of related markets may also have the incentive and ability to use the monopoly profits it generates from the operation of the NBN to cross-subsidise its operations in other wholesale and retail markets to the detriment of its competitors in those markets.
- 4.7 Given the inherent monopoly characteristics of the NBN, the best option to promote competition is for the owner and operator of the NBN to be a standalone supplier of wholesale network services, which does not have any interest or affiliation with any participants in downstream markets, including the suppliers of retail services over the NBN or mobile networks. An owner and operator of the NBN which adopts structural separation has an incentive to maximise the revenue it derives by maximising the use of the services provided by the NBN.
- 4.8 The need for structural separation to promote competition and prevent the NBN operator from using its market power to the detriment of competition in downstream markets is even more critical if Telstra were to be selected as the successful proponent of the NBN. Telstra's ownership of the NBN would substantially enhance its ability to cross-subsidise its monopoly network profits into downstream markets such as mobile, internet and fixed service wholesale and retail services.
- 4.9 The current regulatory regime in Parts XIB and XIC of the TPA has proved to be difficult to implement in a manner that appropriately restrains Telstra's ability to take advantage of its market power, for example:
 - (a) Regulatory processes around ULLS have been undertaken for the last eight years and only recently has the Australian Competition and Consumer Commission (**Commission**) been able to determine certain pricing for access seekers, and further Telstra legal challenges to these determinations are expected;
 - (b) Access related proceedings and subsequent appeals have often taken longer than the period of application of the relevant access terms (e.g. the relevant period for which a price is set in an undertaking or access determination has often expired before the appeal processes pursued by Telstra, resulting in continued price uncertainty); and

(c) Telstra has been able to achieve retail-wholesale price squeezes such as in relation to DSL services.

- 4.10 If Telstra were to be selected as the proponent of the NBN, in order to minimise both Telstra's ability and incentives to utilise its control of the NBN and associated backhaul network to entrench its dominance in downstream markets, the assets it will own and operate which comprise the NBN should be owned by a structurally separate entity. Vodafone acknowledges that very careful consideration would have to be given to the nature of the assets which were included in such a structurally separate entity, both to maximise the pro-competitive effects of separation and to ensure that the business had the right mix of assets for such an option to be not only commercially viable but also attractive as a stand alone business.
- 4.11 The precise identification of the assets which will need to be included in that separate entity is an issue that cannot be resolved until the final network design of the NBN is known. However, Vodafone submits that if Telstra were to be the successful bidder, those network assets would include the copper local loop, pillars, nodes and fibre to the termination point associated either with the nearest local exchange or an equivalent upstream termination point. Such an entity should also own and operate other non-contestable elements of Telstra's customer access network.

The alternative of functional separation

- 4.12 Without structural separation, backhaul will be a major point of regulatory argument between access seekers and the access provider, because it is crucial to the access seeker's ability to compete. No regulatory system can be as effective as structural separation in providing a clear pathway for the delivery of competitive services between the access seeker and the consumer.
- 4.13 However, even under a structurally separated model, access regulation will be important to ensure non-discriminatory, timely and economically efficient access to what will still be a monopoly service.
- 4.14 Vodafone considers that the only viable alternative to structural separation (albeit less suitable), is to implement a model of full functional separation if a vertically integrated telecommunications provider is the successful bidder, similar to that which has been implemented in the United Kingdom with respect to British Telecom and will be implemented in New Zealand with respect to Telecom.
- 4.15 The purpose of functional separation is to reduce the opportunity for discriminatory and other forms of anti-competitive behaviour by the access provider in favour of its affiliates to the detriment of third parties. Unlike structural separation, it does not require separate ownership of network assets from other assets in the business. Instead, it focuses on separating network assets and other network access related inputs within a

separate business unit which then trades independently with third parties on the same terms as it trades with its affiliates

- 4.16 The necessary components for an effective functional separation model have been identified as:
- (a) *Equality of inputs*: access seekers are able to obtain key access and backhaul products using the same processes and at the same price as the network owner's affiliated wholesale and retail businesses.
 - (b) *Equivalence of outcome for the supply of wholesale product*.
 - (c) *Effective operational separation*: clear separation from wholesale and retail arms of the business, commercial incentives aligned solely with running a network access only business and entirely separate staff and location and the distinctive brand.
 - (d) *Governance and compliance*: oversight by a specific board comprised of a majority of independent members who are responsible for ensuring that the functional separation is effectively implemented.
 - (e) *Agreed key principles for competitive next generation networks*.
 - (f) *Enforceability*: financial incentives for delivery of access services backed up by court enforceable sanctions for non-compliance.

Access to backhaul

- 4.17 Fixed and mobile networks often use the same backhaul, in particular in regional and remote areas of Australia. While backhaul is provided on a competitive basis between certain routes, such as between the mainland capital cities, Telstra remains the monopoly provider of backhaul transmission across large parts of Australia.
- 4.18 The usage of backhaul transmission will increase significantly as a result of the NBN, the evolution towards 4G mobile and increased data usage generally. However it is unlikely there will be any new entry into the backhaul transmission market on the monopoly routes. Accordingly, the vast majority of transmission routes display strong natural monopoly characteristics, meaning entry is neither desirable from a social welfare perspective nor commercially viable because:
- (a) the markets served by the transmission routes are small;
 - (b) Australia is geographically large and individual routes span considerable areas;
and

- (c) there are substantial barriers to entry imposed by Telstra's economies of scale and significant share of the downstream market.

4.19 The importance of open and non-discriminatory access to backhaul transmission is therefore likely to significantly increase with the roll out of the NBN to 98% of the population. Therefore, while backhaul access has not been an area of substantial regulatory focus over the last 10 years, it is likely to be one of the most significant bottlenecks in the short term and into the next decade. The regulatory regime for the NBN must recognise the importance of backhaul infrastructure, and maintain the status of such transmission as a declared service under the existing regime.

4.20 As outlined above, the fibre component of the FTTN may itself comprise backhaul capacity serving micro-transmitters associated with nodes that form part of the long term evolution of mobile networks. Therefore, fibre transmission in the customer access network will also be an essential service that must be capable of declaration.

The regulatory regime for the NBN must facilitate the following:

- existing forms of backhaul infrastructure must continue to be regarded as an essential access service, and the status of such transmission as a declared service under the existing regime must be maintained; and
- the declaration of transmission routes to wireless transmitters and other devices that may be co-located with nodes, including those serving high bandwidth micro cells
- the expansion of the forms of declared access to include "dark fibre" access on these routes; and
- the pricing models for backhaul capacity will require ongoing monitoring and updating to, adequately take into account revised network architecture of the NBN and changed usage patterns by both fixed and mobile networks.

Unbundled access supporting quality of service based competition

4.21 It will be important that large scale wholesale customers such as Vodafone are able to purchase unbundled wholesale access services which allow them to develop a suite of tailored products for their customers.

4.22 Standard services which seek to severely limit functionality or points of interconnection to the NBN have the potential to stifle the development of complementary mobile networks and therefore limit the availability of new services to consumers in downstream markets. The NBN infrastructure must be truly open access to allow the benefits of infrastructure competition.

- 4.23 Significant advances in technology are likely to occur over the life of the NBN. As a result, NBN access services cannot be statically limited to a prescribed set of services identified prior to the construction of the NBN or which are solely determined by the NBN operator. The need for a regulatory model in which open non-discriminatory access can be required for to a range of different sub-sets of NBN services, of varying levels and specifications, will only increase over time.
- 4.24 The current Part XIC access regime is predicated on a model where the access provider is only required to provide access to declared services to the same quality and standard as the access provider provides to itself. If the NBN operator is not vertically integrated (which Vodafone would recommend), it will not provide services to itself, therefore the standard and quality required to be provided may need to be specified in an alternative manner.

It is critical that access to the NBN be regulated in such a way that allows service and product development and innovation to be driven by access seekers. This may require amendments to the existing regulatory regime in Part XIC of the TPA to enable third parties to seek access to a service which is technically able to be provided by a facility (or facilities) but which is not currently provided by the operator of the facility either to itself or anyone else, as is possible under Part IIIA of the TPA.

Non-discriminatory access

- 4.25 The incentives the NBN owner will still have to seek monopoly profits can be addressed by the declaration of certain core services provided by the NBN under Part XIC of the TPA and continued ACCC oversight.
- 4.26 However, it will also be critical that the owner and/or operator of the NBN is prevented from engaging in discriminatory conduct relating to the non-price related terms and conditions of the supply of services, including their availability.

As an overarching principle, the owner and/or operator of the NBN should not be able to unreasonably discriminate between various access seekers as to the services it provides and the terms and conditions on which it provides them.

Strengthening the regulatory regime – delivering increased certainty through amendments to Part XIC

- 4.27 Vodafone submits that Part XIC of the TPA could be usefully amended to make its operation and application increasingly efficient and transparent, and to deliver substantially greater business certainty. Vodafone makes these comments based on its first-hand experience of Part XIC of the TPA, particularly having sought a full merits

review to determine the wholesale price of the Mobile Terminating Access Service (MTAS), the practical implementation of which involves complex, extenuated and costly processes.

4.28 It is important to note that we submit these changes not as an alternative to structural separation, but as changes that are necessary even under a structurally separated model – since even a structurally separated NBN operator will be the monopoly provider of an essential service.

4.29 The current operation of the various processes for the determination of the price of access to declared services under Part XIC provides a good example of the need for greater efficiency transparency and certainty. From a practical perspective, there are three main ways in which the price of declared services may be determined under Part XIC:

- (a) by way of an indicative price specified by the Commission in pricing principles for a particular declared service pursuant to section 152AQ of the TPA;
- (b) as part of an access undertaking approved by the Commission pursuant to section 152BU of the TPA; or
- (c) as part of an access dispute determination made by the Commission pursuant to section 152CP of the TPA.

4.30 There are five key elements of Part XIC which Vodafone believes require amendment to deliver greater certainty for all parties – including the Commission – involved in the determination of prices of declared services:

- (a) clear regulatory objectives and the monitoring of outcomes;
- (b) pricing principles and their effects on the negotiate / arbitrate model;
- (c) the establishment of pricing principles;
- (d) timeframes for the establishment and application of pricing principles; and
- (e) facilitating appeals of Commission decisions on pricing principles to the Australian Competition Tribunal.

Importance of clear regulatory objectives

4.31 Vodafone asserts that it is vital that regulatory objectives associated with Part XIC processes and outcomes contribute to the object of Part XIC and promote the long-term interests of end-users (LTIE).

- 4.32 The stated objective of the regulation of MTAS was to increase competition in the fixed line market, particularly in the area of fixed-to-mobile (**F2M**) retail pricing. However, Vodafone's analysis demonstrates that the result of decreasing MTAS has not effected the competitive landscape, as measured by the market shares of Telstra's principal fixed-line competitors (which remain unmoved) and has delivered delayed and partial 'pass through' of MTAS decreases to F2M retail pricing.
- 4.33 Indeed the 'additional margin' generated for Telstra, which amounts to almost \$1 billion over the period June 2004 to December 2008 (ie the end of the current pricing principle) and around \$1.3 billion for the Australian fixed sector as a whole, is a direct cost to the LTIE. This situation is unpalatable to Vodafone, delivering unwarranted benefits to the incumbent fully-integrated operator and is contrary to the objective of MTAS regulation.
- 4.34 There is no requirement on fixed-line operators to pass through the MTR decrease to consumers, which has resulted in limited and delayed pass through of the MTAS decrease to F2M retail rates. Vodafone's Submission to the Australian Competition and Consumer Commission, *MTAS Principle Principles Determination, 1 July 2007 – 31 December 2008, Public Version, August 2008*, incorporated substantial input regarding this matter. That submission is at **Attachment A** to this submission. Pages 19 – 21 of Attachment A address the delayed and partial 'pass-through', evidencing that MTR decreases result in a windfall to Telstra rather than benefit to consumers. Additionally, rather than challenging Telstra's position in the market, across fixed, mobile and broadband, MTAS regulation has entrenched it.
- 4.35 Vodafone recommends that the objectives of regulation must be fit-for-purpose and be actively monitored. The Commission should be required to present evidence to demonstrate that the objective of the regulation is indeed being met, with such evidence encompassed in a regulatory review process, whereby critical evaluation of objectives and evidence must occur:
- (a) to decide whether to continue the regulatory intervention or not, for what purpose; and
 - (b) to ensure that the continuation of regulatory intervention is appropriately directed and, most importantly, delivers consumer benefit and is in the LTIE.

Pricing principles and the effects on the negotiate / arbitrate model

- 4.36 Vodafone's experience demonstrates that pricing principles effectively set prices in the wholesale market for the relevant declared service, as we have experienced via the MTAS. The practical impact of the publication of indicative pricing principles has constrained commercial negotiations, which has resulted in access seekers increasingly notifying access disputes and relying on the arbitration process for an outcome.

- 4.37 While the Commission has the power to reject an arbitration where a party has failed to meet the 'unable to agree' statutory requirement, we believe that the hurdle to demonstrate this has been set extremely low. This is portrayed in the Commission's assertion that it: *does not consider that the 'unable to agree' threshold should be interpreted as a particularly high threshold*⁴. Further, the arbitration process, and its part in the regime, enables the Commission to apply the indicative prices through determining arbitrations, which reinforces the effect of indicative pricing principles as ceiling prices.
- 4.38 Vodafone's experience is that the majority of commercial offers for MTAS that have deviated from the pricing principles have been rejected, and as a result commercial negotiations have stalled. According to the Commission's recent report, *ACCC Telecommunications Report 2006-07*, nine access disputes concerning MTAS were commenced in 2006-07 and 14 disputes were commenced the previous year. In Vodafone's experience the negotiation process extends only to the access seeker demanding the relevant rate of the pricing principles. Failure to agree on the relevant rate of the pricing principles leads to the notification of an access dispute. In practice, arbitration has been the primary mechanism through which the price of MTAS is 'negotiated'. The pricing principle has been applied by the Commission through the arbitration process to all arbitrations to which Vodafone has been a party.
- 4.39 We believe that the practical effect of the pricing principles is contrary to the intention of the negotiate / arbitrate model within Part XIC, and is in fact rendering the negotiate / arbitrate model ineffective as commercial negotiation is not possible.
- 4.40 Vodafone believes that this is a key element which must prompt a critical review of Part XIC to promote efficiency and certainty for all parties regarding the access pricing of declared services.

Establishment of pricing principles

- 4.41 Due to the regulatory framework of Part XIC, there is an opportunity for lack of efficiency and transparency in the manner in which access prices are determined in certain circumstances, and an apparent disparity in the rigour applied in considering and determining pricing principles, and those required to assess undertakings to pursue an amended price. The Commission can set an indicative price for a declared service in pricing principles issued under section 152AQ of the TPA. As described above, that indicative price then becomes the de facto price in the industry.
- 4.42 However, in determining indicative prices the Part XIC framework does not apply the same rigorous assessment as would be applied in the context of an access undertaking. The TPA specifies six criteria about which the Commission must be

⁴ Australian Consumer and Competition Commission, *Resolution of Telecommunications Access Disputes – a guide*, March 2004, p.8.

satisfied before accepting that an undertaking is reasonable (section 152AH), and the Commission has generally set an unreasonably high threshold for the evidence required in order for the Commission to be so satisfied. If there is anything found to detract from the position then the Commission will reject the undertaking. However there are no specific criteria about which the Commission must be satisfied prior to issuing pricing principles.

- 4.43 While Vodafone does not support the retention of the undertaking process, we believe that should the current undertaking process be retained under Part XIC, it must be supported by rigorous criteria which should be developed and subjected to public scrutiny in issuing pricing principles.

Timeframes for the application of pricing principles

- 4.44 In Vodafone's experience, it is not unusual for the indicative prices specified in pricing principles to only apply for a limited period of time such as between six and 18 months. In some cases, final pricing principles have been set well into the period for which they apply, and there is a requirement to be backdated. For example, the most recent MTAS pricing principles were finalised on 28 November 2007, five full months into the applicable 18 month period of application of the price (being from 1 July 2007 to 31 December 2008). At the time of submission of this document, a pricing principle has not yet been established for the period of 1 January 2009 onwards.
- 4.45 This serves to illustrate the significant business uncertainty faced by operators, that may be forced to 'guess' what the wholesale rate will be and apply it to the forecasting process. The result is that the business is subjected to a material risk profile, not of its own doing, which may well prove to be detrimental to a business's operating budget, financial health and sustainability.
- 4.46 This lack of forward looking prices is clearly unsatisfactory for businesses as it creates uncertainty, both in terms of their future costs and potential revenues.
- 4.47 Such short durations also appear to be completely unnecessary in the absence of circumstances where the cost to the access provider or the demand for the service is highly unpredictable beyond the short term. Both access providers and access seekers have a legitimate business interest in certainty regarding access prices for a reasonable period of time so they can be incorporated into forecasting, strategic planning and business models.
- 4.48 For this reason Vodafone recommends that indicative pricing should be provided for longer periods of time, for example 3 years, with the provision of adequate time between consultation and determination of the pricing principle and their taking effect, to enable businesses to incorporate revised access prices into their strategic planning and forecasting processes.

Undertaking process – Commission as appeal body to its pricing principles

- 4.49 Notably, the Commission's pricing principles are not the subject of an application for full merits review to an independent body such as the Australian Competition Tribunal (ACT). Further, any indicative price determined by the Commission then becomes a factor which the Commission can have regard to in determining whether an undertaking is reasonable.
- 4.50 It is not until a party lodges an appeal of an undertaking decision by the Commission to the ACT that a body independent of the Commission is able to examine the appropriateness of the matter of the undertaking – not of the pricing principles.
- 4.51 An appeal to the ACT as the first point of independent review is a full merits review of the undertaking. The ACT effectively stands in the shoes of the Commission at the time the Commission made the decision to reject an undertaking. The ACT can only review the materials that were before the Commission at the time the Commission made its decision.

Vodafone's recommendation for improved certainty and efficiency of declared services

- 4.52 Vodafone believes that the Commission should be specifically required to consider the legitimate business interests of access seekers and access providers in certainty of access prices when determining:
- (a) the duration of any pricing principles under Part XIC; and
 - (b) the date the new access prices contained in the pricing principles or determination come into effect.

Therefore, to best promote certainty and efficiency, Vodafone supports refining the current sequential negotiate / arbitrate / pricing principle/ undertaking / appeal access model in Part XIC, to establish a simpler two stage model in which the Commission sets the access price/s for declared services for a fixed period such as 3 years – with substantially strengthened criteria for assessment – with such a decision being subject to a single merits review by the Australian Competition Tribunal.

Changes to the regulatory regime that may be proposed by proponents

- 4.53 The RFP requires proponents to identify any changes they may want to the current telecommunications regulatory regime. While at least one proponent has publicly identified potential changes to the regulatory regime as part of previous special access

undertaking filing, others such as Telstra have declined to publicly identify the nature and extent of the changes they will seek to current regulatory regime.

- 4.54 Vodafone is in principle opposed to any proposal by a proponent to exempt the NBN from the key aspects of the current regulatory regime.
- 4.55 Vodafone is also opposed in principle to any proposal for overbuild protection in respect of the NBN. Vodafone is concerned that there is too great a risk that, no matter how tightly worded, a legislated overbuild protection would have unintended consequences in stifling innovation and competition from other networks, including mobile, particularly given the trends towards convergence.
- 4.56 Vodafone's position in respect of Universal Service Obligations (**USO**) is set out in our previous submission of November 2007 to the USO Review, at **Attachment B** of this submission.
- 4.57 It is difficult for Vodafone, or any other party, to make meaningful submissions as to the potential impact of any other changes to the regulatory regime in the absence of concrete information as to the nature of the proposals. In light of the importance of the structure of the regulatory regime to achieving the Commonwealth's objective of promoting competition, Vodafone submits that the Commonwealth should provide an opportunity for interested parties to review and comment upon the changes to the existing regulatory regime proposed by various proponents, prior to the Expert Panel making a final decision.

Conclusion

- 4.58 Vodafone reiterates its belief that the NBN project is crucial to the medium and long-term future of Australian communications and the Australian economy generally. It will also significantly impact the economic future of all players in the Australian telecommunications market – which in turn will significantly impact the welfare of all Australians.
- 4.59 Given its importance, Vodafone believes there is very little justification for not choosing a structurally separated model under which the owner/operator of the NBN is structurally separate from any owner/operator of other telecommunications services.
- 4.60 However, even a structurally separated NBN will be a monopoly provider of an essential service, and will need to be subject to improved regulation relative to the current regime.
- 4.61 Therefore, Vodafone submits that the Government should follow a 2-step process in relation to the NBN project:

- (a) Impose structural separation so that the NBN owner/operator may not be structurally related to a provider of telecommunications services; and
- (b) Refining the current sequential negotiate/arbitrate/pricing principle/undertaking/appeal access model in Part XIC, to establish a simpler two stage model in which the Commission sets the access price/s for declared services for a fixed period such as 3 years – with substantially strengthened criteria for assessment – with such a decision being subject to a single merits review by the Australian Competition Tribunal.

Attachment A

Vodafone Submission to the Australian Competition and Consumer Commission, *MTAS Principle Principles Determination, 1 July 2007 – 31 December 2008, Public Version, August 2008*

Attachment B

Vodafone Submission to USO Review, November 2007