OPTUS

Submission in response to ACCC Discussion Paper on Broadband Speed Claims

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Section 1. Executive Summary

1.1 The ACCC has indicated that it is concerned by the current absence of information on broadband speeds and performance in advertising material in the market. The discussion paper has set out an objective of ensuring better information is provided about broadband speeds to improve competition and consumer outcomes.

1.2 Optus agrees that information disclosure on performance and speed of fixed broadband services could be improved and we support the ACCC's objective. Consumers should have clear, simple and relevant information sufficient to enable them to make an informed decision about the broadband services they acquire.

1.3 However, this objective is unlikely to be achieved by simply increasing the regulatory burden on ISPs, which appears to be the aim of the ACCC's discussion paper. Optus believes a more nuanced approach is required. There needs to be better recognition of the different factors that influence speed or performance, many of which are outside an ISP's control. A critical first step to delivering this improved transparency is to understand why performance information is largely absent from the market today.

1.4 Optus believes this is due to a misalignment between the existing ACCC marketing guidelines, which attach a high degree of accuracy and certainty to any speed claims made by ISPs, and the capabilities of broadband technology, which is subject to a number of limitations. The reality is that mass residential broadband services are provided on a best efforts basis and performance can be variable and uncertain.

1.5 The ACCC's current marketing guidelines set a high bar resulting in a high level of risk for ISPs advertising speed claims. The guidelines require that any advertised speed must be *"attainable in practice"* including in *"peak periods"* for individual customers. The ACCC has indicated that it will *"not hesitate to take enforcement action where ISPs under-deliver on their promises"*[1].

1.6 Given the technical limitations of legacy based services, where the length of the copper runs and quality of the copper means that performance can differ on a premise by premise basis, it is not surprising that ISPs are reluctant to advertise speeds. The benefits to be gained from providing performance information are likely to be outweighed by the risks of breaching the ACCC's guidelines and facing enforcement action and reputational damage.

1.7 Whilst the transition to the NBN should lift broadband speeds and performance generally, the next generation technology will also be subject to certain limitations. This includes:

(a) The fact that NBN services are not one-to-one services, but share capacity at certain points in the wholesale and retail distribution chain. Even when the NBN is fully rolled out some elements of the NBN network may still suffer from degradation in the last mile connection, as is the case with services delivered over existing technologies;

(b) That the NBN residential grade services are best efforts services. Further, in the roll-out period certain services might be subject to service performance degradation due to interference issues and the need to remediate certain copper lines; and

[1] ACCC 2011 Information paper: HFC and Optical Fibre Broadband "Speed" Claims and The Competition and Consumer Act 2010.

(c) That the NBN product construct in the form of usage based CVC charges effectively prices speed at a premium. This requires ISPs to balance service performance and price to retail customers.

1.8 As with legacy services it is difficult for ISPs to make speed claims for services provided over the NBN technology with the level of accuracy and certainty demanded by the ACCC.

1.9 Optus believes that a more flexible approach to information disclosure is required that encourages transparency without the same risk of enforcement action. Any updated guidelines should properly reflect both the capabilities and the limitations of the broadband technology. Since the NBN will likely provide the platform for the majority of fixed broadband services in the future it is appropriate that any revised rules should focus on the NBN technology.

1.10 To improve transparency and promote competition Optus proposes that the ACCC's guidelines should be updated to encourage ISPs to provide customers with more useful information about their broadband service. This may include the following;

(a) AVC line speed: since this is the currency of the NBN it is important that ISPs are able to market services based on the underlying NBN access service;

(b) Average throughput: since throughput may vary in periods of peak demand, ISPs should also provide additional information on expected average peak time throughput of their services; and

(c) Measurement: average peak time performance could be substantiated based on independent network testing by a third party, such as the ACCC's proposed broadband monitoring programme. However, testing should only focus on the components of a service that are within an ISP's control.

1.11 Optus notes that the approach is consistent with the practice adopted in the UK where advertised speed is often referenced to Ofcom's testing of UK home broadband performance and its measurements of average peak performance.

1.12 In parallel to the above changes it would be helpful to improve public information on broadband speeds more generally. The debate around the NBN has generated a heightened level of public information about speeds and broadband performance, but it is not clear that this has always assisted public understanding of broadband performance. Headline claims about gigabit speeds that have become the currency of debate are arguably setting expectations that simply cannot be met in practice. It would be useful, therefore, for the ACCC to work with industry on a simple information package that better explains broadband service performance.

1.13 Optus also encourages the ACCC to consider the NBN product and pricing construct as part of its current review of the NBN SAU and proposed market inquiry to assess whether changes in the current approach could deliver better consumer outcomes on broadband performance.

1.14 Finally, in respect of mobile broadband performance Optus does not agree that ACCC intervention is warranted. Given the range of factors that can influence mobile performance at an individual level it is not clear that measures designed to require mobile providers to substantiate mobile broadband speeds and performance further would lead to material improvements in consumer outcomes.

Section 2. Overview of current market

Market snapshot

2.1 The opening up of the fixed line market to competition with the regulation of access to Telstra's copper line network has seen rapid growth in the take-up of broadband services and delivered clear benefits to consumers through lower prices and improved customer offers.

2.2 As at June 2015, there were 33.76 Million broadband subscribers in Australia of which 6.76 million are serviced by fixed broadband platforms with another 27 million using wireless based services, including smartphones and mobile wireless devices[2]. Not only has there been high take-up of services, but usage of broadband data has increased dramatically as it becomes the preferred conduit for many many business and entertainment services and applications.

2.3 In the quarter to June 2015 consumers used 1,460,269 Terra Bytes of data an increase of 41% over the previous year and a 525% increase in the four years since June 2011[3]. The ACCC has noted the benefits that competition is bringing to consumers in the provision of broadband services with prices for internet services having fallen by 21.5% in real terms.

"Vigorous competition in the market has seen operators improve the value of their data offers to meet consumer demand for data and immediate connectivity. Fixed and mobile providers are responding to demand levels through increasing data allowances in plans, or decreasing the rate per gigabyte. Fixed line providers are also continuing to innovate their bundling offers to attract new customers, by providing triple play services which include broadband, home phone and a streaming service".[4]

2.4 These trends are likely to continue as the industry transitions to the National Broadband Network (NBN). The NBN is expected to deliver a substantial uplift in the capability of fixed broadband services as a well as a more competitive industry structure. Optus acknowledges the role of regulation in helping to drive competition into the fixed broadband market and deliver these outcomes to the market.

No evidence of market failure on information disclosure

2.5 Given the widespread penetration of broadband services it is clear that the market is at a level of maturity. The industry services the needs of millions of customers on a daily basis and broadband is considered an essential tool to access arrange of communication, entertainment and business applications for consumers and businesses.

2.6 It is important that concerns raised by the ACCC over rising customer complaint levels about broadband services be put into their proper market context. It is to be expected that there will be some issues in an industry servicing some 30 million services daily. However, the TIO complaint levels noted by the ACCC that specifically

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[2] ACMA Communications Report 2014-15

[3] ACMA Communications Report 2011-12

[4] ACCC Telecommunications Report 2014-15

relate to speed, some 2,159 in the Quarter 3 of 2015/16, represent less only 0.03% of the fixed broadband services in operation. This is small by any measure.

2.7 Further, Optus notes that when consumers are surveyed about their broadband services speed emerges as a lower priority issue for consumers than prices and the data allowance included in their plan. The ACCC refers to a recent ACCAN survey of broadband literacy of consumers as providing evidence that consumers are confused about speed claims. This survey actually indicated that 87% of customers surveyed found choosing an ISP to be relatively easy. Further, it found that customers when choosing their internet service provider ranked speed or broadband performance third in importance behind price and monthly usage allowance[5].

2.8 It is not clear that the ACCC has presented sufficient evidence to suggest that speed/performance is a major issue of concern for customers today and that further tightening of the regulations and obligation is required. That said, Optus accepts the ACCC's proposition that there is scope to improve the information in the market about broadband speeds and performance. It is appropriate, therefore, to review the current advertising practices and the existing regulations applying to these.

Current ACCC marketing guidelines discourage information disclosure

2.9 A review of the websites of the three largest broadband providers indicates that services are typically promoted using the monthly price and the inclusions within the plan with particular prominence given to the monthly data allowance. To the extent that speed is mentioned, then it is often only referenced in the more detailed terms and conditions and it is done in a way that clearly highlights the various limitations on achieveming that speed.

2.10 Below are two examples of information provided in connection with the top tier HFC cable broadband services offered by both Optus and Telstra.

> *"Up to 100 Mbps Download/Up to 2 Mbps Upload. As fast as it gets. This speed pack provides plenty of power for several people online. Use multiple devices doing data-hungry things like downloading movies and music, playing video games online, or streaming live video and TV. The speeds above are only an indication of what you may experience on your service. The speed you will experience depends on a number of factors including your access type, demand on the network and local conditions such as internet traffic, your line condition, your hardware and software, the data source or destination and your location which can interfere with reception and speed."* ***Optus cable broadband***

> *"If you have taken up a Super Fast Speed Boost, it can provide download speeds up to a maximum of 100Mbps into the home for sharing across multiple users in a household. Existing customers may need to purchase a compatible Home Network Gateway to access these speeds. Actual speeds vary, including due to your location/equipment/ software, data source and content type, the number of users and internet traffic. Speeds may be slower when your devices are connected by Wi-Fi rather than ethernet cable or if you're a Telstra Air member and you're using your home broadband service at the same time as a hotspot user".* ***Telstra cable broadband****.*

[5] Broadband Literacy report January 2016

2.11 Optus believes strongly that the absence of speed/performance information is a direct result of ACCC intervention into the market.

2.12 In 2007 the ACCC released an industry information paper in response to concerns it had about how ISPs were promoting broadband services. A follow up information paper was released in 2011 which extended the ACCC's guidance to services offered over cable and fibre networks.

2.13 The 2007 paper was focused on ADSL 2+ technology, which was relatively new at the time and it particularly targeted claims made about the maximum performance of the technology. It cautioned that;

"ISPs should consider alternative ways to advertise broadband internet. Headline speed claims should be avoided entirely for descriptions such as "ADSL2+". "Maximum" or "up to" claims could be avoided in favour of typical speeds or a typical range of speeds… If ISPs do make "up to" or "maximum" speed claims to their customers they should carefully consider their compliance with the TPA and consider seeking legal advice"[6].

2.14 Pursuant to these guidelines the ACCC secured enforceable undertakings under 87B of the Trade Practices Act from Telstra, Optus and VHA in September 2009 in respect of their advertising and promotion of telecommunications services. This included undertakings directed specifically at the advertising of broadband speed. In this respect each party committed that it will not:

"advertise or promote headline broadband speeds unless those speeds are or will be generally available to consumers on the network on a regular basis"

2.15 The ACCC's 2011 paper reflected the language of these undertaking and tightened expectations about speed claims. The ACCC indicated that ISPs should avoid advertising the maximum data rates applicable to NBN technology, such as 100/40 etc, unless these speeds were "attainable in practice" including in peak periods. Further, the ACCC indicated that it was fully prepared to enforce its marketing guidelines;

"The ACCC will not hesitate to take enforcement action where ISPs under-deliver on their promise and fail to demonstrate a reasonable basis for their claims".

2.16 Optus believes that the ACCC's guidelines and undertakings set unreasonable expectations for ISPs to meet to be able to advertise speed when promoting broadband services to customers and take insufficient account of the potential impact of exogenous factors in individual use cases. ISPs often have little capacity to deal with common exogenous factors. When making any speed or performance claim in its advertising material an ISP is required to have high level of certainty that a service offered to an individual customer would meet that advertised speed in practice for the majority of the time, including in peak periods.

2.17 ISPs are ultimately following these guidelines with the result that there is little information on speed/performance in the market. As will be discussed below the ACCC's expectations are not reasonable given the nature of broadband networks and the various limitations that apply to the different broadband technologies.

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[6] ACCC Information Paper January 2007: Broadband Internet Speed Claims and the Trade Practices Act 1974, paras 11 and 12

Section 3. ACCC guidelines do not a take appropriate account of the nature of broadband services

3.1 The 2007 and 2011 information papers both identify a range of factors that can influence broadband performance and that not all of these are under an ISP's control. The papers also acknowledge that the each of the prevailing broadband technologies, ADSL2+, HFC cable and the NBN, can be influenced by certain technical limitations, such as line length in the case of ADSL technology and provisioned CVC capacity in the case of the NBN. However, the impact of these limitations does not appear to have been fully reflected in the resultant advertising rules.

3.2 Optus submits that the guidelines fail to reflect the nature of mass-market broadband services and how networks are engineered to deliver these services. Residential services are not provided as one-to-one services with guaranteed levels of services performance, rather they are offered on a best efforts basis. Applications and services used by customers are provided over number of different network elements; not all of these are under the control of the ISP supplying the broadband service[7]. Each of these components may influence the performance of services delivered to end-users. Many of the components are shared by multiple end-users, which means that changes in demand at different points in the service delivery chain can also influence performance.

3.3 ISPs can only directly influence the network components they control. Investment into these is typically set to manage performance at peak load demand; not to guarantee maximum performance at all times. To do otherwise would result in networks being over-engineered which would result in higher costs for end-users. It is notable that corporate services, which are engineered to provide a more consistent level of performance, are priced at a significant premium to residential services.

3.4 In practice consumer grade networks can be expected to attract congestion at times of peak demand, but they are typically engineered to ensure that there is an acceptable level of throughput for all customers where congestion occurs. Current practice is to treat customers equally and not to discriminate so that performance will be impacted for all customers when demand starts to hit capacity constraints. This means that whilst customers may not achieve their maximum speed they should still achieve a level of performance that enables them use the services and application they want to use.

3.5 In addition to the broader engineering considerations, broadband performance will be materially impacted by technology specific factors. It is important to understand these properly and how they might restrict an ISP's ability to disclose information given the ACCC's marketing guidelines.

Limitations of legacy networks

3.6 When the ACCC's guidelines were issued, the predominant broadband technology was ADSL supplied over Telstra copper lines and the HFC cable technology.

[7] For example, service performance can be impacted by in home issues (such as Wi-Fi, customer equipment, internal wiring) and the equipment over which applications are provided (such as servers and the links to these many of which are located overseas).

3.7 The line speed of a copper-based service is highly dependent on the length of the copper line between a customer premise and the exchange and the quality of the copper. The line length of a copper-based service will differ on a premise-by-premise basis. Equally, the quality of the copper can be highly variable and may be impacted by external factors such as water logging from periods of heavy rain. Performance can vary from household to household and from day to day.

3.8 Whilst the HFC cable networks do not face the same issues related to lengths of copper lines, services are impacted by the fact that the cable is predominantly a shared medium. Performance is, therefore, sensitive to demand on the network.

3.9 Given these technical limitations on performance, an ISP would likely have to tailor any performance advertising to an individual customer level to avoiding breaching the ACCC's guidelines. This is neither practical nor desirable. It is not surprising that ISPs changed their marketing practices and no longer give prominence to speed claims in promotional material, given the threat of enforcement action for not providing accurate information. Where speed is referenced it is done so in a way that reflects the many technical factors that are likely to influence and limit the achievement of that specified speed. This information is typically set out in the detailed terms and conditions.

Technical limitations of the NBN technology

3.10 The transition to the NBN will see a major upgrade of the existing fixed broadband infrastructure across Australia. This is expected to deliver a significant lift in the performance and speed of broadband services.

3.11 Since the NBN will operate as a national wholesale network with a near monopoly over the supply of high speed fixed broadband services the performance capabilities of NBN Co's wholesale service will have a key impact on downstream retail services. In determining how information disclosure might be improved it will be important, therefore, to properly understand the technical capabilities and limitations of the NBN technology.

3.12 One of the objectives of rolling out the NBN infrastructure was to solve a number of the technical limitations that inhibited the performance of legacy broadband services. Issues associated with line length will be removed for fibre to the premise GPON services and will be less significant for FTTN and FTTB services, which will have much shorter copper line lengths. The HFC cable networks that NBN Co is acquiring form Optus and Telstra are expected to have a major capacity and technology upgrade. Performance levels are almost certainly likely to be improved on the NBN compared to existing legacy services.

3.13 Nevertheless, there are factors specific to the NBN technology that may affect performance. This includes;

(a) The fact that the NBN product construct is not a not a one-to-one service offering and the different technologies have different performance capabilities;

(b) That there will be limitations on performance during the roll-out of the NBN and subsequent service migration period; and

(c) The product economics that are largely dictated by the current CVC pricing structure.

3.14 Each of these issues is considered in more detail below.

Product limitations

3.15 The NBN wholesale product construct has placed a significant emphasis on speed with services being sold at varying speed tiers across its different access technologies. However, it is important to note that the NBN advertised AVC line speeds do not necessarily translate into speeds provided downstream. The AVC is the dedicated customer component of a service and it sets the maximum allowable throughput of a service. However, the AVC has to be combined with a shared CVC component to deliver services to end-users.

3.16 Further, a number of the AVC line speeds offered on the multi-technology mix services are positioned as offering "up to" speeds since performance will depend on a number of external factors. In its Product Description NBN Co has identified these factors as including the distance of a premise from the node, the condition of the copper line and certain other environmental factors (such moisture on the line).

Transitional performance limitations

3.17 According to NBN Co, the services provided over the FTTB and FTTN technologies are likely to be subject to performance degradation for a temporary, but unspecified period, as legacy services transition to the NBN. In the proposed SAU variation, NBN Co has recently submitted to the ACCC, NBN Co has identified two issues that will affect broadband performance.

3.18 Firstly, it has identified the "Co-Existence Period" which is a period (currently with no defined end date) where NBN Co may be required to adjust the normal operations of the network in the supply of the NBN Access Service, for example, by way of a Downstream Power Back-off. This will be done to avoid interference with existing legacy-based services supplied over copper. In practical terms, this means that service performance or speed on an individual line will potentially be dropped to a lower speed tier.

3.19 Secondly, it has identified the concept of remediation. This refers to a period during which NBN Co may undertake work in respect of the premises and during which time the performance of the NBN Access Service at that premise may be significantly lowered.

3.20 Whilst these performance issues will likely be temporary and limited to the NBN rollout period, they may apply for an extended period. It is not clear the extent to which NBN Co will inform ISPs or end-users that a service will be subject to speed limitations.

CVC pricing

3.21 Arguably, the most significant factor that influences the actual performance of NBN services delivered downstream to retail customers is the CVC component of the NBN wholesale product construct and the current price of the CVC. The NBN wholesale products are made up of two parts; an uncontended access charge (the AVC) which is offered at different speed tiers; and, a contended backhaul aggregation product (the CVC). Ultimately, the throughput available to customers is dependent upon the provisioned CVC capacity that is shared by multiple AVCs.

3.22 The CVC is something of an artificial construct that seeks to monetise customer usage of the network. A consequence of the current approach is that speed and performance is effectively treated as a scarce resource, which results in high CVC costs to meet peak demand. This approach helps to drive a misalignment between the wholesale AVC speed tier purchased and the actual performance experienced by a customer.

3.23 This can be seen today at an industry level in terms of the average AVC and CVC services purchased in the market. The average AVC speed tier purchased from NBN Co is 30 Mbps[8] yet the provisioned CVC capacity per customer is only 1 Mbps. This implies that in period of heavy demand and usage customers are unlikely to be getting the speed expected from their AVC tier[9].

3.24 To improve speed and performance ISPs will need to provision more capacity, but this will drive up the costs of the service and end-user prices are likely to have to increase commensurately. Ultimately, the CVC pricing construct drives ISPs to make trade-offs between performance and end-user pricing. It is unlikely, therefore, that current AVC line speeds are being met in periods of peak demand.

Interaction between NBN services and current ACCC marketing guidelines

3.25 Given the limitations noted above it is not clear whether the current ACCC marketing guidelines provide ISPs with sufficient flexibility to make broadband speed claims in connection with services provided over the NBN. This is clearly borne out by current offers in the market that appear to avoid any quantitative statements about speed in headline offers. To the extent that speed is referenced it is often relegated to the detailed terms and conditions and aligned closely to the NBN AVC speed tiers. Broadband plans continue to focus on the monthly price and the data allowance attached to the plan.

The ACCC's guidelines need to better align to broadband technology

3.26 If ISPs are reluctant to advertise speeds, except in the most qualified way, on both the legacy and NBN technologies then it is clear that there is a problem. However, Optus submits that this does not result from market failure; rather it is a failure of existing regulatory guidance to take account of how broadband networks are managed and the limitations of these networks in meeting performance claims for properly services that remain best efforts services.

3.27 The key to improving disclosure of speed/performance would appear to be amending the ACCC marketing guidelines.

[8] Calculations based on NBN Wholesale SIOs - quarterly snapshot as at June 2016

[9] To achieve a speed pf 30 Mbps no more than 1 in 30 services should be using the CVC capacity at any one time.

Section 4. Improving current levels of transparency

4.1 Optus accepts that the way broadband services are currently marketed provides less than optimal comparability. Information given to customers in accordance with current ACCC expectations about broadband speeds provides them with insufficient insight into how their service is likely to perform. It is also difficult for consumers to compare the services offered by different ISPs as information disclosure tends to be qualitative and generic.

4.2 As indicated in the sections above the ACCC's existing marketing guidelines for advertising broadband speed claims are a cause of the current information vacuum. These require a level of certainty and accuracy that is simply not aligned with current network practices and technological limitations. The problems are elevated by the clearly stated aimed of the ACCC to enforce the rules and seek redress if claims cannot be substantiated.

4.3 Optus believes that a more flexible approach from the ACCC which seeks to encourage rather than discourage information disclosure would go a long way to improving the level of information disclosure. The current rules need to change to take proper account of the underlying technology and engineering practices.

Technology

4.4 In re-defining the current guidelines it is important that we focus on future technologies. The legacy copper and HFC cable networks are in the process of being transferred to the NBN on an area-by-area basis to be upgraded. It would be inappropriate to set new rules that encourage or require further investment in these legacy networks in this interim transition period.

4.5 The updated marketing guidelines should, therefore, focus on the current NBN product set and current engineering practices related to the NBN, as the basis for improved information disclosure. These should encourage ISPs to provide sufficient information to enable customers to understand what their broadband service will deliver and to provide them with sufficient them to easily compare offerings between different ISPs, which might on the face of it appear quite similar.

A proposed new approach

4.6 Optus believes that this objective can be achieved by providing customers with three simple pieces of information;

(a) The AVC line speed of a service;

(b) The expected average throughput of services in the peak period; and

(c) Information on steps taken to substantiate the average peak performance.

4.7 Access line speeds are integral to the NBN product offering. It is important, therefore, that ISPs are able to sell and market services on the basis of the NBN access line speed tiers. Line speeds should be lifted from the detailed terms and conditions to be more visible in marketing material. This will help to differentiate services offered on the NBN and provide end-users with services that are tailored to their requirements. It would also assist NBN Co to achieve its stated financial objectives, which may rely on end-users buying higher AVC speed tiers.

4.8 However, in marketing access line speeds it would be appropriate for any marketing material to identify any conditions set by NBN Co in provisioning the underlying

service clearly. Therefore, if line speed is only provided as a range or on an "up-to" basis (as is the case with some of the NBN multi-technology mix technologies) then ISPs should be free to communicate this range to customers. This would be consistnet with the ACCC's approach to the NBN wholesale product set in other regulatory processes[10].

4.9 As indicated in the previous sections, notional NBN line speeds may not equate to the actual performance of a service delivered to customers at all times. In periods of peak congestion speed is likely to slow. The level of performance will directly reflect decisions taken by an ISP in terms of investment in the provisioned CVC and backhaul capacity.

4.10 It would be appropriate therefore when selling services at particular AVC speed tier for ISPs to disclose sufficient information for customers to understand likely performance of services in peak periods. There is a range of measures that could be disclosed, but a simple and understandable metric would be to disclose the expected average peak throughput of an ISP's services.

4.11 The average peak time performance could be substantiated based on independent network testing by a third party. Optus notes that the ACCC's proposed broadband monitoring programme would likely provide appropriate independent test results on which to base these performance measures.

4.12 The approach Optus has outlined above has similarities to the practice adopted in the UK. Optus notes that advertised speeds by UK based ISPs are typically referenced to Ofcom's testing of UK home broadband performance[11].

4.13 It will be important to ensure that any testing is robust and represents a fair reflection of those elements of the service that an ISP controls. The impact of Wi-Fi connectivity, in-home wiring, third party modems and content servers should be excluded from any 'test' impacts as an ISP can only influence, but not control these. The test period should also be capable of smoothing out or excluding exceptional events and planned NBN outages.

Failure to meet claimed performance

4.14 As indicated above, such rules should encourage ISPs to be transparent and to improve their service offerings. Therefore, if an ISP fails to deliver the advertised or claimed speed for a service the first response ought not to be ACCC enforcement action through the courts rather an ISP should be given an opportunity to fix the issue and/or release a customer from their contract. This should also apply in the case of a breach that affects multiple customers.

4.15 Enforcement action should only arise in response to evidence of systemic breaches by an ISP or if there is evidence of a clear intention to mislead customers. As a regulator of the industry, the ACCC has other means available to it than action through the courts.

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[10] Should the ACCC have concerns with this then it should seek to address these directly through the SAU review process rather than indirectly through ISP marketing restrictions.

11 Refer to Virgin Media broadband offers: http://www.virginmedia.com/shop/broadband/compare.html ;Talk Talk broadband offers: https://sales.talktalk.co.uk/product/fibre; BT broadband: https://www.productsandservices.bt.com/products/broadband-packages/

Benefits of this approach

4.16 Optus believes that the above approach will help to deliver on the ACCC's twin objectives of improved customers disclosure and promoting competition by encouraging service differentiation. Under the above approach if ISP A offers a 50 Mbps service but this is only likely to achieve 20% of the headline performance in peak periods compared to 80% of performance in the peak period for the same 50 Mbps service offered by ISP B then the service differential will be clear to customers. A customer can make an informed choice, which might be to favour performance over price or vice-versa. In either case, the information available would represent a substantial improvement compared with that provided in the market today.

4.17 Further, having information on average peak performance substantiated by ACCC testing would remove a first mover disadvantage from improving information disclosure. If an ISP unilaterally decided to market its NBN service performance based on its own testing it is not clear that its service would compare well against another ISP that continued to simply provide qualitative information and reference the NBN AVC speed tiers.

Improved public information

4.18 In parallel to the above changes, it would be helpful to improve public information more generally on broadband speeds. The debate around the NBN has generated a heightened level of public information about speeds and broadband performance, but it is not clear that this has always assisted public understanding of broadband performance. Headline claims about gigabit speeds[12] that have become the currency of debate are arguably setting expectations that simply cannot be met in practice.

4.19 It would be useful, therefore, for the ACCC to work with industry on a simple information package that better explains broadband services. This should include;

(a) The nature of broadband performance and what speed means;

(b) The range of factors that influence speed;

(c) How speed interacts with different applications;

(d) The impact of factors outside an ISP's control on speed/performance such as Wi-Fi, modems, power adaptors, servers and international links; and

(e) Why a consumer might want a high or lower speed service.

4.20 Importantly, it should also recognise that speed is just one factor in a consumer's purchasing decision and that customers should weigh-up the value of the overall service they are being offered.

[12] Refer to recent report by Ovum for NBN Co titled: HFC: Delivering Gigabit Broadband

Section 5. Mobile broadband speeds and representations

5.1 Optus notes that the discussion paper focuses largely on fixed broadband services. Accordingly, we have only provided brief comments on the issues raised in connection mobile broadband speed claims. The points we have made regarding fixed network advertising also apply to mobile broadband.

5.2 Firstly, the ACCC has put forward no evidence to demonstrate that the information provided to customers on mobile performance is a cause for concern. As the ACCC is aware, the industry is in the midst of a major technology upgrade with billions of dollars being invested in new 4G technology. Services are gradually being transitioned from legacy 2G technology to 3G and 4G technologies. The service benefits between 4G and legacy technologies are immediately apparent to customers when they switch technology. However, Optus provides information to assist customers when choosing a mobile service. This includes information on the likely performance differences between 3G and 4G services and address based maps showing the coverage of our services[13].

5.3 Secondly, Optus notes that there is a range of tools available for customers to check their service performance in real-time, such as mobile speed-test applications. In addition, publications such as Communications Day publish annual mobile performance data for each of the MNO's based on independent testing by P3. This report measures network performance of the three MNO's, including call quality, file upload and download speeds, call success rates, website access, and mobile video quality.

5.4 Thirdly, there are a range of factors that will influence the performance of a customer's mobile service. As with fixed networks, many of these factors are outside an MNO's control. However, mobile network performance is likely to be affected to a greater degree by factors that are specific to the location and environment of a customer at the time they use a service. Many of these are highly variable and can have a material impact on performance.

5.5 Given the range of factors that can affect mobile performance at an individual level, it is not clear that measures designed to require MNO's to substantiate mobile broadband speeds and performance further would lead to material improvements in consumer outcomes without significantly greater deliberations. The mobility inherent in the service will always act as a key inhibitor on MNO's being able to make accurate speed claims for individual services.

[13] http://www.optus.com.au/shop/mobile/network/technology#Technology

APPENDIX 1

Detailed Questions

Issue 1 – Network management and monitoring services delivered on NGNs

1. **How do RSPs, content service providers and access network owners/operators currently manage and monitor their fixed broadband network and speed performance?**

   Optus monitors the performance of its networks to ensure that an appropriate level of service is being delivered to our customers.

   c-i-c

2. **When issues are detected through performance monitoring or in this context, what are the key measures available to improve network performance and therefore speed of service? What timeframes are needed to implement any such measures?**

   c-i-c

3. **Does the move to next generation access networks provide opportunities for RSPs to better manage their networks and more accurately assess the service performance and speeds that they deliver in practice?**

   Next generation access networks inherently have larger capacity infrastructure allowing ISPs to build infrastructure that is designed to meet demand on those networks. However, as discussed in section 3 of the submission there is a range of factors associated with next generation networks that may affect performance.

4. **What information is available to RSPs to assist them in making accurate performance claims in their marketing materials and at point of sale?**

   As indicated in the main body of the submission, Optus does not currently make specific speed/performance claims. Any information that is provided is based on the capability of the technology (e.g. NBN line speeds) and is subject to clear disclaimers. Nevertheless, there is a range of tools available to Optus to measure performance, including;

   - Ookla speednet data that provides Optus with fixed product performance on regular basis.
   - Monthly Netflix reports showing comparisons of ISP performance against the Netflix application.
   - c-i-c

5. **Is information generated through network monitoring and diagnostics used by RSPs to inform speed claims made to consumers? If so, how?**

   As indicated above, Optus does not currently make specific speed/performance claims. Any information that is provided is based on the capability of the technology and is subject to clear disclaimers. c-i-c.

6. **Is information on expected service performance available to RSPs when establishing a particular retail service? Is information on actual service performance available to RSPs shortly after service activation? How is this information provided to consumers or otherwise taken into account by RSPs when communicating with consumers?**

   See answer to 5 above.

7. **What arrangements can RSPs implement to minimise the impact where an individual service will not meet the represented retail product specification that is generally available to users of the service? Are the consumers of these services offered the opportunity to exit their contracts without penalty?**

   Where a service does not meet the represented retail product specification, Optus will generally attempt remediation of the service in the first instance. c-i-c.

Issue 2 – Presentation of speeds information to consumers

1. **What are the impediments to RSPs making more meaningful speeds information available to consumers, including the speeds that the RSP's retail products support on fixed services during peak periods?**

   Refer to main submission. There is a significant standard of proof required for ISP's to make a claim around the speed of a broadband service.

   c-i-c

2. **Do RSPs consider they need additional information/support from access network owners/operators to effectively communicate broadband speed information to consumers?**

   For services provided over wholesale networks such as the Telstra Wholesale DSL network and the NBN, ISPs are dependent upon information about the performance of access networks and individual connections to be able to communicate speed/performance information to end-users. For further information refer to section 3 of the Optus submission.

3. **What aspects of the RSP service should be the basis of performance and speed claims? For instance, should RSP claims be limited to the service delivered into the premise (excluding in building networks operated by the end-user)? Should claims be based on the performance of actual end-user services and/or on network testing performed using domestic/international test servers?**

   Refer to section 4 of the Optus submission. Speed claims can only be made where the ISP maintains control over the end-to-end operation of the network or service. Given the variance of end-user services, premises and network configuration, ISP's cannot warrant a particular speed outcome. ISP's rely on wholesale service providers for access network speed outcomes.

   Testing for any speed claim should be from the end user NTD (network terminating device) to a domestic server. It should exclude Wi-Fi connectivity, in-home wiring (in the case of power line adapters) and third party modems,

4. **How could impediments be overcome so that consumers will receive meaningful speeds information?**

   Refer to section 4 of Optus' submission. Standardised measurement by a third party would allow ISP's to make informed claims about speed. Optus supports the ACCC's proposed broadband monitoring programme, which would provide a useful basis to improve information disclosure.

5. **Could a standard product disclosure template or similar information tool assist RSPs to present information? If so, what sort of information should be included in the template so that it is comparable by consumers?**

Refer to section 4 of Optus submission.

6. **Which performance measures would be most appropriate for the provision of more accurate performance information to consumers? Should 'speed' remain the focus, or should the approach be broadened to include other measurable performance factors?**

   Refer to section 4 of Optus submission.

7. **What strategies could be adopted to ensure any changes to the way that RSPs present speeds information to consumer are implemented at the same time?**

   A standardised measurement by a third party would provide information to allow ISP's to make informed claims about speed.

Issue 3 – Peak period demand

1. **Do RSPs design and manage their networks and fixed services to deliver the same service performance and speeds during both peak and off peak periods? Does this differ by service/plan?**

   As indicated in section 3 of Optus' submission, networks are typically designed to manage performance at peak load demand. This means that performance may vary between peak and non-peak periods. In periods of heavy demand customers may receive a level of throughput that is less than the maximum speed achieved in non-peak periods. As indicated in section 3 a key factor driving congestion in peak periods on NBN services is CVC pricing.

2. **Do RSPs provide information to consumers about whether their services are likely to be impacted during peak periods? What representations are made to consumers in this regard?**

   Information is provided to customers in the detailed product terms and conditions.

3. **What tools are available to RSPs to monitor their services during peak periods? Do these tools and associated information provide a sound basis for RSPs to make reliable representations to consumers about the performance of their services during peak and off peak periods respectively?**

   As indicated above, there is a range of tools available to measure performance. However, the main barrier to improved information transparency is the ACCC marketing guidelines that require a level of certainty and substantiation that is not currently achievable.

4. **How do RSPs manage complaints and enquiries from consumers about peak speed problems?**

   c-i-c

Issue 4 – Premium speed products

1. **Is it possible for RSPs to distinguish traffic on their fixed networks to prioritise premium speed services or otherwise differentiate service levels by service/plan type, particularly during busy hours?**

   Tools are becoming available that may enable different types of traffic to be identified and different levels of priority attached to these. c-i-c

2. **What tools do RSPs use to ensure consumers who sign up for premium speed services receive a higher speed as a consequence of paying for a more expensive service?**

Customer download speeds conform to the access network speed that a customer has been offered as part of a premium speed service. This means that a customer cannot exceed the speed tier for the service they have taken.

In periods of peak demand speed may fall below the maximum headline speed. c-i-c

3. **Do RSPs have measures in place to ensure that consumers are not encouraged to take up more expensive services (to address network congestion problems on basic services) if the premium service will also be affected by network congestion problems?**

   c-i-c

Issue 5 – Prioritisation of network traffic

1. **Do RSPs currently prioritise certain network traffic on fixed broadband services? If so, how is network prioritisation communicated to consumers?**

   c-i-c

   Optus' customer terms notes; *"we may modify an aspect of the service or the delivery of the service if it is necessary to do so for the efficient operation of the network used to supply the service".*

2. **How do RSPs manage and monitor the performance of their services in respect of delivering prioritised applications and other applications respectively?**

   See answer above.

3. **Would there be any practical impediments to RSPs disclosing to consumers whether they prioritise traffic for certain applications? Is it possible for RSPs to disclose the resulting service quality experienced by users of prioritised applications and how this compares to service performance more generally?**

   See answer to 1 above.

4. **Is information made available by applications service providers a reliable basis for consumers interested in those applications to make broadband purchase decisions more** generally?

   Optus notes that application service providers such as Netflix publish an ISP speed index on a monthly basis, which provides a good indication of ISP network performance for this application.

Issue 6 – Data intensive applications and services

1. **How do RSPs currently plan for and present consumer information about new data intensive applications and services for fixed broadband services?**

   Optus advises customers through its general terms where over the top services and other data intensive applications and services used over a fixed broadband service will generate significant data usage. Further, where data for a service of this type is un-metered, this is highlighted to customers. Optus also advises customers about the impact of multi-device/application uses in the home.

2. **How is service performance for new data intensive applications monitored?**

   c-i-c

3. **How quickly can RSPs respond to changes in demand when this places pressure on network capacity? How is information about this and any limitations on service performance best communicated to consumers, both upfront and during the life of a retail contract? Depending on access network type**.

   See answer to question 2 under Issue 1 above.

4. **How do RSPs currently respond to complaints about short term capacity issues where these are related to data intensive applications? Are there any steps that could be taken to improve these practices for future events?**

   Optus will look to upgrade capacity to address any capacity issues.

Issue 7 – Managing isolated cases of poor service performance

1. **What thresholds would provide a reasonable basis for performance claims that RSPs use in their marketing materials for fixed broadband services?**

   Refer to section 4 of the Optus submission.

2. **What measures could RSPs reasonably implement to minimise the impact on consumers should their service not meet the represented retail product specification?**

   c-i-c

3. **What factors should the ACCC consider in determining a level of response to individual instances of broadband services failing to meet the advertised level of performance?**

   Given the variability and factors involved in the provision of broadband service, Optus would recommend that an ISP should always be given an opportunity to remedy the individual service. In the event that a customer's service cannot be remediated, Optus recommends that the ISP be allowed to let the terminate their contract without penalty.

Issue 8 – Mobile broadband speeds and representations

1. **Is it possible to provide mobile broadband performance information, including speed claims, to consumers? What sort of mobile broadband performance information is likely to be helpful to consumers in this regard?**
2. **How do mobile network operators (MNOs) and mobile virtual network operators (MVNOs) currently manage and monitor their mobile broadband network performance, including for speed of service?**
3. **When issues are detected through performance monitoring, what are the key measures available to improve network performance and therefore speed of service? What timeframes are needed to implement them, and how is this best communicated with consumers?**
4. **Are there impediments to MNOs and MVNOs making meaningful speeds information available to consumers? How could any such impediments be overcome?**
5. **What measures could MNOs and MVNOs reasonably implement to minimise the impact on consumers should their service not meet the represented retail product specification?**
6. **What factors or tolerances should the ACCC consider in determining a level of response to individual instances of mobile broadband services failing to meet the advertised level of performance?**

7. **What strategies could be adopted to ensure any changes to way that MNOs and MVNOs present speeds information to consumer are implemented at the same time?**

c-i-c.

As indicated in section 5 of Optus' submission, mobile performance can be influenced by a range of factors that includes the type of device used and the location of a customer. It is not reasonable to expect MNO's to make performance claims at an individual service level.