Boost and Commercial Handover Connection Services issues paper

Cross submission | Commerce Commission

15 August 2014

Contents

Executive Summary

1. Thank you for the opportunity to comment on submissions received on the Boost and commercial hand over services issues paper.

2. All submitters support innovation and the opportunity for Chorus to provide commercial services that are truly differentiated from the regulated services. Almost all submitters agree, though, that differentiation that is only delivered as a result of degrading the service performance of the regulated UBA variants is not innovation and is not, and should not, be permitted under our regulatory framework.

3. Chorus' proposal will result in network congestion on the regulated UBA service, which will have significant implications for end users. Over 40% of EUBA customers today are served by handover links that already exceed Chorus' proposed cap and will experience slower speeds and degraded performance under it. Broadband connectivity is a critical component of our customers' work and home life. We will not accept or support Chorus threatening significant degradation in our customers' broadband service experience unless we agree to pay it more than the regulated price for UBA.

Parties are divided over the purpose of the UBA service

4. The submissions and workshop discussions highlight that this is, ultimately, a debate about what the purpose of the regulated UBA service is:

    a. In Chorus' submission the regulated UBA service provides limited functionality that is only suitable for low bandwidth users who use the internet for basic emails, browsing and social networking needs. Chorus estimates approximately 20% of customers fall into this category. Customers that want to use their broadband for gaming and video streaming are not provided for by the regulated service;

    b. By contrast, we believe the regulated UBA service was designed to provide a uniform full-speed/full-speed broadband access service that was capable of supporting evolving end-user requirements and therefore of serving all New Zealanders.

5. The idea that the regulated UBA service should only be capable of serving a subset of New Zealanders is, in our view, insupportable. We consider the Commission was clear in Decisions 568, 582 and 611 that the regulated UBA service was designed to be the primary input into all retail broadband services, targeted at all New Zealanders, and to grow with New Zealanders' changing bandwidth requirements. For example, in Decision 611 the Commission concluded:[1]

    a single internet-grade FS/FS Basic UBA service would best give effect to s 18 …

    continuing to limit the upstream line speed of the Basic UBA service to 128 kbps would be unlikely to meet the changing needs of residential and SME broadband end-users where there is increasing use of symmetric web based applications such as social networking websites, video content, and increasing file sizes in general for residential and SME end-users …

[1] Decision 611, paras 59 and 107.

a single FS/FS Basic UBA service provides Access Seekers with the maximum flexibility to use bitstream access to differentiate their retail services

6. The same logic must apply to the throughput limit proposed by Chorus.

7. Through each of these Decisions, the Commission has consistently applied the STD in this way, and with non-discrimination and equivalence obligations supporting this approach, the regulated UBA service has continued to grow in lockstep with end-users changing needs and in accordance with the "full speed/full speed" requirement.

8. "Full speed/full speed", or "avoid network congestion" is an appropriate and comprehensible outcome for network operators. For example, Spark today applies a network capacity management policy of adding capacity to links when usage hit 85% of the link capacity. This provides Spark with sufficient time to add capacity so that the link is not expected to be congested (with a 99.5% probability). We have consistently applied this principle for some time – including well before demerger.

This is not about investment

9. Vodafone submits that Chorus should not be required to make inefficient investment in legacy copper networks, which may undermine the migration from copper to fibre. We agree with these sentiments.

10. But the investments required to allow the regulated UBA service to continue to meet growing end-user throughput are not copper investments. They are predominantly investments in Chorus' fibre aggregation network, which is a shared transport network that carries UFB broadband traffic as well as UBA traffic. Therefore, any investments in capacity to cater for growth in UBA data usage will also be available to meet future fibre based demand.

11. And Chorus will be compensated for those investments – through the Commission's UBA FPP cost model (which will provide for all efficient costs required to meet all forecast UBA demand), through the layer 2 UFB services Chorus provides to retail service providers, and through the commercial prices Chorus charges for commercial services that also utilise its aggregation network (such as HSNS). There is no scenario where Chorus faces investments for which it will not receive fair compensation.

12. The only question is whether Chorus can withhold access to these investments for customers purchasing the regulated UBA variants.

The next steps

13. At the Commission's latest workshop, the parties agreed that it is important that the Commission clarify whether Chorus is permitted to limit available throughput in its aggregation network to the regulated UBA service or not as soon as possible. This will allow retail service providers to make informed decisions about whether they wish to purchase Chorus' proposed Boost services, and allow Chorus to consider whether it will continue to offer the Boost services in their proposed form or not.

14. Following this, the Commission can consider whether it needs to build flexibility in to the UBA FPP cost model to better reflect the uncertain nature of growth and/or whether a wider review of service performance for regulated services is warranted. In any event, as an access seeker, we expect that Chorus is required to continue to maintain the infrastructure to ensure a fit for purpose service is provided, including, where necessary, adding capacity to meet reasonable growth.

Introduction

15. Thank you for the opportunity to comment on submissions received on the Boost and commercial hand over services issues paper.

16. The Commission is currently considering a Chorus Notice of new UBA variants (amended by its letter of 28 July 2014) and investigating Chorus proposals to degrade regulated UBA services from 1 September 2014 using throughput constraints on the hand over links used for regulated UBA services.

17. End-user demand for internet services is growing, and will continue to grow for the foreseeable future. All network operators (retail service providers and wholesale service providers alike) are continually investing in additional network capacity to meet this growing demand. Chorus has recently invested in bigger data switches in its aggregation network, and will continue to augment capacity between those switches and its DSLAMs.

18. Chorus has proposed to limit the network capacity available within its aggregation network to the regulated UBA service and to withdraw the regulated VDSL variant. The proposed commercial Boost services will not be subject to any such constraints, and so will have access to the full capabilities of that same aggregation network. They will also be given priority in the network, meaning that should network congestion occur at any time, it will only be expected to impact customers on the regulated UBA service.

19. Chorus' proposed model, limiting regulated UBA service performance to that suitable for basic internet browsing needs, will have significant implications for end users. Chorus proposes that the regulated UBA should be a basic service suitable for email, internet browsing and social networking – estimating that this comprises around 20% of end user customers.[2] Put another way, a regulated UBA service would no longer be an option for around 80% of end users (we expect this proportion to increase as customers do more online).

20. Submissions provided a range of views on whether:

    a. Chorus is able to unilaterally impose limit the performance of the regulated UBA service to its aggregation network by imposing a throughput cap on the service;

    b. The regulated UBA service is intended to provide a regulated input available to all New Zealanders, or only to low-bandwidth users; and

    c. Expecting Chorus to continue to augment capacity in its aggregation network to meet end-user demand will result in wasteful investment.

21. The submissions also demonstrate the different perspectives on the nature of investment required to support data usage growth by regulated UBA customers and the impact of Chorus' proposed service constraints and traffic prioritisation on end users. In this submission we respond to the alternative views to our own.

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[2] See Chorus 28 July 2014 letter "**Handovers** – customers have the option of either taking Boost on a regulated handover with no service commitment or on a commercial handover with a proportion of lines (up to 20%) nominated as basic bitstream customers (previously separate commercial and regulated handovers required). The 20% limit is based on market data that shows that around 20% of end users use broadband for basic purposes (e.g. emails, browsing and social networking)."

22. We will be participating in the separate section 156O on whether the regulated service is being provided in accordance with the STD and, on that basis, in this cross-submission we have not provided further responses on all questions at the heart of that investigation.

The purpose/policy sitting behind the UBA service description

23. It is clear from submissions and the conference that the parties are divided over the purpose of the regulated UBA service.

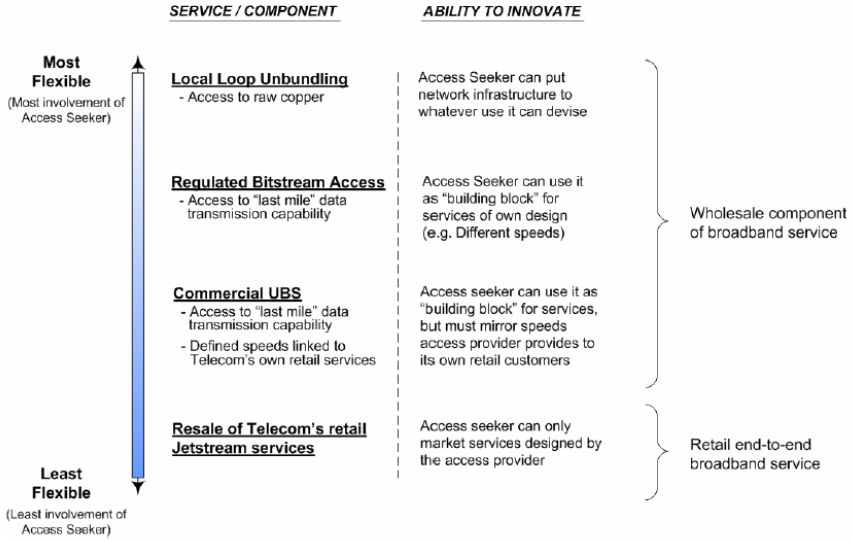
24. Chorus is saying that the regulated UBA should be a basic broadband service - i.e. suitable for emails, browsing and social networking needs – and constraints should be applied at the hand over links to limit it to this purpose. Chorus estimates that around 20% of customers use broadband for these basic purposes. The remaining customers' needs – i.e. for entertainment, video or gaming applications – would be met by commercial UBA services.

25. We do not support the proposal. Chorus' proposed differentiated approach, whereby the regulated UBA service has a limited niche role, is not consistent with the purpose and policy sitting behind the regulated service. Through the development of the STD service over time, the Commission has consistently described UBS/UBA as a single price, full speed and building block service upon which retail services are built.

26. In Decision 568 (TelstraClear), for example, the Commission determined that the UBS service should be full speed as this would promote competition, innovation, uptake and lower prices [239-246]. Telecom argued in Decision 568 that there should be an imputed price for each wholesale bitstream service and the Commission should preserve its retail pricing structure [291]. This led to a discussion on the purpose and role of regulated UBA service.

27. The Commission noted that bitstream sat on a continuum of wholesale services [293].

Figure 2: Service/component innovation matrix



28. The Commission did not agree that it should maintain a tight link as this would, in effect, give rise to a resale rather than a wholesale environment [299]. Instead, it concluded that a uniform price should apply to a full speed/full speed service [300]. It rejected Telecom arguments that a uniform price would undermine investment [301-302] and incentives for retail price discrimination [303-327].

29. In other words, the Commission made a choice that UBS should be a basic building block service that is divorced from retail characteristics. The Commission's objective was a relatively undifferentiated and low level service which permitted maximum innovation and differentiation at retail. Therefore, the Commission can't have intended the sort of UBA price discrimination that Chorus' proposed constraining of the regulatory UBA service implies. To limit regulated UBA to being solely a low performance service would be inconsistent with the principled building block approach taken by the Commission.

30. Further, Chorus' proposed differentiation between Boost and regulated services is based on retail segmentation set out in it's Dialogue presentation. In which case, it seeks to reinstate the linkages between wholesale and retail levels that the Commission has previous removed in defining a building block service. Chorus' approach is not consistent with the position and purpose of the wholesale bitstream service. The Commission has consistently applied this approach:

    a. In Decision 582 (IHUG/Callplus), the Commission rejected bringing retail differentiation in to wholesale prices. Telecom had argued that the Commission should define a range of commercial wholesale services, effectively retaining a tight link between commercial wholesale and retail prices [140 of decision].[3]

       The Commission reiterated its Decision 568 conclusion that it was not required to define a range of access speeds and to retain a tight link between wholesale and retail pricing would give rise to a resale rather than wholesale environment [141]. It concluded that potential dynamic efficiency benefits in the form of increased innovation, both in terms of product variety (product differentiation) and pricing, will be greatest where a uniform access price is determined [142];

    b. In the reconsideration of Decision 582, the Commission considered Telecom's proposal to create imputed prices to reflect different ISPs use of shared virtual path (VP) capacity [27].[4] Telecom proposed to apply this model as a separate ISP charge on the basis of handover link capacity per user [28].

       In the draft decision, the Commission did not support the proposal, noting that the regulated service does not have different capacity variants and that Decision 582 specified a uniform wholesale price for a common regulated bitstream service, it would effectively be a price increase in the price of handover links, and would introduce price discrimination for the service [75-76]. Telecom withdrew the proposal at the conference. Chorus proposes to do exactly the same thing: price discriminate on the basis of virtual path use;

    c. In Decision 611 (the UBS service description was taken through to Decision 611), the Commission concluded that a single FS/FS Basic UBA service is likely to best give effect

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[3] http://www.comcom.govt.nz/regulated-industries/telecommunications/archive/determinations-archive/interconnection-archive/wholesale-determinations/2006-callplus-wholesale-bitstream-service-application/

[4] http://www.comcom.govt.nz/regulated-industries/telecommunications/archive/determinations-archive/interconnection-archive/wholesale-determinations/2006-callplus-wholesale-bitstream-reconsideration-application/
Telecom submission http://www.comcom.govt.nz/dmsdocument/7485

to promotion of competition for the long-term interests of end-users [107]. It confirmed the Commission's draft view that:

> 59. The Commission was of the view that a single internet-grade FS/FS Basic UBA service would best give effect to s 18, and that continuing to limit the upstream line speed of the Basic UBA service to 128 kbps would be unlikely to meet the changing needs of residential and SME broadband end-users where there is increasing use of symmetric web based applications such as social networking websites, video content, and increasing file sizes in general for residential and SME end-users.

While set in the FS/FS context, the UBA service is clearly intended to be suitable for an increasing range of services such as video content etc., and to evolve or grow, with the changing needs of end-users. UBA was not a static concept suitable only for general browsing.

31. The UBS/UBA decisions all point to the service being an undifferentiated, building block service provided at a uniform price and growing with end-user demand. As noted in our submission, there has been progressive increases in UBA throughput over time so that it continues to meet RSP and ultimately end user needs. Chorus' proposed approach is also not consistent with this approach.

32. Finally, from a policy perspective it's difficult to see Chorus' proposed approach being consistent with the purposes of the Act. Generally, the Act provides for the regulation of services where there is not effective competition. If the Chorus approach were implemented, there would be no regulatory backstop or protection for the 80% and increasing proportion of customers for which the regulated service would no longer be available. We do not expect either Parliament, in setting the regulated service description and in freezing the STD for three years, or the Commission, in setting the STD, would have intended this.

The STD does not permit Chorus to constrain the regulated service

33. Chorus argues that the metrics in the STD should be read as putting a static box around the regulated service. Chorus notes that, while the current regulated UBA service comfortably exceeds the 32kbps minimum set out in the STD, as a "best efforts" or "internet grade" service it is not required to do so by the STD [B12]. Further, Chorus argues that statutory principles that require it to carry out its obligations in "good faith" and supply the service to a standard "consistent with international best practice" are similarly limited by the best efforts concept and minimum throughput defined in the STD [B14].

34. Even if the Principles in the Act and the STD could be applied to undermine the intention behind the regulation of access to UBA in this way, Chorus is not being asked to do more than provide a "best efforts service". Chorus is being asked to refrain from degrading a best efforts service by access seekers. Actively degrading a best efforts service means it's no longer offered on a best efforts basis. The STD sets a minimum standard and requires best efforts to deliver a fit for purpose full speed/full speed service. From a technical perspective, best efforts is simply an acknowledgement that delivery of data packets is not guaranteed, not a measure of the likelihood that this will occur. That is the case for UBA and Boost. Therefore, as set out in our earlier submission, where the 32kbps minimum sets the floor the principles of the STD and international best practice obligations inform the actual expected performance.

35. The Commission's UBA pricing determination is based on forward-looking costs of the regulated service, which include an appropriate margin for ongoing investment and maintenance, to ensure that the regulated services remains fit for purpose in the long term. It is not possible to have

regulated pricing which provides ongoing investment incentives and, at the same time, limit investment in the regulated service in order to charge a premium for it commercially without that creating a conflict with the ideals of section 18.

36. In practice, Chorus' proposed interpretation would leave it with no obligation to provide a regulated UBA service that meets consumers' needs or supports the requirements of the regulation. As discussed above, the proposed constraints could imply a regulated UBA service that is unusable for a significant number of customers.

37. As noted by InternetNZ and Callplus, Chorus is not permitted to constrain the service or withhold capability of the underlying DSL network. The STD requires Chorus to provide a full speed service that operates as fast as the underlying technology and copper line supports. There are a number of important differences between the WVS Clarification and the Boost. As noted by submitters, VDSL technology was, at the time, a novel technology. VDSL is now a mainstream feature of deployed ADSL/VDSL platforms. Further, the WVS proposal did not come with artificial constraint, withdrawal or impairment of the regulated service. WVS also provided penalties where performance did not meet minimum service commitments, and did not create the degree of compulsion to take the service implied by the Boost proposal.

38. Although, in the WVS decision, the Commission placed some weight on the difference in minimum throughput commitments, the evolution of throughput on the regulated service has demonstrated that a minimum throughput level is an artificial distinction. Throughput on the regulated BUBA service provided over Ethernet has progressively increased to cater for demand performances. The very fact that Chorus now provides throughput at average in excess of 200kbps (compared with a minimum throughput of 90kbps offered under WVS) is evidence that higher throughput was never really an innovation. Nor is it in any way out of the ordinary to expect that throughput on the regulated service will continue to increase to meet evolving demand.

39. As Chorus point out in paragraph 14 of their submission the market should be able to make its own assessment of the standalone value of Boost. But we would stress that the standalone market value of Boost cannot be intrinsically linked to a degradation of value of the regulated UBA service.

40. The type of progressive or organic throughput increases we have seen are not in themselves enough of a differentiator to classify UBA as a commercial service. In our view, an expectation that the type of organic growth in throughput we have experienced to date continues, does not impose an unreasonable or material obligation to make significant investments.

41. We support the principle articulated by Vodafone that Chorus should be able to introduce genuinely new and differentiated products for which they should be able to set a market based price. But we consider that Vodafone's comments at paragraph F7, should not be interpreted as a suggestion that the regulated price does not anticipate a reasonable level of continued investment by the Access Provider over the life of the regulated service.

42. We also consider that the point Vodafone makes at paragraph F9 is relevant to the proposed approaches to the pricing principles and decisions being undertaken during the FPP pricing process. The converse of the point made by Vodafone is that if we were to assume that regulated services do not require any further investment or evolution, then it is hard to see why a full replacement cost methodology, which anticipates ongoing investment, would be justified when determining the regulated price.

43. In the end, the market made its own assessment of WVS value and there was little take up of VDSL by RSPs until provided under the UBA STD.

Resolving the regulated UBA service

44. We do not believe the STD provides for the service differentiation Chorus is looking to implement. Accordingly, we've asked the Commission to consider whether Chorus can limit throughput of the regulated UBA service as proposed.

45. However, Chorus' proposal raises a number of questions that are difficult to address through the current process. As Vodafone notes in its submission, the Boost service continues to develop and key characteristics of the service remain unknown [D2]. For example:

    a. Whether Chorus propose to withdraw the regulated VDSL variant (while indicating that this was subject to RSP feedback, it indicated at the most recent workshop that it now planned to withdraw the service);

    b. Chorus proposes to limit Boost hand overs to 30 hand over points (compared to the 90 UBA hand over points). Chorus has also yet to indicate the proposed price of commercial tail extension services (which must be taken with Boost);

    c. The degree to which VDSL performance (para 27 of Chorus' submission) is due to proposed changes to the VDSL bandplan currently being considered by the TCF and whether Chorus intends to apply agreed bandplan changes to the regulated variant; and

    d. In the latest proposals, Chorus has proposed increased Boost VDSL linespeeds and to prioritise Boost services in the network.

46. We are also uncertain whether the Boost service description can be finalised ahead of the Commission clarifying the nature of the regulated UBA service. For example, the competition implications on transport markets of offering a limited number of Boost hand over locations (effectively bundling competitive transport with commercial UBA access service) will depend, in part, on whether the regulated UBA service remains a viable option for access seekers.

47. Faced with this level of uncertainty and change, at this stage it's simply not possible for the Commission to make an assessment of the impact of Boost for consumers and competition. Therefore, we agree with comments made in the workshop, the Commission should focus on clarifying its expectations relating to regulated UBA service performance.

48. Accordingly, we recommend that the Commission:

    a. Complete its s156o investigation, clarifying that the current UBA service cannot be constrained as proposed by Chorus. Spark applies a network capacity management policy requiring that links are augmented when usage hits 85% of the link capacity. This gives sufficient time to add capacity so that the link is not expected to be congested. A similar approach may be a practical means for the Commission to set out its expectations that Chorus would continue to add capacity;

       This would also provide the parties the necessary certainty against which Boost product development can proceed.

    b. Invite Chorus to resubmit a modified Boost proposal in light of the clarification, reflecting changes since the original notice and setting out differences to the regulated service; and

    c. At the same time, the Commission may wish to consider whether it should undertake a broader review of the performance of regulated services to consider:

i. Whether there should be differentiated regulated prices based on whether the service is provided using VDSL and ADSL technologies. On the face of it, there may be differences between the (operational) costs of the services and current retail behaviour suggests efficiency enhancing differentiation may be possible. Ideally, the Commission should build any differentiation in to the FPP cost model; and

ii. A longer term review of quality of service aspects of UCLL and UBA services. As the Boost consultation illustrates, quality of service is an important consideration in the regulation of network industries. For example, where incentive regulation focusses on price, an access provider can benefit by reducing service quality. Further, in a separated environment, the pre-separation dynamic by which retail preferences passed through to wholesale services is undermined and there is a hold out risk. The Commission may want to consider the performance of regulated services further.

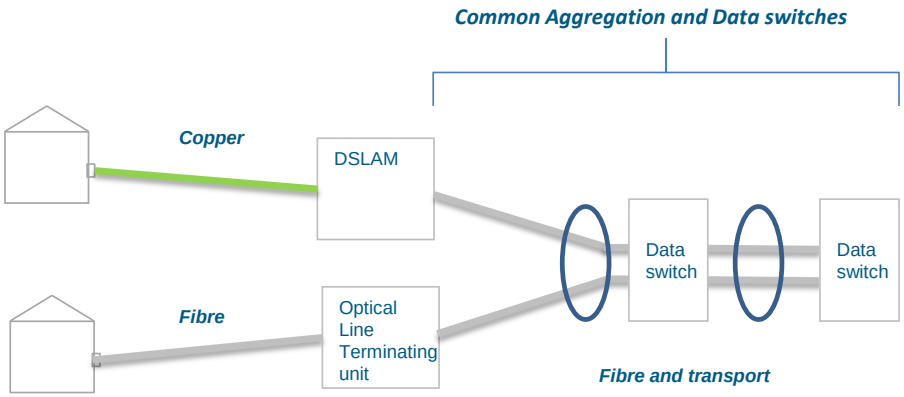
Investment and customer impact

Chorus is not being asked to invest in legacy copper network

49. Vodafone suggests that the investment required to continue to meet end-user demand growth is in Chorus' copper network and that such investment would have implications for the migration to fibre services [F6-F8]. However, this issue is not about investment – Chorus is not being asked to invest in copper services as suggested by Vodafone.

50. This is because data growth predominantly drives investment in the Chorus aggregation network comprising fibre transport links and data switches. In a modern network, these platforms support all fibre and copper based bitstream services and offer additional capacity at low incremental cost (see figure 1). Therefore, any capacity investment for UBA data growth is in the common aggregation network available to meet both copper and fibre access demand.

Figure 1: shared aggregation and data switch network



51. In any case, it's difficult to draw a direct link to investment required to increase capacity beyond Chorus' proposed 250kbps per customer cap. Fibre transport links from the DSLAM support up to 1Gbps of traffic (with at least 2 additional links possible) or around 2.5Mbps per customer on a

DSLAM supporting 200 lines.[5] In other words, demand could be up to ten times Chorus' proposed cap without driving further material investment (under the proposal, even customers on lightly loaded DSLAMs face service degradation). Therefore, anticipated data growth will initially drive investment in data switch capacity rather than the full aggregation network.

52. In any case, to the degree that further investment is required, this investment will be driven by end-user demand, and therefore will exist whether the demand occurs over UBA, Boost or UFB services. And Chorus will in all cases be compensated for this investment. Conventional TSLRIC modelling incorporates forecast demand growth into the model, and we expect this to be the case in the Commission's FPP TSLRIC model for Chorus' UBA service.

The proposed throughput constraints will have a significant customer impact

53. Vodafone notes that it would be unacceptable for Chorus to undertake any action that would materially degrade the service experience it delivers today [F1]. It further notes that actively degrading the UBA service to 32kbps would result in substantial detriment to end users and such degradation would rely on Chorus' market power [F3]. We agree - the impact on consumers of proposed constraints is a key consideration. The proposal would result in significant impact on customers.

All customers on a hand over link will experience a degraded service

54. Chorus notes that the 250kbps per subscriber limit is slightly higher than today's observed average throughput and regulated services will not be compromised beyond a level currently provided on average by Chorus today [37.2].[6]

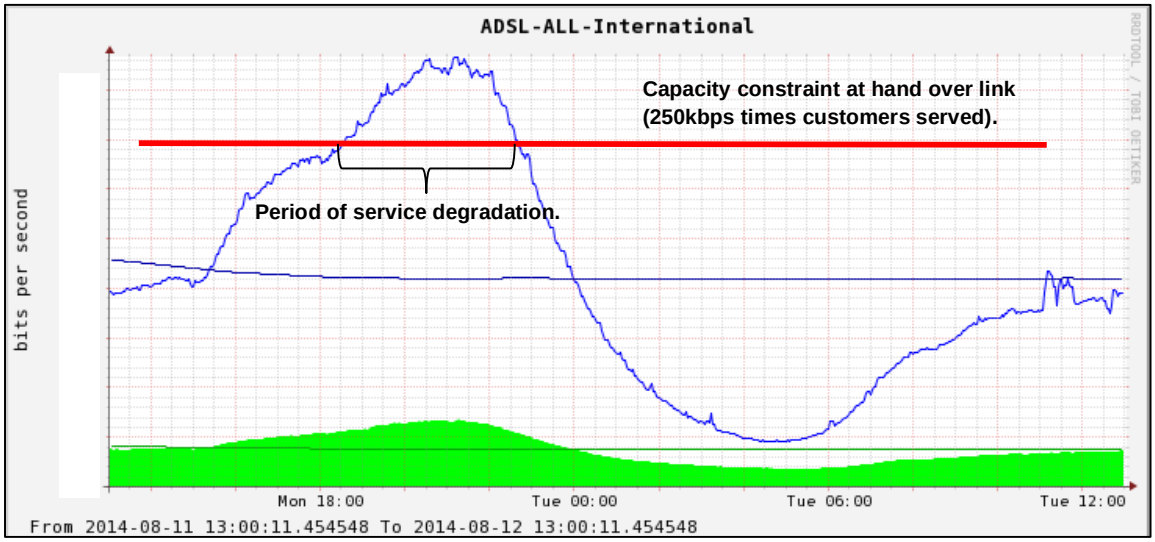
55. Chorus' approach, however, fails to recognise that handover capacity is shared by all end users, that average demand varies across hand over links and RSP customer bases.

56. This means that all end user customers served by a hand over link will face degraded service when demand on a handover link exceeds 250kbps, irrespective of whether they are light or heavy users. This is because service performance is impacted by congestion in the network - speeds slow as data packets pass to customers with increasing delay (latency), or they are dropped.

57. The degree to which service is degraded, and the period over which it occurs, depends on the demand profile. Internet traffic peaks through the evening (when most users are on line). Figure 2 sets out a typical UBA traffic profile. Applying Chorus' proposed 250kbps limit to a link with around 300kbps demand (and profile) results in congestion and degraded performance from around 6pm to 11pm in the evening. All end users using this link in this period face a degraded service – slower speeds for web browsing and a degraded performance for sensitive applications such as video streaming, gaming and Skype – irrespective of whether they are a light or heavy internet user.

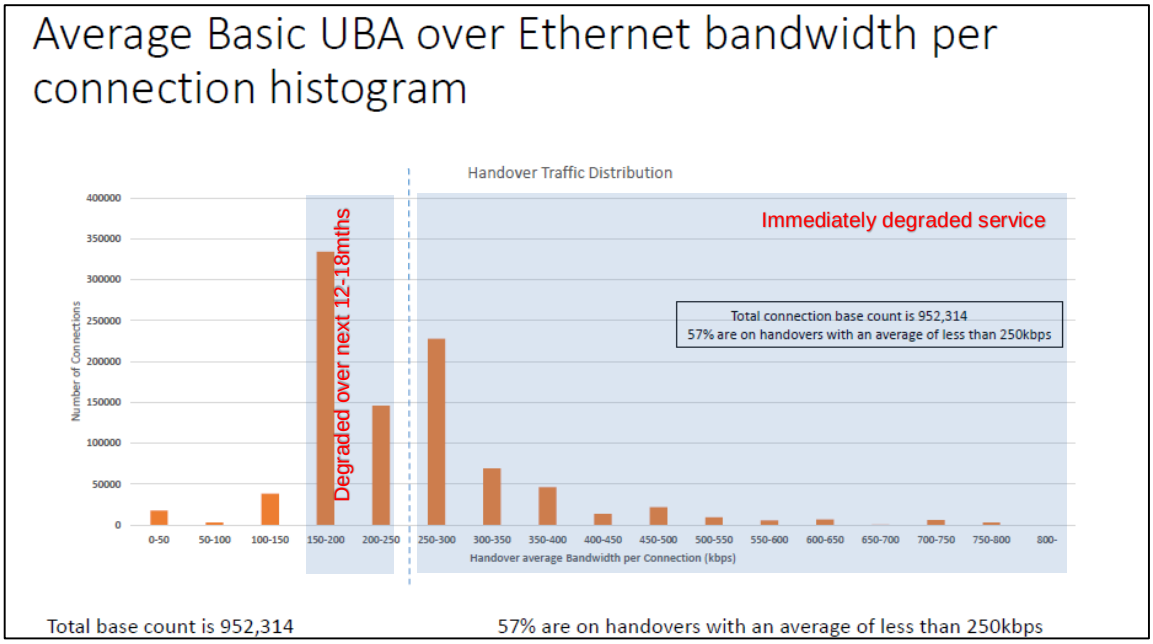
[5] This is only a crude estimate as you need to take account demand from other services.
[6] The limit may well be less than the average throughput with growth since May 2014 when Chorus proposed the cap.

Figure 2: typical traffic profile on a hand over link (with constraint applied)



58. The proposed constraints would impact a significant number of customers. Chorus' submission indicates that over 400,000 (43%) of end user customers are served on links where throughput already exceeds Chorus' proposed 250kbps cap (see Figure 3).[7] We estimate that, based on current growth rates, over 760,000 (80%) of end user customers will be served by handover links exceeding the cap within the next 12 months. All customers on these links will experience degraded service through the evening, some severely.

Figure 3: Hand over links Customers on hand over links impacted by proposed cap



59. It is difficult to estimate the individual customer impact as this, in part, depends on the applications the end user is seeking to access. Nonetheless, customers on impacted links will, on

[7] Lifted from page 30 of the Attachment to Chorus' submission.

average, likely experience an 18% reduction in throughput which a customer would experience as a reduction in speed at peak times. The 10th percentile (worst case) is a 50% reduction and the 10th percentile (best case) is a 3% reduction. Data usage is growing at around 50% per annum and, without mitigating action, the degradation will grow at a similar rate. In practice, speeds during the evening peak will be noticeably slower and performance sensitive applications frustrating to use.

60. As set out in our submission, faced with these impacts on our customers' service experience, we believe RSPs will have little choice but to migrate some - or all - customers off the regulated UBA service and onto Boost services. In Spark's case we would be compelled to purchase Chorus' Boost products in order to ensure a continuation of the existing service experience for our customers. Chorus estimates that around 20% of end users use broadband for basic purposes, i.e. emails, browsing and social networking. This means that, over time, RSPs would need to migrate around 80% of customers to the commercial UBA service in order to maintain existing performance for all customers.

Traffic prioritisation

61. Chorus also notified the Commission in its 28 July 2014 amended Notice that it plans to implement prioritisation between the Boost and regulated UBA service [page 2].

62. Under the amended proposal, the commercial UBA service will be classed as premium best efforts and given priority within the local aggregation network. This means that where there is any network congestion, the network will prioritise traffic from customers of the commercial service, i.e. discarding - or hold back - traffic from customers of the regulated UBA service so that the commercial traffic can progress unimpeded.

63. The commercial and regulated UBA services share the same local aggregation network and DSLAMs. Accordingly, by giving Boost priority in the network, Chorus can minimise network capacity – increasing the likelihood of congestion - without impacting customers of its commercial service. In other words, the costs of minimising network capacity are worn by customers of the regulated service.

64. Operators can use prioritisation to better manage network resources. However, the differentiation is typically built around performance attributes necessary for different applications. For example, some applications are not sensitive to packet delay and can therefore be treated differently to applications that are; the network can be optimised across these services to improve an applications performance (by allowing the performance sensitive packets to proceed where there is congestion) without detracting from a meaningful characteristic of other applications (by delaying packets for services that are not susceptible to delay). In other words, the applications demand the performance specifications, and meeting these is enabled by the quality of service parameters and designs.[8]

65. Chorus' proposed prioritisation (based solely on access type), however, is not well aligned with application performance, it simply degrades the regulated service by imposing congestion costs on a single access type. For example, with Chorus' proposed approach, game players on a regulated product would be significantly impacted (through, for example, increased latency) by the prioritisation regime even when there is no packet loss or bandwidth issues in the network.

[8] For example, MEF 23.1 describes performance characteristics for different applications

END