



Vodafone New Zealand

Submission on Section 30R review of Chorus'
Unbundled Bitstream Access Service

30 November 2016

Public Version



Investment must focus on next generation technologies

1. Next generation technologies are rapidly replacing copper as the main infrastructure for the provision of broadband to urban New Zealanders. UFB is now available to over a million users, and uptake continues to be well above expectations.¹ This is complemented by the roll-out of Fibre-X, making our cable network a strong alternative for customers in Christchurch, Wellington and Kapiti. Beyond this, the copper network is facing increasing competition from fixed wireless networks offered by Vodafone and Spark. This will only increase with the roll out of 5G (as described in more detail in our submission on the Issues Paper).
2. Ensuring continued investment in and migration to these newer technologies is the only way to ensure the full benefits of the step-change in capability between copper and next generation networks (NGN) can be realised. Therefore, there is little to gain in “forcing” Chorus to invest in areas where NGN is available today, or will be shortly.
3. What investment is undertaken on the copper network should focus on:
 - a. maintaining current service quality; and
 - b. ensuring uncongested lines.
4. In most respects the draft decision aligns with this view. We therefore limit our comments below to those areas where the final decision could better deliver a digital future for our customers.

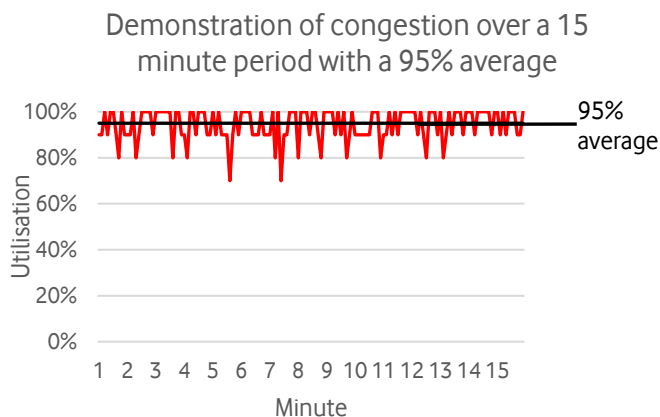
Links must be congestion free

5. We support setting a link utilisation threshold that will provide a safety net to ensure that the copper network is maintained to the level demanded by customers. This will be important over the short term in the transition period to next generation technologies.
6. However, if Chorus were to operate its network at or near the proposed utilisation threshold of 95% over a 15 minute period there could be significant congestion on the network. [CONFIDENTIAL]

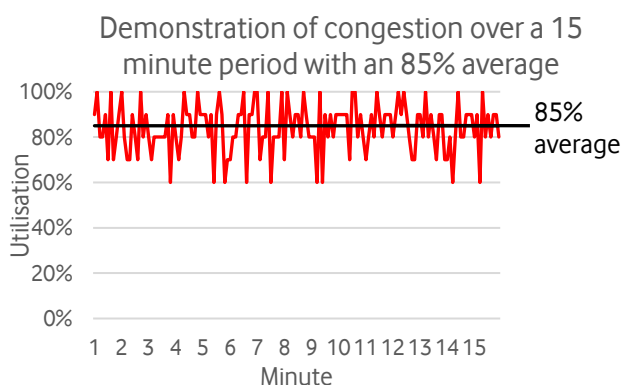
¹ MBIE, “Broadband Deployment Update, September 2016” released on 22 November 2016.



7. Data usage is highly volatile, and tends to travel in clumps. So in reality a 95% average utilisation actually means that the network is fully congested a lot of the time. This is demonstrated in the graph to the right. This is a stylised example, using random numbers,² but it demonstrates how much congestion can be expected. This would result in material delays or dropped packages, and end-users would face a degraded service.



8. Ultimately the choice of threshold will be a judgement call, but moving towards a lower threshold, such as an 85% threshold, shown below, would have a significant impact on the amount of time the network faces congestion.



9. The Commission notes that Chorus may operate its network well below the proposed thresholds to avoid the risk of any breach.³ Chorus' own investment plans also suggest that they are aiming for a much lower utilisation.⁴ Nonetheless, the Commission's proposed threshold does allow for congested network

performance demonstrated above.

10. To avoid the risk of a congested network the Commission should change one or more of the following features.

² This series was calculated by assuming data only travels over the network 100 times a second. Each instance of data is recorded as a 1 or a 0, and this is then set to a normal distribution where the resulting average is 95%. The percentage of congestion is then calculated every tenth of a minute to show it graphically.

³ Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service: Draft Determination" 9 November 2016, paragraphs 150 and 151.

⁴ Chorus, "Congestion Free Networks: Technical white paper", September 2016.



- a. Decrease the measurement period to 5 minutes. This better aligns with industry practice, and makes it congestion less likely if a link reaches the threshold
 - b. Decrease the threshold to at least 85%. This is at the upper end of the industry standard, giving Chorus headroom to make investments before breaching the threshold, but lowering the risk of heavy congestion.
 - c. Establish clear up-front penalties for breaching the threshold that do not include exceptions or mitigating circumstances. This will ensure that the thresholds are viewed as strict upper bounds, as is intended by the Commission.
11. In any event, the Commission should also increase the reporting requirements to cover both 5 and 15 minute measurement periods. This will provide information on any breaches, as well as provide better information on actual congestion on a basis better aligned with common industry practice. The Commission should also commit to analysing this data within 6 months of the new requirements to assess whether Chorus is reacting to these requirements as expected.

No changes required to the ATM network specifications at this time

12. We agree with the Commission that it is better to wait until RBI2 decisions have been made before making any changes to the ATM network. This is the oldest part of Chorus' network and is being rapidly replaced by new technologies such as fixed wireless. This means that the ATM network already faces competitive pressures which are likely to be sufficient to encourage appropriate investment.
13. Reconsidering this position after the RBI2 contracts are awarded will be important, to assess whether competitive pressures still exist across all parts of the ATM network.

The price for 10GigE handovers is too high

14. Including 10 GigE handovers as a regulated product is important to keep up with standard practice. Currently [CONFIDENTIAL] of our EUBA handovers are 10GigE, which is a more than twice as many as in December 2014. It is important that the regulation changes to reflect the requirements for larger handover links driven by increased traffic.
15. However, the prices proposed are clearly too high. The actual cost will be similar to the \$300 for the 10GigE connections on the UFB network. This is because the equipment used is largely identical across the two networks. The proposed price of \$1,160.49 would over compensate Chorus by almost four times.



16. The over-compensation for 10GigE handovers creates real distortions in the market, by incentivising the growth the copper network where it can receive windfall returns. Such a distortion undermines the development and uptake of next generation technologies. Furthermore, above cost prices artificially make the business cases for RSP investment to support improved customer experience more difficult.

The UFB 10GigE prices provide a sense check

17. We agree with the Commission that they cannot simply adopt the UFB 10GigE prices for UBA. The Act clearly requires the use of the TSLRIC modelling for any new service specifications. However the UFB prices serve as a sense check. The proposed 10GigE prices clearly fail that test.
18. In the Draft Decision, the Commission rejects the UFB 10GigE price as a reference point by calling into question the accuracy of the prices reached between CFH and the LFCs.⁵ We disagree. The negotiations between CFH and the LFCs were undertaken in good faith, and are likely a good reflection of costs given the information available at the time. If anything, the prices are likely to be high, to provide the necessary incentives at the time for LFCs to participate in the build.
19. The Commission also argues that existing 10GigE prices need to be used because it ensures consistency with the rest of the model. However this fails to take into account the wider inconsistency such a price could create between UBA and UFB.

The Commission can and should update the handover prices

20. A full reconsideration under section 52 is not appropriate given the materiality of the 10GigE handovers. However, a more targeted update of the price is possible. Section 30P covers the pricing of designated access services under a Standard Terms Determination. It allows for prices to be "updated ... if the Commission considers it to be necessary because of a change in circumstances".⁶ The surge in data usage that has led the Commission to propose introducing regulation of 10GigE handovers would meet the definition of a change in circumstances.
21. We also agree with Spark that there has been insufficient consultation on how these prices are determined to date. Looking back through the information produced over the last few years on the FPP we were unable to find reasoning for the key parts of this

⁵ Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service: Draft Determination" 9 November 2016, paragraph 224.

⁶ Telecommunications Act 2001, S30P(1)(a)(ii)



calculation. In particular, we were unable to find discussion of these prices in either the draft or final FPP decision.

22. Attachment 2 of the Draft Decision does little to fix this. The attachment covers the last couple of steps in determining the 10GigE price, and neglects to provide reasoning for many of the key assumptions made in determining this price.
23. Given the opacity, it is difficult for us to provide detailed comments. The Commission should review these aspects before reaching a final decision to avoid locking in this over-compensation.

Current processes are sufficient for developing further transparency if required

24. We agree with the Commission that there is no need to amend the UBA STD to improve the transparency of Chorus' systems and service level terms at this time.
25. It is important that access seekers have visibility of Chorus' systems to make diagnosing customer problems, and streamlining the connection process that much easier.
26. Chorus currently provides information to help meet this need, in some cases beyond the current reporting requirements set out in the STD. For example Chorus provide us with detailed information on network upgrades and roll-out addresses.
27. The current clause 9 process also provides sufficient powers for the industry to agree on any changes to the transparency of Chorus' systems. While the list of suggested changes from Spark are worth considering, we consider that the TCF is the best place to discuss these potential changes. If this process fails, further consideration by the Commission may become necessary.

A review of the service level terms can be undertaken by the TCF

28. In our submission on the Process and Issues Paper we proposed a review of the service level terms. We still consider that this would be a fruitful piece of work, but also appreciate the Commission's view that the current clause 9 process already provides the TCF with the power to undertake such a review. We therefore, agree with the Commission that no changes are needed to begin this review.



Brief comments on other topics

Draft Decision	Vodafone response
Not to review or amend the UBA STD regarding the treatment of VDSL	We agree with the Commission that VDSL is already covered by the UBA STD
No amendments to the clause 10 process for introducing new products	Boost was a good test of this and the right outcome was reached in the end. We agree with the Commission that no amendments are necessary
Amending the process for the review of the Operations Manual to include additional consultation requirements to improve transparency	We agree with the Commission