

Cross-submission in response to the Commerce Commission's Section 9A Backhaul Study

14 October 2016 – Public Version

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SUBMISSION

Introduction

1. This is Chorus' cross-submission on the Commerce Commission's *Section 9A Backhaul Study: Preliminary questions in understanding domestic backhaul services* paper.
2. We agree with other submissions that backhaul has an important role to play in the development of a thriving broadband market in New Zealand and that continuing investment will be required. We understand that the purpose of the backhaul study is to enable the Commission to better understand the backhaul market in New Zealand, including the state of competition. We believe that the backhaul market is a national one and it's competitive.
3. The majority of submitters agree that backhaul services in New Zealand are generally competitive. However, some have residual concerns regarding areas where there is only one backhaul provider on intra-regional links. We, and other backhaul providers, believe that even on these links there are sufficient competitive constraints taking into account the national dynamics of the market to drive efficient outcomes.
4. Spark identifies pricing differentials between our Chorus Regional Transport backhaul service (**CRT**) and our Commercial Backhaul Service, which is based on regulated pricing, as possible evidence of inefficient outcomes. For example, Spark compares pricing for:
 - 4.1 Auckland to Palmerston North with pricing for Greymouth to Karamea; and
 - 4.2 Rotorua to Taupo with Invercargill and Te Anau.

Such comparisons are potentially misleading – seeking to ignore the challenging geography and some of the country's highest cost areas with low demand. A YouTube video¹ illustrates why it's not appropriate to compare Auckland to Palmerston North with Greymouth to Karamea. We don't sell backhaul between Invercargill and Te Anau so that comparison appears hypothetical.

5. It's also important to keep intra-regional backhaul requirements in perspective given the scale of the national backhaul market. The Commercial Backhaul Service and regulated backhaul services sold on intra-regional links comprise less than 1% of the backhaul capacity we sell. This would represent an even smaller proportion of New Zealand's backhaul requirements, which are met by a combination of self-supply and third-party providers like us. Over 99% of backhaul capacity is therefore in areas considered competitive, as acknowledged by submitters. This scale of competition mirrors the competitive landscape for

¹ <https://www.youtube.com/watch?v=wbMzvSNPdFY&feature=youtu.be>

Spark's resold voice services² which the Commission is proposing to deregulate. We think backhaul regulation is ripe for deregulation too.

6. New Zealand's appetite for data will continue to flow through to backhaul competition – driving both new investment and pricing. All backhaul providers face the risk that their customers will switch providers or build themselves.
7. We've focused our submission on areas of agreement and disagreement from submissions. We haven't repeated our views in full here but instead refer back to our earlier submission.

Support for a competitive national backhaul market

8. We think the Commission should adopt the same approach in this study as its analysis of backhaul markets in recent merger decisions³ and the competition test in its draft report on Spark's Resale Voice services.⁴ This is consistent with our view that the backhaul market is most appropriately defined at a national level and is competitive. The majority of backhaul links are subject to direct competition and all links are exposed to constraints against excessive pricing.

National market

9. We agree with other submissions that the backhaul market has evolved significantly since it was first regulated in 2008. We now face direct competition on the majority of backhaul links. We maintain our view that the market is most appropriately defined on a national basis for the purposes of this study. The reasons for that view are set out in our earlier submission. Other parties' submissions add support:

- 9.1 *Wider context:* Vodafone doesn't see a case for further regulatory intervention.⁵ Vodafone says that the wider context is relevant even in areas where there's no direct competition.⁶ Vodafone notes that, in what they describe as "*the less competitive parts of the market*", we are subject to "*solid incentives inhibiting negative behaviour.*"⁷ On intra-

² Draft report on whether Spark's Resale Voice Services should be omitted from Schedule 1 of the Telecommunications Act 2001, 23 September 2016.

³ Telstra/Clear, Decision 447, dated 7 December 2001; Vodafone/TelstraClear [2012] NZCC 33, dated 29 October 2012; and Vocus/M2 [2015] NZCC33, dated 3 December 2015.

⁴ Draft report on whether Spark's Resale Voice Services should be omitted from Schedule 1 of the Telecommunications Act 2001, 23 September 2016.

⁵ Vodafone submission on the Commission's Section 9A Backhaul Study, 23 September 2016, page 2.

⁶ Vodafone submission on the Commission's Backhaul Study, 23 September 2016, page 2. Vodafone states: "*In this case we are unsure of the problem that the Commission is trying to address through this study. While there are some pockets of the backhaul market that are not subject to direct competition, our experience is that access seekers are successful in reaching acceptable commercial terms for backhaul services. This is due to other constraints on the market, such as the potential for new entrants, and the threat of competition*". Also, page 4 where Vodafone says that: even in areas "*where direct competition is less clear, we expect other pressures provide some constraint in the market*" and gives some examples such as the threat of competition, the threat of further regulation and direct regulation of current backhaul services in the Telecommunications Act today.

⁷ Vodafone submission on the Commission's Section 9A Backhaul Study, 23 September 2016, response to Commission question 16, page 10.

regional links where we are the only supplier or we face limited direct competition, Chorus and Vodafone “can generally reach agreement on prices and other terms commercially”.⁸ Vocus also describes intra-regional links as “largely competitive”;⁹

- 9.2 *Competition on a national basis:* Vocus notes that it supplies transmission on either a link-to-link or a national basis. The driver behind the choice is the customers’ needs.¹⁰ Vodafone states that typically it wouldn’t need to use Chorus services for a national deal (unless it needs to buy dark fibre for the last mile if the customer isn’t co-located in one of its points of presence or if there’s a site in the national network where it doesn’t have a presence).¹¹ Spark also agrees that a number of providers can offer a national service;¹²
- 9.3 *Customers are national or near national and can threaten to switch:* As noted in our submission our major customers, who are also backhaul competitors, have similar network lengths to us. So RSPs can buy links and national services from other backhaul providers;
- 9.4 *Customers are vertically integrated and can threaten to self-supply:* Vodafone says it extensively self-supplies.¹³ Kordia¹⁴, Vocus, and Spark¹⁵ also self-supply;
- 9.5 *Where there’s one provider it likely reflects a lack of volume/demand:* Spark says that it self-supplies when it is economic to do so and expects to continue doing so by deploying its own fibre when it’s economic.¹⁶ Spark also states that competitive entry tends to take place on those routes where the actual or expected level of backhaul traffic makes it commercially viable to build sufficient capacity.¹⁷ This supports our view that other backhaul customers/providers are making build/buy decisions based on cost and whether they think there is sufficient demand to build.

10 All this confirms that if there’s sufficient demand, entry will likely occur. And, as most submitters appear to agree, backhaul demand is likely to increase driven

⁸ Vodafone submission on the Commission’s Section 9A Backhaul Study, 23 September 2016, page 4.

⁹ Vocus submission on the Commission’s Section 9A Backhaul Study, 16 September 2016, paragraph 24.

¹⁰ Vocus submission on the Commission’s Section 9A Backhaul Study, 16 September 2016, paragraph 34.

¹¹ Vodafone submission on the Commission’s Section 9A Backhaul Study, 23 September 2016, page 8.

¹² Spark submission the Commission’s Section 9A Backhaul Study, 23 September 2016, page 13.

¹³ Vodafone submission on the Commission’s Section 9A Backhaul Study, 23 September 2016, page 7.

¹⁴ Kordia submission on the Commission’s Section 9A Backhaul Study, 23 September 2016, response to question 7.

¹⁵ Spark submission on the Commission’s Section 9A Backhaul Study, 23 September 2016, page 11.

¹⁶ Spark submission on the Commission’s Section 9A Backhaul Study, 23 September 2016, page 11.

¹⁷ Spark submission on the Commission’s Section 9A Backhaul Study, 23 September 2016, page 19. Spark also goes on to say that the build out to a regional POP from locations outside major cities and larger towns is more expensive and the roll-out of competing backhaul networks is less commercially viable, even with lower technology costs.

by New Zealanders' love of broadband. We think demand in rural areas is particularly likely to grow as broadband effectively allows access to technology and services not otherwise available in those areas and those areas with access to broadband today gain access to improved services and increased inclusion in online opportunities. This makes increased backhaul competition more likely rather than less, including on single backhaul provider links.

Competition

- 11 Other submitters generally agree that the backhaul market is largely competitive. For example:
 - 11.2 In Kordia's view: *"In general ... the domestic backhaul services market in New Zealand is a competitive market and does not require further regulation"*;¹⁸
 - 11.3 Vodafone thinks: *"While most of the market is subject to vigorous competition, there are some pockets where Chorus is the only supplier or faces limited competition. Typically this is in the intra-regional backhaul..."* Although, Vodafone's submission indicates it doesn't think that there is in fact an issue on intra-regional links;¹⁹
 - 11.4 Vocus considers: *"it is clear that main trunk and regional backhaul routes are competitive"* and *"There is a competitive wholesale market for backhaul in New Zealand."*²⁰
 - 11.5 Spark says: *"The main routes between centres are highly competitive..."*²¹;
 - 11.6 Gilat's submission notes that satellite technologies are a financially and operationally viable alternative to terrestrial intra-regional and regional backhaul services and indicates that recent technological innovations would make these even more attractive.²² This submission indicates that there may be developing competition for backhaul services from emerging technologies on intra-regional links for which there is currently only one provider.
- 12 Given some submitters have residual concerns about intra-regional links, this indicates those links should be the focus of the Commission's study. We discuss below why we think competition on intra-regional links doesn't demonstrate a market concern.

¹⁸ Kordia submission on the Commission's Section 9A Backhaul Study, 23 September 2016, page 6.

¹⁹ Vodafone submission on the Commission's Section 9A Backhaul Study, 23 September 2016, page 4.

²⁰ Vocus submission on the Commission's Section 9A Backhaul Study, 16 September 2016, paragraphs 7 and 9.

²¹ Spark submission on the Commission's Section 9A Backhaul Study, 23 September 2016, page 9.

²² Gilat Satellite Network's submission on the Commission's Section 9A Backhaul Study, pages 4 and 11.

Intra-regional links

Competition

- 13 In terms of intra-regional links where we are the only current backhaul provider, there is a wider national context at play. We think this will likely result in the Commission finding there's no competition concern.
- 14 Vodafone says the wider context is relevant even in areas where there's no direct competition. On intra-regional links Chorus and Vodafone "*can generally reach agreement on prices and other terms commercially*".²³ This is due to other constraints, such as the potential for new entrants and the threat of competition.²⁴
- 15 Vocus also says: "*Intra-regional backhaul has not been a problem for Vocus to date*" based on its extension of its network.²⁵ Vocus notes that we're the only backhaul provider in sixteen listed provincial areas – but that despite that, in all but one instance "*we have been able to get acceptable pricing from Chorus*".²⁶ Vocus describes intra-regional links as "*largely competitive*".²⁷
- 16 Rather than showing a clear competition problem on the intra-regional single-provider links, the submissions above support the view that our behaviour on those links is constrained by broader factors.

Pricing

- 17 The aspiration for lower prices on high-cost links, as outlined in other parties' submissions, isn't indicative of a competition problem that justifies further regulation. Spark raises concerns that regulated pricing levels on intra-regional links are too high, presumably on the basis that it believes this is evidence that there is a backhaul market concern that the Commission needs to address. But, for the reasons set out below, we believe it's inappropriate and potentially misleading to compare:
 - 17.2 Commercial prices on CRT links with regulated pricing on intra-regional links; and
 - 17.3 Regulated pricing with pricing trends in Australia.
- 18 Particular care should be taken comparing our CRT backhaul prices to our Commercial Backhaul Service prices on intra-regional links, which are based on the Commission's 2008 regulated backhaul services. On links where CRT is available our customers buy CRT instead of the Commercial Backhaul Service – so RSPs don't pay the regulated price. CRT prices and the regulated prices on

²³Vodafone submission on the Commission's Section 9A Backhaul Study, 23 September 2016, page 4.

²⁴ Vodafone submission on the Commission's Section 9A Backhaul Study, 23 September 2016, page 2.

²⁵ Vocus submission on the Commission's Section 9A Backhaul Study, 16 September 2016, paragraph 10.

²⁶ Vocus submission on the Commission's Section 9A Backhaul Study, 16 September 2016, paragraphs 23-25.

²⁷ Vocus submission on the Commission's Section 9A Backhaul Study, 16 September 2016, paragraph 24.

intra-regional links reflect different underlying demand profiles and different pricing structures. Such pricing differences shouldn't be used as evidence of a competition concern.

- 19 The regulated price was for a nationally averaged price across all links. But on links where CRT is available, the nationally-averaged price has been replaced with a price reflecting increased demand and material cost reductions on those links. The introduction of CRT has resulted in a de-averaging of prices between low-cost inter-regional and high-cost intra-regional routes. That increased demand/reduced cost hasn't occurred to the same extent on remote intra-regional routes. The fact that prices on intra-regional routes haven't fallen doesn't mean that they are inefficient or indicate an exercise of market power.
- 20 The particular examples identified by Spark also don't withstand basic scrutiny. The examples compare some of New Zealand's highest cost links to serve and relatively low demand, with more straight forward links. Spark's examples need to be approached cautiously:
 - 20.2 *Regional routes can be very high cost:* Spark queries the cost of our Commercial Backhaul Service pricing on the Greymouth to Karamea route compared to the Auckland to Palmerston North price for CRT. This video should help explain the reasons why there can be cost differences on the Greymouth to Karamea route (<https://youtu.be/wbMzvSNPdFY>). It illustrates the laying of fibre in the West Coast near Karamea showing the effort and cost required to invest in rural links where there is low population density and the nature of the terrain, which is anything but straight forward.
 - 20.3 *Demand varies on links:* Spark also gives the example of CRT pricing for Rotorua and Taupo compared to Invercargill to Te Anau based on the Commercial Backhaul Service pricing. This appears to be a hypothetical comparison because we don't sell any backhaul between Invercargill and Te Anau. This in itself demonstrates that RSPs are able to use alternative routes or backhaul supply to move traffic out of rural regions. In addition, capacity use on a spur link, such as Te-Anau to Invercargill, will be lower - potentially orders of magnitude lower - than on a route picking up traffic from multiple locations, such as Rotorua to Taupo or Auckland to Palmerston North. Population comparisons are a useful metric as a sense check on the potential scale of traffic: the population of Karamea is around 500, while the population of Auckland is around 2,800 times larger. Even if the underlying backhaul cost was the same to/from these locations, it wouldn't be surprising that the prices could be orders of magnitude different.

] Chorus CI

- 22 Spark also seems to suggest a comparison with Australian pricing trends suggests that there's a market concern with our pricing levels. We think a comparison of the differential between the commercial prices of our backhaul services on different intra-regional links and Australian pricing is also unlikely to be useful to the Commission. As we said in our submission, there is no reason to think that our pricing on intra-regional links is above a competitive level and we set out our reasoning for that view.
- 23 The regression approach supported by the ACCC is disproportionate for New Zealand given the scale of the relevant links. The ACCC regressions also shouldn't be directly applied to New Zealand given that Australia has been rejected as a comparable country in both the UCLL/UBA and MTAS benchmarking processes. Changes to commercial pricing on high volume routes aren't a suitable proxy for pricing on areas with different cost and demand conditions.
- 24 Spark also suggested the Commission check our backhaul pricing on intra-regional links reflects TSLRIC costs.²⁸
- 25 Properly-determined TSLRIC prices would also be expensive and time consuming. The FPP process for UCLL/UBA took about 3 years. While the process for backhaul might be shorter, the costs of such an exercise shouldn't be underestimated.
- 26 Given the nature and scale of backhaul requirements on intra-regional links, it's difficult to see how an intensive pricing approach on links representing < 1% of Chorus' and New Zealand's backhaul capacity would yield an efficiency gain to the long-term benefit of end-users, let alone the point of effectively replicating that pricing exercise in a study of backhaul services. The Commission's study is entitled to take these costs into account in the design of its study, and in assessing what, if any, form future regulation should take.
- 27 The Commission should also take account of the risk that regulated prices may distort signals for future investment. And this is in an environment where

²⁸ Spark submission on the Commission's Section 9A Backhaul Study, 23 September 2016, response to question 17.

submitters expect demand to increase, so competitive dynamics will ensure prices on all links in the market remain competitive as they are today.

- 28 Other submitters don't raise Spark's pricing concerns. Indeed, Spark also indicates that it self-supplies backhaul when it is economic to do so.²⁹ As we said in our earlier submission, there are a range of cheaper backhaul options available for non-legacy services. Spark's choice of which Chorus services it takes reflects a commercial prerogative rather than a problem with the market.

Fit for purpose commercial backhaul services

- 29 We believe we provide commercial backhaul services that are fit for purpose, including backhaul services that are service agnostic. Concerns have been raised that the regulated backhaul services should be service agnostic and technology neutral, presumably in support of an argument that because the regulated services aren't there is a market problem. For the reasons already discussed we don't believe that regulation is appropriate given the backhaul market is competitive. In addition, the presence of commercial services that adequately address the concerns raised means that the Commission both:

29.2 Shouldn't regulate; and

29.3 Doesn't need to amend the regulated service description in the Telecommunications Act or the STDs to address this.

- 30 However, if the Commission takes a different view, any further consideration of regulated backhaul services is only likely to impact intra-regional links. [**Chorus CI**] The Commission needs to take care regarding the incentives its setting if it considers changes to the regulated backhaul services.

- 31 Any amendment to the current regulated services to introduce a service agnostic service, would need to be carefully considered. The distortionary effects of regulation are likely to be greater given the potential foreclosure of emerging competition over a wider range of demand and services.

- 32 There has also been some discussion of interfaces in other submissions. There is a potential issue that needs to be considered if a regulated backhaul service is required to both carry Ethernet traffic and legacy type traffic over the same fibre. This would require interfaces for both types of traffic with additional cost that would need to be recovered. Attempts to support a range of legacy interfaces and speeds tends not to be the most economic solution over the long term. Standardising and simplifying backhaul drives efficient solutions. TES backhaul provides an option for very small players who cannot yet consume standard capacity backhaul.

²⁹ Spark submission on the Commission's Section 9A Backhaul Study, 23 September 2016, response to question 7.

- 33 As we said previously, we don't think that it makes sense to continue to invest in backhaul for legacy traffic where there is an alternative and incentives should be designed to encourage RSPs to move away from legacy services.
- 34 Given the competitive nature of the backhaul market any concerns regarding the quality of the services are likely to be addressed if customers really value stronger service level terms. There is of course a cost implication for higher service levels so RSPs will be factoring in price/quality trade-offs in commercial decisions. We're open to discussing customer requirements.
- 35 We continue to invest in improving technology, and migrating and retiring legacy equipment to improve backhaul networks. Our long term goal is a high capacity all Ethernet transport network. 1G and 10G transport is widely available, and well used. The introduction of 100G is well under way.

Next steps

- 36 We think that the Commission should conclude that the backhaul market is competitive on a national basis, so there are reasonable grounds for an investigation into whether Schedule 1 should be amended to deregulate the existing regulated backhaul services consistent with its previous merger decisions and open a Schedule 3 investigation.
- 37 As the investigation may also be of interest to MBIE as part of its telecommunications review, we think that the timetable should be accelerated.
- 38 To the extent the Commission concludes that there is an ongoing need for regulation, we have provided our view in earlier submissions on what that regulation might look like. However, we respond briefly in this submission to the issues raised by other parties.

Appendix

- 39 We set out in the Appendix some additional comments, including on the competition test.

APPENDIX A: ADDITIONAL COMMENTS ON SUBMISSIONS

We set out below our comments on other points raised in submissions.

Issues	Description
Fit for purpose commercial services	
Capacity	Some submissions appear to be concerned about whether there is sufficient backhaul capacity. As we said in our previous submission, we plan to ensure that there is sufficient capacity in our network and we have the right commercial incentives to do this. Other backhaul providers agree there isn't a capacity issue. ³⁰ RSPs will also need to ensure that they purchase sufficient backhaul capacity appropriate to the number of broadband consumers and services they deliver to ensure that consumers have a high quality end-to-end experience.
Co-location for backhaul providers – Vocus mentions it had experienced one issue with accessing our exchanges in Christchurch, Hereford St and Riccarton, and needed to meet Enable in a pit outside the exchanges although in all other locations it meets carriers and LFCs inside Chorus exchanges. ³¹	We provide co-location commercially, including for backhaul providers. We're unsure why Vocus believes that Enable wasn't able to access the Chorus part of the Christchurch and Riccarton exchanges. We've looked into the reason why Enable wasn't able to access co-location space in those exchanges and we have no record of any order being denied for either Vocus or Enable. We're happy to discuss co-location options further with Vocus and Enable.
Competition test	
There was little comment on the appropriate competition test from submitters. Where changes were suggested there was no compelling	Our view remains that there's no justification for any changes to make the test more onerous – if anything it should be relaxed in terms of the distance requirement. It's important to keep in mind, for the limited potential

³⁰ Vocus submission on the Commission's Section 9A Backhaul Study, 16 September 2016, page 6. Vodafone submission on the Commission's Section 9A Backhaul Study, 23 September 2016, page 7 "We currently have no concerns about gaining access to adequate capacity."

³¹ Vocus submission on the Commission's Section 9A Backhaul Study, 16 September 2016, paragraph 32.

Issues	Description
<p>support/evidence for them.</p>	<p>concerns around intra-regional links, a simple approach should be adopted.</p> <p>Most submitters don't seem concerned with the current competition test nor have they suggested more onerous changes. For example, Vocus simply commented:³² <i>"At this time Vocus has no issue with the test based on competitor network within a distance of the Chorus exchange. There may be a case for reducing the distance but we do not have a considered view on what the distance should be at this point."</i></p> <p>While Spark has referred to the ACCC's approach, we set out in our submission why that approach was previously rejected by the Commission in terms of the number of competitors.</p> <p>Spark has advocated tightening the competition test to include an assessment of whether current and expected demand is sufficient to make entry profitable. The broader market dynamics we've already described, including countervailing power and the ability to bypass, mean that there is a strong case for full deregulation. If broad regulation remains in place, the same dynamics mean there is no justification for tightening the competition test as Spark advocates, as prices may be efficient even on links where there are no other providers. Furthermore, given projected demand growth, if anything the criteria should be relaxed.</p> <p>In addition, such a test would be disproportionate and impractical, as it would effectively require an assessment of the business case for entry on each link.</p>

³² Vocus submission on the Commissions Section 9A Backhaul Study, 16 September 2016, page 8.