Ultra Fast Broadband - Post 2020

Presented by Brendan Ritchie







Crown Infrastructure Partners





Speeds and design

<u>BS2</u>

GPON/fast best effort speeds, cheap with low quality SLAs. Residential work horse. <u>BS3</u>

GPON/fast best effort speeds, not as cheap, business grade SLA and Multi VLAN capable





Year	Service download speed at 50% increase per year
2011	30Mbps*
2012	45Mbps
2013	68Mbps
2014	101Mbps
2015	152Mbps
2016	228Mbps
2017	342Mbps
2018	513Mbps
2019	769Mbps
2020	1153Mbps
2021	1730Mbps

 $\ast slowest available option when UFB was initially deployed$



Purchasing trends





100/20Mbps anchor product - 200/X largely 'leap-frogged' - Gig emerging as the mainstay - Unbundled?



UFB service specifications

Multi VLAN capable

Attribute	Bitstream2	Bitstream3	Bitstream3a	Bitstream4
Bitstream	E-AVPL	E-APL	E-APL	E-APL
High Priority	Yes	Yes	Yes	Yes
Low Priority	Yes	No	Yes	No
MTU	2000	2000	2000	9100
MAC Addresses	16	64	64	128
Number of Available UNI's	4 standard	4 standard	4 standard	l with a second UNI available on request
L2CP Support	No	No	No	Limited
Diversity	On request with limited availability	On request with limited availability	On request with limited availability	Available to priority users in selected areas

Traffic component	Frame Delay	Frame Delay Variation	Frame Loss
CIR	≤ 5ms	≤ 3ms	≤ 0.1%
EIR	N/A	N/A	≤2%

Service Level Type	Restoration Target	ONT** Faults Included in Target?	Additional Charge?
Default – Chorus	≤ 48 hours	NO	NO
Default - other providers	\leq 12 hours	NO	NO
Enhanced SLA Level 1	\leq 12 hours	YES	YES
Enhanced SLA Level 2	≤ 8 hours	YES	YES
Enterprise SLA^	\leq 6 hours	YES	NO^*



Wholesale price points



DFAS priced at \$355 p/month and \$710 install by Chorus p/month (less by LFCs) for leg to exchange from same candidate area.



UFB1 Roll out progress



As at March 2018 - http://www.mbie.govt.nz/infoservices/sectors-industries/technologycommunications/fast-broadband/documentsimage-library/03-mar-quarterly-broadbandupdate.pdf



UFB Uptake rates







Telecommunications (New Regulatory Framework) Amendment Bill - purpose of this bill is to amend the Telecommunications Act 2001 to establish a regulatory framework for fibre fixed line access services; remove unnecessary copper fixed line access service regulation; streamline regulatory processes; and provide more regulatory oversight of retail service quality.





Chorus innovation

Regulated price points pushing Chorus to look for unregulated revenue streams:

- 2014 Chorus seeks to increase copper revenue with services that fall outside regulation
- 2015 Chorus CRT, an inter-metro backhaul product released that forces market prices down overnight in that product category.
- 2017 Further backhaul play with tail extensions released
- 2018 Chorus pushes for Commerce Commission to allow it to add WiFi and CPE to its product offering, but is unsuccessful.



Recent changes

	Region	Regional POIs	Local POIs
1	Auckland	Mayoral Drive Glenfield Mt Eden	Whangarei Mayoral Drive Glenfield Mt Eden
2	Hamilton	Hamilton	Rotorua Taupo Tauranga Whakatane Hamilton Tokoroa New Plymouth
3	Wellington	Wellington Porirua	Palmerston North Levin Wanganui Napier Hastings Gisborne Masterton Paraparaumu Wellington Porirua
4	Christchurch	Christchurch	Nelson Blenheim Ashburton Christchurch Greymouth Timaru
5	Dunedin	Dunedin Dunedin South	Dunedin Dunedin South Oamaru Queenstown Invercargill



Unbundling – regulation

What we know from select committee 80 page report:

- "it" has to be provided from 2020, but priced at providers discretion
- 5 year review process means price wont be regulated until at 2023 at the earliest
- Vodafone/Vocus have issued RFP to fibre companies asking for proposal to deliver an unbundled service
- Revenue cap for Chorus from 2020 "Under price-quality regulation an annual 'maximum allowable revenue' (otherwise known as a 'revenue cap') will be set for Chorus. This will be calculated as a sum of various network and financial 'building blocks' of costs. This revenue cap should be sufficient to cover all of Chorus' efficiently incurred costs without putting it in a position to earn excessive profits. -

http://www.mbie.govt.nz/info-services/sectors-industries/ technology-communications/communications/regulating-thetelecommunications-sector/review-of-the-telecommunicationsact-2001/further-consultation-on-fixed-line-communicationsservices/discussion-paper.pdf



Unbundling – regulation

What we don't know:

- Price each provider will set
- Service design. Design and delivery still being worked out.
- What the revenue cap set for Chorus will be, and therefore what impact it will have.
 - In any case, will drive lean operation and focus on high margin services.
 - Will revenue cap be ramped up as UFB uptake is forecast to increase, or static with generous head room in early years?



Unbundling – Pricing



•Vodafone/Vocus kicked off the public pressure re price with press conference announcing partnership and assumed benefits for consumers

•UFF appear to see unbundling as a challenge rather than an opportunity

Will Chorus seek to deter uptake through higher unbundled price points in order to deter churn of existing connections to lower cost unbundled subs?

•Other carriers don't look to be subject to a price cap, how will that impact their approach?



Unbundling – what's at stake?

Well, that depends. How much will it cost?

•Let's assume it is priced attractively, key markets will be prioritised, creating divide between high/low return areas, which UFB was created to avoid. •Big 3 (Spark, Vodafone, Vocus) can afford universal rollout if they choose, others will need to be more selective. Goes against initial UFB aim of creating competitive and even retail market?

•Potential for wholesale competition against Chorus using Chorus unbundled fibre, or wholesale access may not be possible at all via unbundled providers networks

•Could LFCs use Chorus unbundled access to compete against Chorus in new regions?



Unbundling - Churn conundrum

Without unbundling we have a fully intact network upon completion. Customers will be able to choose/change their provider in near real-time.

Enter unbundling – fully intact is now gone so the advantages above are gone but advantages of innovation (?) and price (?) can be realised.

New client – unbundled provider 1 – truck roll to fusion splice the premise to the RSP splitter – Higher install cost (assumed) but offset by lower monthly charges.

Same client - non-unbundled provider 2 wins the client – why should they pay high transfer cost when their monthly charge will be higher? And down the rabbit hole we go...

Essentially – why should ISPs that haven't unbundled face higher install costs that wouldn't have existed without other providers unbundling?



Many unknowns, it is early days, but 2020 will come around quickly.

More questions than answers, but big changes looming.



