



# Commission Issues Paper 1: Technical Issues

PUBLIC VERSION OF PRESENTATION MADE TO  
COMMERCE COMMISSION 27<sup>th</sup> JANUARY 2012

telecom<sup>nz</sup>

# Introduction

---

- We welcome the Commission's Technical Issues Paper (19Dec11)
- We generally support the Commission's conclusions
- This presentation provides:
  - Telecom's view on the lead-in issue
  - An update on recent developments in the transport, transit and peering markets

# Lead-ins installation charges

---

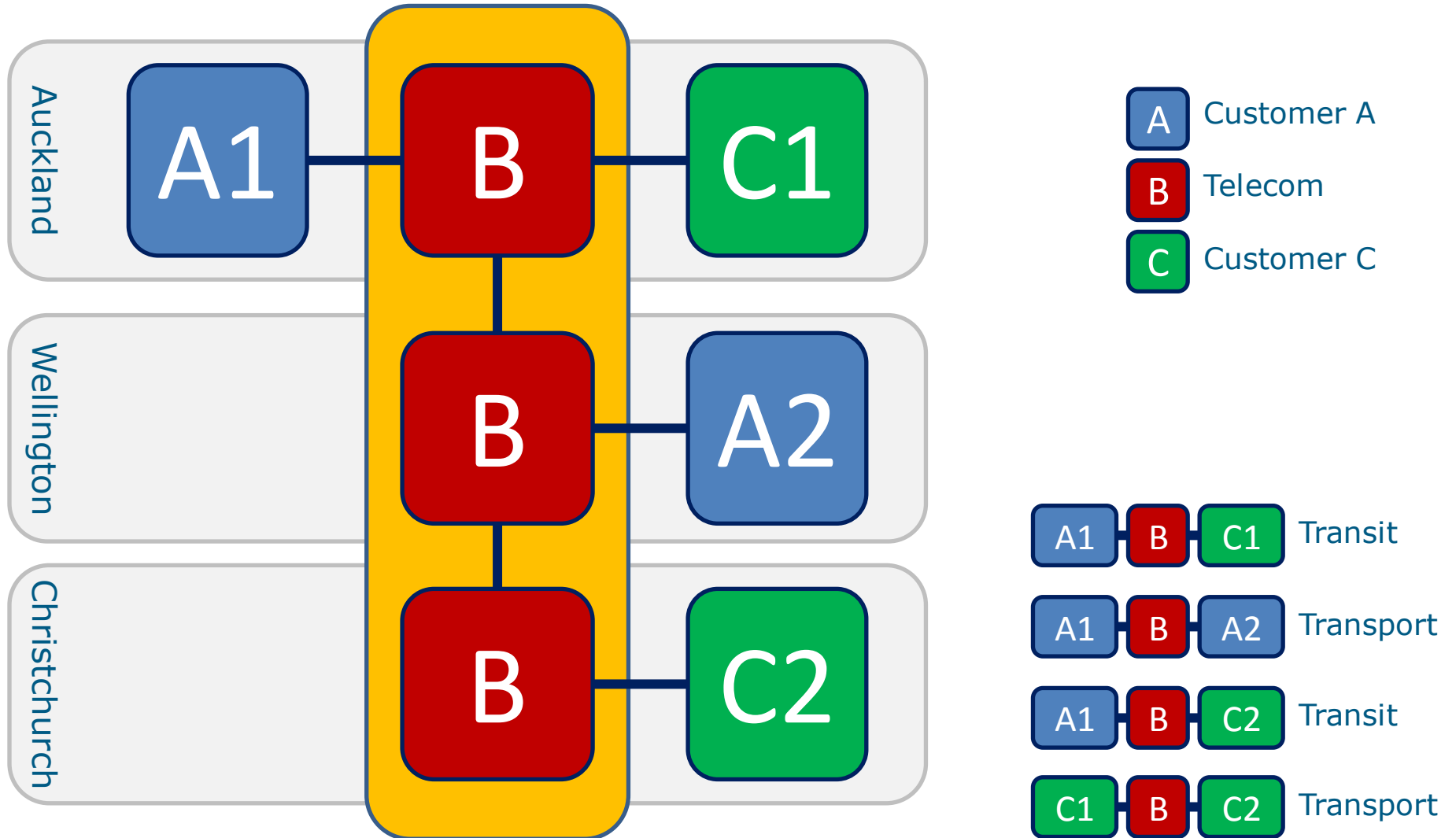
- We share the Commission's concern that consumers are expecting free installation for UFB services. The recent Ultrafast press release and 2011 ministerial release have tended to create this impression without identifying likely/possible exclusions.
- It is still unclear what/if LFCs will charge for non-standard installs. Different LFCs may end up with different definitions and charges for non-standard installs. We accept it is early days for UFB and we are all still learning about costs etc. However, we expect LFCs will make sensible policies for installations which don't disincentivise take up but at the same time are commercially pragmatic.
- Installation charges are potentially a barrier to take-up where they apply. RSPs have the retail relationship with customers and face difficult conversations with those who will not get free installation. We intend to pass through LFC charges and costs to customers. The correct expectations will need to be set with consumers in advance of commercial offers being published.
- Industry expects to see robust prequalification tools from LFCs which are continually refined to reflect real experience in rolling out fibre. These tools should enable RSPs to indicate to potential customers early in the sales process whether they are likely to face installation charges and the likely cost if they are.
- Providing certainty makes it easier for customers to commit to a fibre connection, and RSPs to provide services to their customers. Robust prequalification tools will ultimately help drive fibre uptake.

# National Transport Network

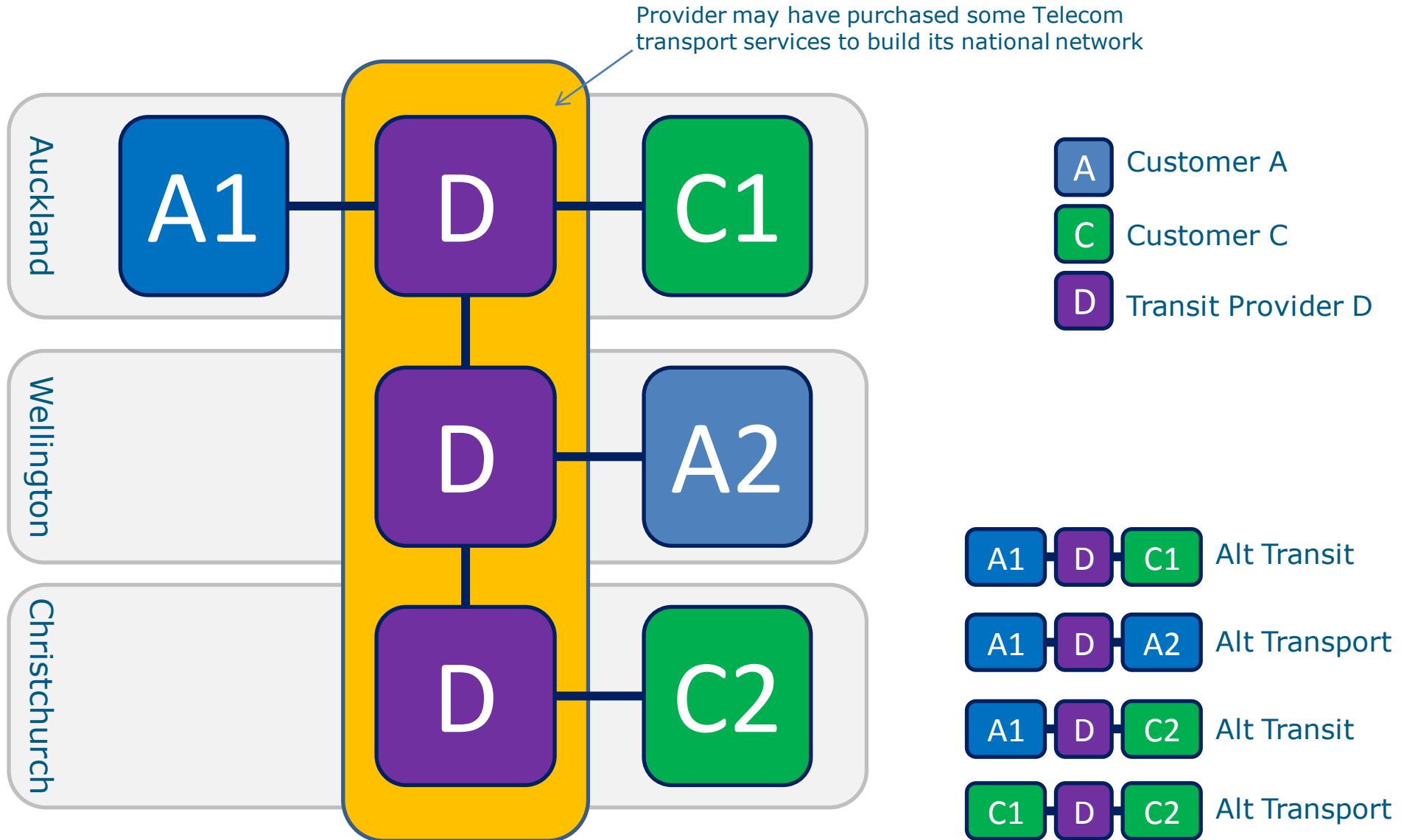
---

- Telecom owns and operates a transport network which is capable of voice and data transmission. Telecom provides transport and transit services across this network. These services are consumed as an input for retail products including broadband, mobile, IP services etc
- Transport and transit are separate services delivered over a transport network:
  - **Transport** is a service that is made up of moving packets across geographical distances on the network (these can vary in distance). Transport services are typically defined as either Layer 1 or Layer 2 services. Operators continue to invest in infrastructure to support their transport networks
  - **Transit** is a service which runs over the transport layer to move traffic (voice or data) from one Service Provider (the customer) to another Service Provider's network. The service is Layer 2,3 and above. The transit provider may own their own transport network and/or purchase transport services from a transport provider.

# Telecom Transport and Transit Services



# Alternative Transport and Transit Services



# Global Gateway Internet Service (GGIS): Telecom's IP Transit service

---



- GGIS is an international and domestic Layer 3 IP service that provides high-quality managed IP connectivity by submarine cable systems to the global Internet.
- The service carries international Internet traffic between the USA, Australia and New Zealand via the Southern Cross fibre optic cable, and to the rest of the world via alternative cable operators.
- GGIS enables a Service Provider's IP network in New Zealand to exchange Transmission Control Protocol/Internet Protocol (TCP/IP) traffic with a vast range of IP addresses and networks throughout the world.
- Three GGIS variants provide a choice of service level options and price:
  - GGI Lite
  - GGI Enhanced – High availability, carrier grade IP Transit
  - GGI Domestic – A service tailored specifically for domestic content and services only.

# International Transit

---

- **International Transport**

- We think a clearer way of analysing the International connectivity market is by considering current and future developments in the market for international transport separately from the market for international transit.
- International transport is the Layer 1 or 2 service only.
- The Commission notes the various announced future international cable deployments.
- Southern Cross recently announced the availability of the first 200Gbit/s from its latest upgrade and a price reduction of up to 44% (Southern Cross has averaged an annual reduction of 21% since 2001)

- **International Transit**

- Today, multiple wholesalers purchase transport services from Southern Cross to provide transit services to RSPs.
- Price reductions in international transport lower costs for international transit providers who provide IP transit to RSPs. The market for international transit is increasingly competitive.
- Retail Service Providers buy transit from one of a variety of wholesale transit providers on a variety of different terms (eg upfront commitments, spot prices etc)
- International transit map ([ispmap.co.nz](http://ispmap.co.nz)) is being refreshed



# Telecom's Local Peering Service

---

- Local Peering is for Internet Service Providers (ISPs), content providers, MUSH network operators, and other Telecom Wholesale customers who wish to exchange internet traffic with Telecom Broadband customers.
- Local traffic is exchanged on a 'bill and keep' (no settlement payment) basis.
- Local Peering allows service providers to more effectively separate and manage their internet traffic, and to keep local internet traffic local rather than having to use a centrally routed, nationally priced service.
- A commercial transport service is also available to carry a service provider's non-local traffic to the appropriate coverage area, but Service Providers are free to use their own or alternative transport networks as they see fit.
- Local Peering is delivered over Telecom's Ethernet platform and provides a high-speed service over Telecom's optical fibre. Telecom has 29 Local Peering Points
- Operators with national transport networks can use the Local Peering service to create their own national transit wholesale services.
- Telecom currently provides Local Peering services to major transport providers who use them to provide domestic IP Transit services

# Peering (Historical)

---

- In the case of early Peering in NZ (2005-2010), there were limited options (outside of peering at the Auckland Peering Exchange, APE) for domestic SP's to exchange traffic with Telecom and TelstraClear on a settlement free basis.
- In addition to this the alternative (domestic transit) pricing was high (~+\$100 per Mbps)
- These factors incentivised Content Owners to host content in the USA due to the low cost for the Content Owner to host content. The cost to transport content to end users however was transferred onto the ISP as the content would be sourced off shore.
- Today, the vast majority of local content (SkyTV, TVNZ) and high volume international content (Google, YouTube, Facebook and Akamai) traffic, is hosted domestically. This vastly reduces the cost to ISPs and improves end user performance for content owners.

# Questions?

---

