POSITION PAPER
Sub-loop unbundling and cabinetisation
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INTERNET SERVICE PROVIDERS
ASSOCIATION OF NEW ZEALAND

Description:

Sub-loop unbundling (SLU) refers to opening up Telecom's cabinets to competition, whereby equipment such as DSLAMs can be located in cabinets by Access Seekers (such as competing ISPs and telecommunications firms) and connected to backhaul feeds. This means broadband services can be provided over shorter local loops than are possible from exchanges.

The term "cabinetisation" simply refers to the deployment of cabinets and equipment. The cabinets may be existing or replacement, or new cabinets may be located next to existing ones.

The latest planned Telecom deployment will enable DSLAMs within 800m of the targeted end-users, increasing the speed capability on those copper lines. These cabinets will be fed by both copper and fibre, with the fibre feeding the DSLAM(s) and the copper enabling the POTS voice services.

Note that there are two types of cabinet – active and passive. Passive cabinets are simply places where copper cross connects, whereas active cabinets include electronics (DSLAMs for broadband and other transmission to deliver voice services) and are typically (but not always) fibre fed.

Working end-user copper lines (Metallic Path Facilities or MPFs) from a passive cabinet are terminated on the exchange MDF (Main Distribution Frame). Normally copper lines from active cabinets have not been.

Background:

Telecom has been installing cabinets for many years and has over 7000 passive cabinets and 3000 active cabinets in the field. The active cabinets already cover more than 15% of end-user lines (MPFs).

The main reasons for Telecom's existing cabinetisation are:

- New subdivisions
- MDF demand from infill housing exceeding the available copper feeder capacity
- Failure of the existing copper feeders
- Demand for broadband that cannot be acceptably served from the exchange

In November 2007, Telecom outlined its plans for further cabinetisation for the 24 months following the unbundled local loop standard terms determinations (STDs). This included geographic location information. Telecom will deploy another 3600 active cabinets within its existing broadband coverage over the next four years.

The reason for Telecom's further cabinetisation plan is different: The company has agreed a target with Government to provide 10Mbps broadband to 80% of homes within the next couple of years. This is the easiest way to achieve that. It is not extending broadband coverage into new areas, but rather improving the broadband in areas that already had it from the exchange.

With Operational Separation, the management of Telecom's sub-loop network will fall under the network division, which is branded Chorus. Telecom's DSLAMs will fall under its wholesale division.

In December 2007, the Commerce Commission began a standard terms determination process for sub-loop services under the Telecommunications Act, including sub-loop unbundling, backhaul and co-location. Ultimately this will set the characteristics of the services and the price that Telecom can charge for them.

The Telecommunications Carriers' Forum (TCF) has a working party providing input into sub-loop services, both commercial and regulated, and related issues.

Issues:

Consultation

Due to the late availability of detail from Telecom about the extent of cabinetisation, Access Seekers have had inadequate visibility of the impact that cabinetisation will have on their plans.

Without adequate consultation and certainty there is an unnecessary risk of "asset stranding". For example if an access seeker places DSLAM equipment in an exchange and the copper access lines that it serves are subsequently allocated to cabinets.

PSTN migration

Telecom originally advised that the PSTN would involve turning off their legacy voice exchanges by 2012 and voice services would be delivered using newer IP technology. This has now been delayed, with PSTN migration being pushed out as far as 2020 and "in most cases" voice services will continue to be delivered from the exchange using splitters and line spectrum sharing until then.

This unexpected decision changes the playing field substantially with flow-on effects for the products that Chorus will be offering and the business case assumptions for Access Seekers. It also cuts across assumptions made in the regulatory process and undermines the goal of equivalence.

Balance of priorities - LLU rollout vs. cabinetisation

Moving the copper aggregation point closer to the home through SLU is likely to be good for the end-user.

SLU is most useful where the cabinet is located a long way from the exchange and good broadband was not otherwise possible for the end-user. It is less useful where the cabinet is closer to the exchange and the end-user can already get good broadband.

As Telecom pointed out in its April Operational Separation submission to the MED, "There is a critical disconnect between the introduction of LLU as the platform for competition, and cabinetisation to fulfil the Digital Strategy objectives."

As well as the Digital Strategy objectives, there are obviously more financial incentives for Telecom to push ahead with cabinetisation as opposed to LLU. With 15 exchanges per quarter for LLU versus 300 cabinets per quarter for cabinetisation, the question is whether we have got the balance right.

This question is even more important when one considers that the migration products required by Access Seekers, such as sub-loop unbundling, voice-only UCLL for cabinetised MPFs, Wholesale DSL ports and Dual Feed are not yet in place. Note that Dual Feed refers to the ability to provide broadband from the exchange at the same time as Telecom does from the cabinet, which can be useful where the cabinet is close to the exchange.

Equivalence

It would appear that Access Seekers in competition to Telecom Wholesale will be playing catch-up for quite some time while Telecom Wholesale enjoys an "early mover advantage".

- Telecom Wholesale is the only customer that has been given access to Sub-loop unbundling and it is likely to remain that way for at least the next 12 months.
- Telecom Wholesale are the only party that have access to Telecom's Fibre To The Home trial and at this stage they have only made it available to WorldxChange for retail purposes. This will not be opened up to other Access Seekers until later in 2008.
- Telecom Wholesale is the only customer that ANS/Chorus has starting offering a "Voice-only" UCLL variant for MPFs that pass through a copper and fibre served cabinet. This is the Line Sharing Service that Access Seeker are seeking.

Viability

The TCF working party is looking at options for Access Seekers to build up a customer base, in order to improve the viability of sub-loop unbundling. Two of these are Dual Feed and Line Spectrum Sharing (LSS).

Low Frequency Line Sharing (LFLS) enables the Access Seeker to continue to offer voice services from the exchange, and Broadband from the cabinet. Initially this will be a Telecom Wholesale Broadband product but is expected to become a broadband product from any provider. It is essentially a service Chorus is providing to Telecom Wholesale in order for Wholesale to continue providing POTS services from the exchange and it should be provided to all Access Seekers on an EOI basis. Line Sharing only applies to cabinets where Telecom has maintained the copper, as well as fibre, to the cabinet.

Dual Feed is requested by Access Seekers so that they can continue to provide services to their customers from the exchange. This does introduce the potential for interference between exchange fed and cabinet fed services. Therefore in order for Access Seekers to continue serving their customers from the exchange once those lines have been cabinetised the interference management plan must be modified to limit degradation on exchange based services, with a small (but acceptable) effect on cabinet based services. This would allow Access Seekers to offer an adequate service from the exchange for cabinetised lines.

The TCF is also exploring unbundled DSL Services (UDS), which is a wholesale cabinet DSL port. It could allow Access Seekers to provide a more flexible differentiated product while building up the customer base. It is a stepping stone that would substitute for the UBA product but offer the flexibility of an SLU based product.

Position:

ISPANZ welcomes Commerce Commission action on the Standard Terms Determinations required for sub-loop unbundling and supports the TCF working party on sub-loop services.

Like the Government and many others, ISPANZ is in favour of solutions that encourage investment and competition. Sub-loop unbundling increases competition at the cabinet level and improves services available to the end-user.

Cabinetisation will improve the performance of services offered by Telecom's Wholesale customers. When sub-loop unbundling is in place Telecom's network customers will be able to provide additional competition through installation of their own DSLAMs and backhaul services.

Cabinetisation should be prioritised to areas that really need better broadband (or do not have it now) rather than overlaying areas that already have reasonable broadband, and shutting out competition.

As well as sub-loop unbundling, Access Seekers should urgently be given the options of:

- Low Frequency Line Sharing for providing POTs from the exchange, as Telecom has
- Dual Feed so that access seekers retain the ability to provide broadband from the exchange at the same time as Telecom does from the cabinet
- Wholesale cabinet DSLAM ports (detail to be defined by TCF working group)

Line Sharing should be provided on a fully equivalent basis to that of Telecom for at least as long as Telecom provides the service to itself.

Dual feed should be provided on terms to be agreed by the TCF, but essentially wherever the cabinet is reasonably close to the exchange (less than 3km) and in the deployment state A, where the exchange service has preference for an in initial period of at least 2 years, or until dynamic spectrum management becomes viable.

Many difficulties and risks remain in the process of achieving competition and equivalence for the long term benefit of the end-user. ISPANZ supports the judicious and timely use of regulation in achieving the Government's objectives.

ISPANZ is seeking the implementation of a comprehensive industry consultation process for future services.

The broadband roadmap for New Zealand *(please see ISPANZ Broadband Roadmap Position Paper)*, which is only possible with regulatory support, creates an environment whereby competition occurs at a number of levels from multiple competitors. As a result:

- Our poor international ranking for broadband uptake will improve
- New Zealand businesses will be more competitive in the international market
- The average New Zealander will be able to benefit from lower prices and better services.
- New Zealand as a country will reap the significant economic advantages of a broadband enabled society.

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About ISPANZ:
ISPANZ is a non profit, industry group that represents most Internet Service Providers operating in New Zealand. Our membership includes all the major ISPs outside those of Telecom and TelstraClear; plus a broad range of medium and small ISPs. We exist to promote a fair and fully competitive Internet marketplace where our members can deliver the full benefits of the Internet to the New Zealand public and our economy. Our primary goals are to:

- Improve New Zealand's poor International ranking for broadband uptake,
- Enable New Zealand businesses to become more competitive internationally through use of Internet enabled technology,

- Improve Internet pricing and services for ordinary New Zealanders,
- Enable New Zealand to reap significant economic benefits as it becomes a broadband enabled society.

For more information please visit ispanz.org.nz