

TelstraClear Limited

Establishment and Measurement of Service Level Agreements for Wholesale Supply

Discussion Paper

This paper is supplied on the basis that it is solely for the use of TelstraClear Limited, as part of its submission to the New Zealand Commerce Commission investigation into the terms and conditions of wholesale business services offered by Telecom New Zealand Limited. PricewaterhouseCoopers does not accept any liability or responsibility to any person other than to TelstraClear Limited. Copies may be made available to Telecom New Zealand Limited and the New Zealand Commerce Commission as part of the determination process, provided it is clearly understood by such recipients that PricewaterhouseCoopers does not accept any liability to those entities.

December 2004

I Executive Summary

Similar to many countries, the Telecommunications Act 2001 ("the Act") of New Zealand requires the incumbent operator to supply wholesale services to access seekers. Standard access principles are outlined in the Act, relating to the provision of designated access services by the incumbent, including the principle that designated services be supplied to access seekers on a non-discriminatory basis.

On the 5th of November 2004 TelstraClear Limited ("TelstraClear") lodged with the Commerce Commission an application for an access determination for the provision of bitstream services and associated backhaul services ("wholesale bitstream services"). A bitstream service purchased from Telecom New Zealand Limited enables a telecommunications provider to provide high speed internet access to its own customers using wholesale Asymmetric Digital Subscriber Line (ADSL) services.

TelstraClear's request for a determination includes non-price terms and conditions for the supply of wholesale bitstream services (which incorporate the service levels required for these services) and requirements for the measurement of performance in wholesale supply against Telecom's supply of its retail DSL services.

International experience outlines that service level management is not a new concept. It first emerged in the 1980s, when large corporate customers, such as the Fortune 500 companies, began demanding certain guarantees of service. Service Level Agreements ("SLAs") have subsequently become an essential part of IT, outsourcing and business process engineering and are a foundation upon which customer satisfaction is built. SLA methodologies are also currently applied to the provision of communications services, on both a retail and wholesale basis.

In Australia, the Australian Consumer & Competition Commission (ACCC) issued a Record Keeping Rule (RKR) which required the incumbent to implement a series of end-to-end performance measures for the supply of Basic Access services¹ by the incumbent operator to itself and its wholesale customers. These measures provide a strong mechanism for comparison of relative performance in order to demonstrate an equivalence of service. The measures also outline that it is feasible, practical and productive to compare the end-to-end service performance provided by a vertically integrated incumbent operator to a wholesale customer vis-à-vis its own end users or, in the case of an unbundled wholesale service, the comparable part of the service provision within the end-to-end retail service.

The ACCC has since released a further RKR requiring the incumbent to implement and report a series of performance measures for the supply of Asynchronous Digital Subscriber

¹ Refer to Appendix for definition of Basic Access services

Line (ADSL) services² by the incumbent operator to itself and its wholesale customers. These measures are due to be submitted to the ACCC and published by 31 August 2005.

PricewaterhouseCoopers (PwC) has previously reviewed the end-to-end processes of a vertically integrated incumbent operator's retail and wholesale processes for the ordering, provisioning and assurance of specific telecommunications services. The approach adopted by PwC to demonstrate the equivalence of service at each stage in the incumbent's supply chain for wholesale and retail services is outlined later in this report. PwC considers that this approach can also be used at vertically integrated incumbent operators that do not have separate processes for the delivery of wholesale and retail services. The approach also considers the identification of the comparable components of a wholesale and retail service (e.g.: Basic Access or ADSL), where the entire end-to-end process is not directly comparable because, for example, the wholesale service is an unbundled service.

It should be noted that comparisons included in this paper between the New Zealand telecommunications market and other markets/industry verticals, and any other conclusions, should be construed as directional only. This paper does not specifically examine Telecom's supply chain processes. Comments are based on international experience of developing key performance indicator metrics, and demonstrating an equivalence of service between retail and wholesale for vertically integrated incumbent carriers.

This paper is supplied on the basis that it is solely for the use of TelstraClear Limited, as part of its submission to the New Zealand Commerce Commission investigation into the terms and conditions of wholesale business services offered by Telecom New Zealand Limited. PricewaterhouseCoopers does not accept any liability or responsibility to any person other than to TelstraClear Limited. Copies may be made available to Telecom New Zealand Limited and the New Zealand Commerce Commission as part of the determination process, provided it is clearly understood by such recipients that PricewaterhouseCoopers does not accept any liability to those entities.

² Refer to Appendix for definition of ADSL services

II Background

Purpose

The objectives of this paper are to:

- Provide comment on international experience relating to SLA establishment, measurement and evolution;
- Examine the experience of the Australian telecommunications market for the development of end-to-end performance metrics that provide a relative comparison of performance between wholesale and retail for Basic Access services;
- Outline the approach currently being adopted in the Australian telecommunications market for the development of performance metrics that provide a relative comparison of performance between wholesale and retail ADSL services; and
- Outline PwC's approach to reviewing vertically integrated incumbent operators' processes to demonstrate equivalence of service between retail and wholesale.

New Zealand

The standard access principles ("SAPs") in New Zealand for designated access services and specified services as per clause 5 of Schedule 1 of the Telecommunications Act 2001 provide³:

- (a) Principle 1: the access provider must provide the service to the access seeker in a timely manner:
- (b) Principle 2: the service must be supplied to a standard that is consistent with international best practice:
- (c) Principle 3: the access provider must provide the service on terms and conditions (excluding price) that are consistent with those terms and conditions on which the access provider provides the service to itself.

TelstraClear have stated that they disagree with Telecom over the meaning and consequences of the SAPs. Telecom stated in its Residential Resale Submission Procedures Manual, 5 March 2004 that for the resale of business services it:

³ The New Zealand Act also sets out some exceptions or qualifications to these standard access principles.

“rejects TelstraClear’s assertion that the churn and support functions Telecom provides to TelstraClear are inferior to Telecom’s equivalent retail processes. The processes provided to TelstraClear are in fact the same as those Telecom uses itself at retail. The same methods and procedures are used, and the same information systems are utilised.

.... In regard to service levels, Telecom provides a variety of service levels to retail customers with a corresponding range of prices. Telecom notes that the basic service level provided to TelstraClear corresponds with the service level generally provided at retail – there can be no suggestion that TelstraClear is receiving a lower standard of service.”

TelstraClear has stated that access seekers should not be treated equivalently to Telecom’s retail customers; but should be treated equivalent to Telecom’s retail division. TelstraClear argued that, in the absence of electronic interfaces which provided equivalent functionality and processing efficiency to Telecom’s own processes, TelstraClear would be perceived in the market as providing an inferior quality of service in areas such as provisioning, fault management, billing and helpdesk services.

Section 152AR(3) of the Australian Trade Practices Act (TPA) has similar obligations to the New Zealand SAPs. An access provider must, if requested to do so by a service provider:

- Take all reasonable steps to ensure that the technical and operational quality of the active declared service supplied to the service provider is equivalent to that which the access provider provides to itself; and
- Take all reasonable steps to ensure that the service provider receives, in relation to the active declared service supplied to the service provider, fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself.⁴

With reference to the Commerce Commission’s investigation into the terms and conditions of wholesale bitstream services offered by Telecom, this paper provides comment on international experience relating to the establishment, measurement and evolution of SLAs. SLAs have existed in IT, outsourcing and business process engineering for some time and the degree to which they are considered as an established concept is also discussed.

The experience of the Australian telecommunications market and the development of end-to-end performance metrics is also included. Such metrics have provided a relative comparison of performance in the supply of Basic Access services between wholesale and

⁴ The Australian TPA also sets out some exceptions to these obligations

retail for public reporting. The extent to which this can be effectively used to demonstrate an equivalence of service between wholesale and retail is outlined in this report. It should also be noted that the Basic Access metric requirements are currently being expanded to also include metrics relating to components of the ADSL ordering and faults process.

In addition, PwC has outlined the approach that it has previously adopted in the review of a vertically integrated incumbent telecommunications operator's retail and wholesale processes to demonstrate an equivalence of service and any potential areas of inequivalence. Where a process may not be exactly the same for retail and wholesale, this approach facilitates the identification of the components of the process, if any, which are comparable.

III International SLA establishment and performance measurement

Background

Service level agreements have become an essential part of the IT and outsourcing industry for a significant amount of time and are a foundation upon which customer satisfaction is built. According to Sturm, Morris and Jander in Foundations of Service Level Management, service level management (SLM) is:

"the disciplined, proactive methodology and procedures used to ensure that adequate levels of service are delivered to all IT users in accordance with business priorities and at acceptable cost."

SLA evolution

The concept of service management first emerged in the late 1980s and early 1990s, when carriers' largest corporate customers, such as the Fortune 500 companies, began demanding certain guarantees of service, including on-time installation, specific maximum-time-to-repair periods and increased mean-time between failure intervals.

This soon evolved into the service level agreement (SLA), a contract between the carrier and the customer that promises compliance with certain terms and conditions and may assure rebates if those conditions are not fulfilled.

Now SLAs have moved on to the next stage of their evolution, driving a change in carrier's service management systems - the development of service level management systems designed to monitor customers' SLAs and quality of service, as:

"for most service providers, managing their networks is old hat by now.....originally, service management was handled much as an extension of network management....but as services have become increasingly sophisticated, the concept of service management has evolved - driven primarily by the business customer."⁵

In addition, outsourcing has become more strategic and is helping make enterprises more adaptive and better able to capitalise on changing business conditions. Companies are becoming smarter regarding the negotiation of their outsourcing contracts. More service-level agreements, for example, include penalties for non performance⁶.

⁵ America's Network, January 15 2003

⁶ Hewlett Packard, 2004

Best practices companies insist on SLAs from their outsourcing providers in order to set clear expectations for both parties. Such companies not only include performance metrics in SLAs, but make sure they support business and IT objectives.⁷

Systems

Successful service level management strategy requires pulling information from multiple systems, including inventory, fault management, performance management and customer relationship management systems, in order to build a comprehensive view of the service. Vendors that have participated in this space for some time have included fault and performance management companies.

With this in mind and in light of the benefit of cheaper, more efficient XML technology, national regulatory authorities such as Oftel and Ofcom in the UK have prescribed detailed principles for the development of operational support systems.

Telecommunications processes in the UK are predominantly automated (including BT's internal processes), with manual intervention and processes being the exception. This includes order placement and management (i.e. tracking) and fault reporting and management, in addition to service forecasting.

An XML web based application has been implemented by BT that allows UK access seekers to place orders, if required, to which an error/rejection is communicated immediately, and the access seekers subsequently has the ability to interrogate the gateway themselves and make amendments. The gateway supports:

- Business and residential customer groups;
- Individual and bulk orders; and
- Search and tracking of orders.

In Australia, Telstra provides an on-line ordering system: Links On-Line Ordering (LOLO). This system provides access seekers with an option to use an automated system and interface for order handling. Telstra states on its Telstra Wholesale website that this system allows wholesale customers to create, find, monitor and change requests for Voice, DSL and data services online. If orders are accepted by the LOLO system as valid, they can be processed directly by the Telstra core systems⁸.

⁷ PricewaterhouseCoopers Global Best Practices®

⁸ Telstra LOLO training manual. http://www.telstrawholesale.com/linxonline/ordering_training.htm (December 2004)

Obligations

SLAs are typically included in the scope of an international incumbent operator's Reference Offer (RO) including the terms and conditions of supply and penalties for non-delivery.

SLAs and performance metrics are commonly used for regulatory and inter-carrier purposes. As stated earlier, SLAs are a contract between the carrier and the customer that promises compliance with certain terms and conditions and may assure rebates if the conditions are not fulfilled. Parties can use SLAs to prepare performance metrics, or Key Performance Indicators (KPIs) which, depending on how they are defined, can highlight the level of performance against components of an SLA. The use of SLAs and KPIs is supported by the Australian experience, which has included the development of end-to-end performance metrics, incorporating minimum performance targets, such as the Customer Service Guarantees, or CSG, for the relative comparison of Basic Access services provided to wholesale and retail customers by the incumbent.

IV Development of performance metrics for equivalency of service between wholesale and retail for public reporting - Australia

Background

The Telecommunications Competition Act 2002 (the Act) made amendments to Parts XIB and XIC of the Trade Practice Act 1974, which came into effect on 19 December 2002. The Act gives effect to the decisions announced by the Government on 24 April 2002 and builds upon amendments introduced in 2001 to streamline the Commission's arbitration process for telecommunications access disputes.

These reforms included two new regulatory requirements relating to Non-Price Terms and Conditions:

- ACCC to develop model terms and conditions for core services, such as PSTN originating and terminating services, unconditioned local loop services and local carriage services; and
- *ACCC to develop key performance indicators (KPIs) in relation to Telstra's supply of specified retail and wholesale services.*

There was a separate requirement on Telstra, pursuant to a Ministerial Direction made under 'Record-Keeping Rules and Disclosure Directions' (Div 6 of the Act), to publish information comparing its actual performance in supplying specified wholesale services and specified retail services in accordance with a customer grouping (if any) determined by the Commission to external access seekers in terms of key NPTC.

On the 17 April 2003, the Australian Competition and Consumer Commission (ACCC) issued a Discussion Paper for Key Performance Indicators (KPIs) for Non-Price Terms and Conditions (NPTC). This paper canvassed issues and proposals for the determination of KPIs measuring the supply of certain services by Telstra to itself and its wholesale customers.

Following this industry consultation, a revised Record Keeping Rule (RKR) was made pursuant to section 151BU Part XIB of the Trades Practices Act 1974 by the ACCC in August 2003, which defined the KPIs for inclusion in Telstra's initial Accounting Separation Reports. The KPIs required for the initial report in December 2003 related to the provision of Basic Access services and were outlined in Schedule A of the RKR.

These KPIs are summarised in the following table:

Term of Supply for Basic Access services	Key performance indicator(s)	
	Business performance compared to wholesale	Residential performance compared to wholesale
Faults and maintenance		
Difference in % of faults rectified within performance standard		
Difference in % of appointments kept		
Ordering and provisioning		
Difference in % of services provisioned within performance standard – re-connections		
Difference in % of services provisioned within performance standard – new services with existing cabling and capacity		
Difference in % of services provisioned within performance standard – new services without existing cabling and capacity		
Difference in % of appointments kept		

Table 1: Information and reporting format as per the NPTC Key Performance Indicator (Initial Reports) Record-Keeping and Reporting Rules, August 2003

Telstras first return was lodged in December 2003, for the quarter ending 30 September 2003⁹.

⁹ Copies of the reports can be found on the ACCC's website at <http://www.accc.gov.au/content/index.phtml/itemId/426661>

Published Key Performance Indicators

The ACCC issued its 'Initial Reports Relating to Accounting Separation of Telstra' in December 2003.

The reports were stated as providing greater transparency on Telstra's operations to ensure that it does not unfairly discriminate between access seekers using its network services and its own retail operations. The reports included the six key performance indicators on NPTC that compare relative service performance between Telstra's retail and wholesale Basic Access services.

The relative performance was based on CSG measures, although in the absence of CSGs, internal operational targets set for the incumbents retail services could be used, as it is the relative performance between wholesale and retail that is being compared.

Relative performance between the supply of Basic Access services provided to retail and wholesale can assist in identifying any potential discrimination in the supply processes. any significant variation in relative performance can be subsequently investigated and rectified to ensure that equivalence of service is restored.

The comparison of relative performance can also be applied to vertically integrated incumbent operators that do not have separate processes for the delivery of wholesale and retail service, or do not have an appropriate reference point in their internal supply chain between wholesale and retail.

Subsequent Record Keeping Rules

On 29 September 2004 the ACCC issued a subsequent RKR which both incorporated the requirements from the previous Basic Access RKR (described above) and expanded the KPI reporting required to include ADSL services. The subsequent RKR required the incumbent to:

- Establish and maintain written and electronic records containing information that compares the outcomes of their performance for the supply of retail and wholesale ADSL services as well as Basic Access services; and
- Expand the initial Basic Access metrics (as detailed above) to include the requirement to report the % difference in recurring fault ratio for wholesale and retail services.

The specific ADSL KPIs required for the initial report in August 2005 were outlined in Schedule B of the RKR and are summarised in the following table:

Term of Supply for ADSL services	Key performance indicator(s)	
	Business performance compared to wholesale	Residential performance compared to wholesale
Faults and maintenance		
Difference in % of faults rectified within performance standard		
Difference in % of appointments kept		
Service Activation		
Difference in % of services provisioned within performance standard – where end user has an existing and functioning basic access service capable of supporting ADSL services		
Difference in % of services provisioned within performance standard – held orders		

Table 2: Information and reporting format as per the NPTC Key Performance Indicator Record-Keeping and Reporting Rules, September 2004

In addition to the above KPIs, Telstra is also required to establish and maintain written and electronic records in respect of service qualifications¹⁰ for ADSL services requested by their retail and wholesale customers, and whether or not they were qualified. If they were not qualified, records should be maintained explaining why it did not qualify. There are currently no reporting requirements specific to this captured data.

The Australian incumbent is currently in the process of implementing the requirements of the RKR. The performance standard required for each KPI is defined in the RKR.

¹⁰ The ACCC September 2004 RKR defines Service Qualification as the process of confirming whether an ADSL service can be provided by checking line loss, infrastructure availability, technology blockers, adjacent interference and incompatible products

Summary

The Australian experience indicates that:

- End-to-end measures of performance for the supply of services to wholesale and retail customers by the incumbent provides a strong mechanism for comparison of relative performance in order to demonstrate an equivalence of service;
- It is feasible, practical and productive to compare the service performance provided by a vertically integrated incumbent operator to a wholesale customer vis-à-vis its own end users. The ease of measurement is likely to increase as the level of process automation is increased; and
- The comparison of performance between retail and wholesale can relate either to an end-to-end process or components of such processes; which ever is more valid and meaningful to the report users.

V PwC’s approach for an walkthrough of ordering, provisioning and assurance processes for specific wholesale service and their equivalence to retail services

Background

Based on our experience of reviewing the end-to-end processes of a vertically integrated incumbent operator’s retail and wholesale processes for the ordering, provisioning and assurance of specific telecommunications services, we have outlined the approach adopted to demonstrate the equivalence of service at each stage in the supply chain for wholesale and retail services. This approach can also be used at vertically integrated incumbent operators that do not have separate processes for the delivery of wholesale and retail services. Where a retail and wholesale process is not comparable in its entirety, the approach can be used to identify components of the processes which are comparable.

Approach

PwC has undertaken the following three phased approach to demonstrate equivalence of service between wholesale and retail services at a vertically incumbent telecommunications operator:

	Phase 1 Checklist Development	Phase 2 System & Process Review	Phase 3 Walkthrough & Test
Activities	1. Preparation of checklist outlining the incumbent operator's performance obligations: <ul style="list-style-type: none"> • Legal • Regulatory; and • Contractual 	1. Review / develop documentation with retail and wholesale process owners <ul style="list-style-type: none"> • Key process activities ('As Is') • Map processes, obligations and accountability • Determine which components of the process are comparable • Define process interfaces and KPIs for comparable parts of the process • Define internal point of reference for wholesale and retail services (e.g. current average retail performance; CSG) 	1. Walkthrough & test of the comparable processes for ordering, provisioning and assurance. 2. Observe compliance with obligation checklists developed in phase 1 3. Develop audit trail and identify potential equivalency issues for follow up / remediation
Output	1. Developed 'compliance' checklists	1. Defined and mapped processes, systems, KPIs and procedural documentation 2. Defined process owners, accountability and demarcation points (for KPIs)	1. Independent report outlining efficiency, transparency, and 'equivalency' of processes 2. Documented audit trail

Figure 1: Suggested approach to demonstrate equivalence of service between wholesale and retail services at a vertically incumbent telecommunications operator.

Phase 1 – Checklist Development



A complete review and assessment of the incumbent operators' obligations are defined during this phase. These obligations set out the minimum requirements that must be provided in the ordering, provisioning and assurance processes to its customers, both retail and wholesale. These checklists are subsequently used to:

- Assess the level of compliance; and
- Determine various 'performance level' streams to be tested (i.e. equivalence of service testing should be based on the standard level of service performance – not on special bi-lateral arrangements).

Phase 2 – System and Process Review



The objective of this phase is to ensure that each stage of the retail and wholesale service delivery supply chain is adequately documented (mapped), with the accountabilities and SLAs/KPIs identified. During this phase the processes should be documented and mapped in detail to determine which components of the wholesale and retail process are comparable and which can be measured. This is required as in some cases the end-to-end process may not be sufficiently similar in both the retail and wholesale environment to compare them in their entirety. However components of the process will be comparable.

It is critical to understand the ‘as is’ position before starting to test equivalence of service, especially the areas of difference in the wholesale and retail processes and the rules for handling of exceptions.

Phase 3 – Walkthrough and Test



The objective of this phase is to follow individual orders and trouble tickets through the wholesale and retail processes (as mapped in Phase 2) to identify potential differences in relative service performance and other potential breaches. The walkthrough and test includes:

- Confirmation of the processes by way of a detailed testing of a sample of orders and trouble tickets from entry to completion. The focus of this testing is to ensure that the standard retail or wholesale services (or process components thereof) are being provisioned to an equivalent standard of service.
- Comparison of the wholesale processes with retail for the same services and identification of potential differences including, but not limited to:
 - Accuracy of process outputs/measurements;
 - Repeatability of process outputs/measurements;
 - Reliability of instruments and procedures used.
- Confirmation of compliance with the obligation checklist.
- Consideration of the overall efficiency, transparency and usability of the processes developed by the incumbent based on current and future volumes.

The resultant report on the findings of the walkthrough of both retail and wholesale service delivery processes highlights areas of actual or potential service in-equivalence as well as actions required to address such issues.

PwC considers that a relative comparison of service level performance between wholesale and retail is an appropriate measure. This assumes that an efficient interface is deployed for the submission of service requests by the access seeker (orders and trouble tickets) which does not disadvantage it compared with retail's own end users. Increased automation is likely to ensure that a more equivalent service is provided to the wholesale customer and allow it to be maintained as demand increases.

Issues

Previous reviews of incumbent telecommunications operators' retail and wholesale processes have identified a number of "common" areas of potential in-equivalence:

- **Manual processes** are especially evident during the initial set up phase. Manual processes tend to be error prone, slow, create backlogs in service provisioning and fault management and are not scalable to handle forecast demand.
- **Automation.** Orders are not always directly input into the incumbent's key systems. Automation is required to allow access seeker information to be captured more quickly and accurately, and potentially to provide status reporting for ordering, provisioning and assurance to reduce and prevent progress calls.
- **Error Tanks.** Orders and trouble ticket processing is subject to error, especially where there is manual intervention. Such exceptions can lead to queuing issues and the potential for service in-equivalence between retail and wholesale.
- **Documentation.** Incomplete or complex wholesale procedures, and cumbersome standard documentation and acceptance criteria for wholesale orders or trouble tickets can lead to considerable rework at the interface point and delays in the wholesale service – potentially this can be an example of in-equivalence, although there are often quality issues on both sides of the interface.
- **Temporary Services.** The implementation of temporary solutions to provide retail service for which an equivalent wholesale service is unavailable.

These are only a few examples in our experience, where service differences between retail and wholesale can lead to potential equivalence issues.

VI Conclusions

Based on international experience relating to the establishment, measurement and evolution of SLAs in IT, outsourcing and business process engineering during the last twenty years, we have concluded that:

- The development and evolution of SLAs including performance measurements is not a “new concept” as they first emerged in the 1980s
- SLAs have evolved to include penalties, or other agreed remedial protocols, for failure to perform against specific service level commitments.
- International practice suggests that incumbent operators are having to publicly disclose penalties for any failure on their behalf to perform the contractual commitments agreed with an access seeker.
- Web portal technology now provides a feasible and cost-effective solution for OSS interworking. Development in the global standardisation of extensible mark-up language (XML) has enabled cost effective access to support system functions which are vital to creating opportunities for meaningful competition.

In addition, Australian experience relating to the development of performance measures and KPIs for Non-Price Terms and Conditions indicates that:

- A series of KPIs measuring the supply of certain services by the incumbent operator to itself and its wholesale customers has been implemented;
- The incumbent operator provides quarterly reports on its relative service performance for retail and wholesale for six specific KPIs for Business and Residential customers, insofar as they relate to Basic Access services;
- These six specific metrics have been developed based on a benchmark of the existing retail customer service guarantee performance standards (although internal operational targets set for the incumbents retail services could be used as the yardstick);
- The metrics for KPI reporting cover the ordering, provisioning, and fault handling of Basic Access services;
- The scope of Basic Access services (to which the KPIs relate) in Australia appears comparable with that of Business and Residential Resale services in New Zealand;

- The incumbent operator is currently implementing processes to provide quarterly reports on its relative service performance for retail and wholesale for four specific KPIs for Business and Residential customers, insofar as they relate to ADSL services;
- These four specific metrics have been developed based on performance standards specified in the RKR (although internal operational targets set for the incumbents retail services could be used as the yardstick);
- The metrics for KPI reporting cover the service activation and fault handling of ADSL Services;
- The scope of ADSL services (to which the subsequent KPIs relate) in Australia appears comparable with the combination of both the bitstream and backhaul services in New Zealand;
- End-to-end measures of performance for the supply of services to wholesale and retail provides a strong mechanism for comparison of relative performance in order to demonstrate an equivalence of service; and
- It is feasible, practical and productive to compare the service performance provided by an incumbent operator to a wholesale customer vis-à-vis its own end users. In some cases this comparison may be for the end-to-end process, or for identified components of the processes which are comparable.

PwC considers that the approach outlined previously in this paper to determine whether an equivalence of service can be demonstrated between wholesale and retail services supplied by a vertically integrated incumbent telecommunications operator is appropriate. Even where the processes and systems are considered to be identical between retail and wholesale, differences can arise due to systems “queuing priorities” and even bias at the field work force level; and so testing is still appropriate.

PwC considers that its approach can be used at vertically integrated incumbent operators that do not have separate processes for the delivery of wholesale and retail services. This assumes that an efficient interface is deployed for the submission of service requests by the access seeker (orders and trouble tickets) which does not disadvantage it compared with requests from the incumbent’s own retail end users. Increased automation is likely to ensure that a more equivalent service is provided to the wholesale customer and allow it to be maintained as demand increases.

The end-to-end walkthrough and review described in this paper is not designed to detect all limitations in control procedures as it is not performed throughout a measured period but on a sample basis. Therefore, the level of assurance and hence the accuracy of any confidence levels that can be provided is subject to statistical analysis.

However, PwC considers that an audit trail for the tracking and measurement of transactions through the individual components of the incumbent's internal processes can be implemented and supported with appropriate documentation as necessary.

VII Closing Statement

This paper is supplied on the understanding that it is solely for the use of the persons for whom it was prepared, TelstraClear, as part of its submission to the New Zealand Commerce Commission investigation into the terms and conditions of wholesale business services offered by Telecom New Zealand Limited. We will accept no liability or responsibility to any person other than to TelstraClear. Copies may be made available to Telecom New Zealand Limited and the New Zealand Commerce Commission as part of the determination process, provided it is clearly understood by such recipients that we accept no liability to them in respect of the content of this paper for whatever purpose it is being used.

If TelstraClear wishes to discuss any aspect of this paper, it should contact:

Nick Ridehalgh
Partner
Darling Park Tower 2
201 Sussex Street
GPO BOX 2650
SYDNEY NSW 1171
Tel: +61 2 8266 4899

VIII Appendix A - Definitions

Terms used within this paper have the following meaning unless otherwise stated. Such definitions are based on New Zealand and Australian legislative and regulatory documentation.

Wholesale service

Wholesale service refers to the Designated Access Service(s) listed in Subpart 1 of Part 2 of Schedule 1 of the Telecommunications Act 2001 in the context of the supply of the wholesale service by Telecom to a non-Telecom carrier.

Non-discrimination

The non-discrimination rule applying to Designated Access Services is set out in Clause 5 of Schedule 1 of Telecommunications Act 2001 as clause (c) of the Standard Access Principles which states:

The access provider must provide the service on terms and conditions (excluding price) that are consistent with those terms and conditions on which the access provider provides the service to itself.

In Australia, the non-discrimination rule is set out in the Standard Access Obligations, defined in section 152AR(3) of the Trade Practices Act 1974:

An access provider must, if requested to do so by a service provider:

- Take all reasonable steps to ensure that the technical and operational quality of the active declared service supplied to the service provider is equivalent to that which the access provider provides to itself; and
- Take all reasonable steps to ensure that the service provider receives, in relation to the active declared service supplied to the service provider, fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself.

Equivalence of service

This obligation is part of the non-discrimination requirement of clause (c) of the Standard Access Principles outlined previously.

In Australia, this obligation is part of the non-discrimination requirement in section 152AG (3) of the Trade Practices Act 1974 as outlined previously.

Transparency

In Australia, this requirement may be implied as part of the Standard Access Obligations set out in section 152AG(3) of the Trade Practices Act 1974 and also the Record Keeping Rules set out in Part XIB of the Trade Practices Act 1974.

Basic Access

Connection from the Network Boundary Point at the customer or end-user premises (as relevant) to the local Telstra telephone exchange providing access to Telstra's public switched telephone network for the purpose of providing voice telephony at 3.1kHz.

ADSL

The ACCC RKR defines ADSL services as connection on a (copper) pair as part of obtaining an ADSL line, from the network boundary point at the customer or end user premises, to an incumbent DSLAM, for the purposes of transmission of digital information at higher bandwidths, and which has physical and electrical characteristics that confirm with specified ITU documents.

Wholesale Bitstream Service

For the purpose of this paper, the combination of bitstream and backhaul designated services, is referred to as the wholesale bitstream service. The components of this are:

Bitstream

The New Zealand Commerce Commission defines bitstream services as an asymmetric digital subscriber line enabled service (and its associated functions, including the associated functions of Telecom's operational support systems) that enables access to, and interconnection with, that part of Telecom's fixed PDN that connects an end-users building (or, in the case of commercial buildings, the building distribution frames) to Telecom's first asynchronous transfer mode (ATM) data switch or equivalent facility other than a digital subscriber line access multiplexor (DSLAM).

Backhaul

The New Zealand Commerce Commission defines backhaul services as a service (and its associated functions) that provides transmission capacity in Telecom's fixed PDN from the trunk side of Telecom's first asynchronous transfer mode (ATM) data switch or equivalent facility other than a digital subscriber line access multiplexor (DSLAM), connected with the end users building (or in the case of commercial buildings, the building distribution frames), to the access seekers nearest available point of interconnection..