



TelstraClear Limited

**Response to the Statement for Consultation on TelstraClear's
application for access to and interconnection with Telecom's fixed PDN
(“Wholesale Bitstream”)**

27 October 2005

PUBLIC VERSION

TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	3
2.	TECHNICAL SPECIFICATION	5
2.1	Unconstrained Peak Information Rate ('PIR')	5
2.2	Sustained Information Rate ('SIR')	7
2.3	Other technical attributes of the service	9
2.4	Key Performance Indicators	10
3.	APPLICATION OF THE INITIAL PRICING PRINCIPLE	12
3.1	Uniform bitstream access price	12
3.2	Calculation of the uniform bitstream access price	13
3.3	Deduction of the ISP Charge	13
3.4	Calculation of the Calling Discount	15
3.5	Jetstream plans used in the Commission's regression	15
3.6	Wholesale price adjustments over time	16
3.7	Churn charge	19
3.8	Other pricing issues	22
4.	OPERATIONAL SUPPORT SYSTEMS	26
4.1	Interim Solution for OSS	26
4.2	Longer term B2B Solution for OSS	26
4.3	Dispute Resolution	26
4.4	OSS Price Terms	26
4.5	Key Performance Indicators	27
5.	IMPLEMENTATION TIMEFRAME	29

This public version of TelstraClear's submission has had removed from it:

- (a) TelstraClear-designated Restricted Information (**TCLRI**); and
- (b) Telecom-designated Restricted Information (**TCNZRI**).

The material comprising TCLRI was provided to the Commission in accordance with clause 8 of the Commission's Confidentiality Order dated 9 November 2004, and is categorised as cost/price.

1. EXECUTIVE SUMMARY

1. TelstraClear strongly supports the proposals contained within the Commission's 12 October Statement for Consultation. In particular, we consider that the proposed "unconstrained" downstream speed and the uniform wholesale price will provide access seekers with considerable flexibility to innovate to the long-term benefit of end-users.
2. In our view, the technical risks associated with an "unconstrained" downstream speed bitstream service are low and the benefits are high. The latest OECD broadband uptake figures, which demonstrate that New Zealand is only just treading water at the bottom of the OECD rankings, indicate that wholesale bitstream-based competition must be made to work if the Government's Digital Strategy objectives are to have any chance of being fulfilled. Telecom has consistently failed to demonstrate that the adverse impacts of an unconstrained service are significant, that they will be widespread or that they will be unmanageable, particularly given Telecom's experience with its own full speed retail services.
3. Our remaining technical concerns are around ensuring that the wholesale bitstream service is supplied in line with international best practice (Standard Access Principle 2 ('SAP2')) and in a manner that ensures consistent quality of service between the bitstream service and the datastream Telecom provides to itself (Standard Access Principle 3 ('SAP3')). To address these concerns, we consider that the Commission should:
 - (a) require and monitor that Telecom provisions the virtual paths such that congestion does not readily occur. Effective competition relies on a fit for purpose bitstream service and a chain is only as strong as its weakest link; and
 - (b) require that Telecom provide quarterly audited reports demonstrating that it is treating wholesale and retail customers consistently for those aspects of service provision where there is scope for differing treatment.
4. As regards price, we welcome the approach of a uniform wholesale bitstream access price but submit that it is not at a level that would allow an efficient access seeker to compete against Telecom for entry-level residential services, which are likely to continue to constitute a substantial proportion of the downstream residential market. This is where competition needs to occur if New Zealand's broadband ranking is to improve. We consider that the imputed bitstream access price is too high due to two key factors:

- (a) the imputed ISP charge deducted does not fully reflect the cost and value of this service; and
 - (b) the imputed price should vary depending on an access seeker's monthly connection volumes. This is in line with international best practice and Telecom's own pricing for its commercial UBS service.
5. In addition, the quarterly adjustment methodology for the bitstream access price needs revising to ensure that a change in Telecom's customers' retail plan preferences does not result in an increase in the wholesale bitstream price even where all Telecom's retail broadband access prices are falling. This could lead to a retail price squeeze.
6. We also consider that the Commission should determine the starting churn fee and also a methodology for this to be adjusted quarterly, given that we expect provisioning costs to fall and transaction volumes to rise. Further, the connection fee should be adjusted to reflect the actual connection fee offered by Telecom in the retail market rather than the standard list price.
7. Finally, we welcome the Commission's elaboration of the "no material difference in end-customer experience" principle in relation to Operational Support Systems (OSS) that the Commission set out in the Draft Determination. The devil is in the detail in relation to OSS and effective competition requires effective, transparent and equivalent systems and processes.

2. TECHNICAL SPECIFICATION

8. TelstraClear welcomes the revised proposals from the Commission on the technical specification of the regulated bitstream service. We consider that the 12 October proposals, supplemented by additional proposals considered previously (such as interleaving options) will provide access seekers with considerable flexibility to innovate to the long-term benefit of end-users. However, it is important that the wholesale bitstream service is fit-for-purpose as an unbundled wholesale service and is adequately provisioned to ensure equivalent quality of service to Telecom's downstream business. This is necessary to ensure a transparent and equivalent service is delivered to access seekers.

2.1 Unconstrained Peak Information Rate ('PIR')

9. TelstraClear fully supports the Commission's view that Telecom should be required to provide TelstraClear with bitstream access with a downstream PIR at the maximum technical capacity of the DSLAM (an 'unconstrained service').
10. TelstraClear agrees that a bitstream access service with an unconstrained downstream speed is most likely to accelerate competition in broadband markets for the long-term benefit of end-users through the availability of new services, expanded uptake of broadband services, and reduction in prices. Access seekers would be able to innovate by offering customers any speed, and by being able to flexibly change the speed offered to a particular customer, up to the constrained PIR. This ability would not be constrained by Telecom's retail offerings in any way, only by what is technically feasible.
11. As we have submitted previously, TelstraClear does not consider that a downstream PIR set to the theoretical maximum line speed (7.6 Mbps using current technology) will give rise to material additional risks to existing users. A constrained lower speed (e.g., 3.5 Mbps) PIR will not materially assist in minimising the power spectral density in the cable network to maximise reach, as we consider that it is difficult to reduce Far-end Cross-talk (FEXT) for long lines by controlling the rate. Further, reach is likely to be impacted more by other interference (such as radio frequency interference and customer premises wiring), which Telecom's modelling did not account for.
12. In our view, Telecom has not put forward sufficient credible evidence to demonstrate that there is a material risk with a PIR set to the theoretical maximum capacity of the DSLAM. Even if Telecom is correct in its view that there are risks to other Telecom customers in supplying an unconstrained bitstream access service to a wholesale customer, the fact that Telecom continues to provide full speed

services to a significant number of its retail customers demonstrates that those risks must be low and/or manageable.

13. We also agree that any potential risk to existing customers would be unlikely to outweigh the benefits to competition and end-users that an unconstrained service would offer. TelstraClear supports the Commission's proposal that should Telecom introduce a fit-for-purpose spectrum management tool for its own retail and unregulated wholesale services, Telecom could seek the Commission's approval that the spectrum management rules also be applied to regulated wholesale services. However, such a regime would need to be transparent and equivalent, such that there is no material difference in provisioning or service quality from an end-user perspective (SAP 3). It should also be consistent with international best practice, in line with SAP 2.
14. TelstraClear submits that it is important that the Commission specify the following key criteria so that there is clarity about the meaning of an unconstrained service:
 - (a) The PIR set at the maximum theoretical line rate that a DSLAM can support, excluding allowances for DSL overheads, (i.e., 7.6 Mbps initially) should apply from the customer to the DSLAM and the achieved PIR will depend on line length and quality. The PIR specified from the DSLAM to the L2TP Access Concentrator (LAC) should also be set to the theoretical maximum but the PIR achieved across this path will be whatever PIR the DSLAM will take (up to 7.6 Mbps) – e.g., we expect that this will be less than 7.6 Mbps for the Conklin DSLAMs but should not be less than the maximum PIR Telecom is able to achieve for itself;
 - (b) We also consider that a minimum downstream profile access line speed should be set at 128 kbps, as an assurance trigger; and
 - (c) As previously stated, TelstraClear does not consider that any PIR constraint (or average SIR constraint) should apply from the LAC to the Network-to-Network Interface (NNI) – this should be a full STM1.
15. The Commission also notes that the theoretical maximum PIR (7.6 Mbps using current technology) may increase in the future as Telecom utilises new network technologies for the delivery of ADSL services.¹ As we have submitted previously, where Telecom improves its technical capability (e.g., with the roll out of ADSL2+)

¹ Paragraph 14.

TelstraClear should receive the same notice of any increase in PIR as Telecom's "networks group" provides Telecom's internal "retail product development group".

16. As Telecom keeps saying, it has not organisationally separated its retail and wholesale businesses. Accordingly, in order to implement SAP 3, it is necessary to select the appropriate point in Telecom's internal supply chain which represents the point at which Telecom notionally supplies itself with a service which is equivalent to the externally supplied regulated service. That internal self-supply benchmark necessarily will differ between services depending on the nature of the regulated service.
17. The bitstream service is an input into the development of downstream products, such as Jetstream. The downstream Jetstream service is itself a regulated service. The equivalent self supply benchmark logically cannot be the same for the two services: the benchmark would be closer to the customer for the end-to-end resale service and further back in the Telecom internal supply chain for the unbundled service.
18. In the recent draft Private Office Networking Determination, the Commission considered that the relevant internal benchmark for the application of the Standard Access Principles to resale services should be Telecom's retail sales and customer support. That is too late in the supply chain for an unbundled service like bitstream. As Telecom notionally uses an unconstrained service to shape downstream retail products, the relevant self-supply benchmark should be the Telecom function that develops retail products. This function then "hands off" newly developed end-to-end services to the sales function, which is then the appropriate internal self supply benchmark for resale services.
19. As the parties have been fundamentally at odds in these and other proceedings over the application of SAP 3, TelstraClear submits that the Commission should identify the appropriate internal self-supply benchmark for the bitstream service in the final determination.

2.2 Sustained Information Rate ('SIR')

20. The Commission states at paragraph 16 that:

"TelstraClear has requested that the SIR for the bitstream access service be the weighted average SIR of the best efforts ADSL services across Telecom's network."

21. TelstraClear does not believe this accurately reflects the path by which the average SIR proposal was reached and that the Commission overlooks the important

qualifications that TelstraClear believes should apply to the average SIR. TelstraClear believes that its proposals will substantially address the concerns that other ISPs have raised with the average SIR approach.

22. TelstraClear proposed the use of the weighted average SIR approach in response to the Commission's and Telecom's average SIR proposals at the July technical workshop. Prior to the workshop the Commission had proposed that the SIR be set to an average allocated throughput per end-user (set at individual DSLAMs). Telecom proposed that the SIR be set to the average of Telecom's minimum throughputs for its own equivalent Jetstream plans within low, medium and high downstream speed bands.
23. The need to specify a SIR arises from the wholesale input nature of the bitstream access service. As the wholesale bitstream service is not and should not be tightly linked to Telecom's downstream retail products, "contention" needs to be able to be managed by the access seeker. However, Telecom currently uses a defined PIR and SIR for each service provisioned for dimensioning its DSLAM to ATM connection and its hierarchical scheduler (used to manage bandwidth contention during times of contention – typically during busy hour).
24. Hence, this created the problem to which TelstraClear's weighted average SIR was directed. On the one hand, the defining characteristic of the unconstrained service is the delinking from Telecom retail service characteristics, including the contention ratio. On the other hand, Telecom continues to use the retail contention ratio to manage service degradation: Telecom's banded SIR approach has the practical effect of partially rebuilding the tight retail link that was rejected in adopting the unconstrained service. A wholesale-specific SIR could have been adopted, but Telecom has indicated that a SIR different to its average would result in greater resource utilisation on the shared network resources, and hence a higher wholesale charge.
25. Given these parameters, TelstraClear believed that the weighted average SIR approach was the best way of retaining the fundamental requirement for the unconstrained service without rebuilding a de facto link back to Telecom retail services. However, this still leaves the problem of discriminatory degradation of retail and wholesale services when capacity is constrained because the way in which Telecom manages degradation will inevitably favour higher speed retail services over wholesale due to the higher SIR applied. Hence, the use of the weighted average SIR cannot be divorced from capacity on the virtual path.
26. TelstraClear proposed at the technical workshop that the sharing of virtual path resources between Telecom and TelstraClear and the setting of an average SIR

required that a consistent maximum utilisation level be set on shared virtual paths – we suggested 80% for STM1 links, and 50% for IMA links. This maximum utilisation level is an important element required alongside the average SIR specification to ensure consistency of treatment between retail and wholesale customers in terms of capacity management. The maximum utilisation level proposed by TelstraClear is consistent with sound network management practice and therefore should not impose an unreasonable or inappropriate burden on Telecom. Setting maximum utilisation levels for virtual paths is also consistent with international best practice in line with SAP2.

27. We believe that much of the recent public concerns raised by other ISPs around the average SIR proposal result from a concern that the wholesale bitstream virtual paths may be under-provisioned. Our proposals are directed at the same concern expressed by the ISPs and are consistent with prudent network management practices.
28. As previously submitted, a single SIR should be set across the network, with the exception of the Conklin DSLAMs where a lower SIR is likely to be set due to backhaul constraints. The SIR provisioned for services utilising the Conklin DSLAMS should be the weighted average allocated throughput per end-user provisioned by Telecom for best efforts services provided by Telecom on the Conklins.
29. We agree that the weighted average SIR should be updated quarterly and notified to TelstraClear and the Commission. The SIR should be audited as part of the process for verification of the service levels (see below at paragraph 34).

2.3 Other technical attributes of the service

30. The Statement addresses the downstream PIR and SIR, but is otherwise silent on other technical attributes of the service, stating that they will be as set out in the Commission's proposed technical specification on 30 August 2005.² TelstraClear has the following further comments as previously addressed at the technical workshop and in submissions on the 30 August proposed technical specification:

- (a) **Upstream PIR** – TelstraClear accepts that the designated service requires a maximum upstream throughput rate of 128 kbps for data traffic sent from the end-user;

² Paragraph 20.

- (b) **Virtual Path** – TelstraClear agrees with the Commission’s 30 August proposal that Telecom and TelstraClear should share a single Virtual Path from the Local Access Concentrator (LAC) to the DSLAM currently used by Telecom’s best efforts traffic – Unspecified Bit Rate (UBR) services. A consistent maximum utilization level should be set on shared virtual paths (e.g., 80% for STM1 links, 50% for IMA links) to ensure access seekers can assess what service can be achieved downstream and that the bitstream access service is fit-for-purpose – this is consistent with international best practice, as required by SAP2;
- (c) **LAC to the LNS** – As stated above, the PIR from the LAC to the L2TP Network Server (LNS) should be set at the maximum for that path (155 Mbps) and no SIR should be applied on that path (i.e., the PIR should equal the SIR for this component). As that path should be solely for the use of the access seeker at their cost, TelstraClear can see no justification for applying limits. Further, such limits could adversely affect performance to the detriment of end-users; and
- (d) **Interleaving** – As previously submitted, TelstraClear should be able to specify interleaving “on” or “off” for a service.

2.4 Key Performance Indicators

- 31. As previously submitted at the technical workshop, the fact that wholesale and retail services will share the same virtual path from the DSLAM to the first ATM switch should provide assurance as to relative consistency of service (across parameters such as jitter, latency and packet loss). Accordingly, TelstraClear agrees that it is not necessary to require wholesale service levels to be specified.
- 32. However, there are two aspects of service provision that potentially could be managed in a way that would adversely affect the service quality of downstream retail products supplied by wholesale customers compared to the Telecom retail service. These are the type of DSLAM wholesale and retail customer services are connected to, and the utilisation of the shared virtual path used to carry wholesale and retail customer traffic. TelstraClear considers that comparative service reporting is required on both these aspects.
- 33. Additionally, comparative reporting also should be required on the average allocated throughput per end user provisioned by Telecom for its own retail services and the average throughput provisioned for wholesale services. This is to confirm that the quarterly revised SIR is being implemented.
- 34. Hence, to ensure consistency in line with the Standard Access Principles, quarterly

reporting verified by an independent auditor should be required on:

- (a) the percentage of wholesale versus retail customers on each DSLAM type (by type of service – i.e., downstream speed); and
 - (b) the percentage of wholesale versus retail customers on any virtual path with a utilisation above an agreed level - e.g., 60% for STM1 links, 40% for IMA links (by type of service – i.e., downstream speed); and
 - (c) average allocated throughput per end user provisioned by Telecom for its own retail service.
35. TelstraClear submits that, given the importance of transparent and equivalent service provisioning to the successful launch of the bitstream service, there should be a mechanism to expeditiously resolve any dispute between the parties over the implementation details. TelstraClear agrees with the Commission's proposal that the parties should endeavour to reach agreement on the service levels and service reporting (including external verification) terms within a defined period following the final Determination and, if they cannot, either party should be able to escalate the dispute to the Commission. As the service levels and service monitoring process will have to be in place by service launch, the period within which the terms are to be agreed necessarily has to be shorter than the implementation period determined by the Commission. Accordingly, TelstraClear proposes that these terms are to be agreed within 14 days of the Final Determination.

3. APPLICATION OF THE INITIAL PRICING PRINCIPLE

36. TelstraClear largely supports the approach taken to the retail bitstream access price imputation exercise in the Statement for Consultation. We welcome the move to impute a uniform wholesale price because this is consistent with the unbundled service being a generic upstream input across several downstream retail customer markets.
37. However, we consider that the Commission's imputation approach overstates the imputed access price and that the level of the Commission's proposed bitstream pricing provides limited scope for downstream competition in the residential retail market. We consider that the Commission should both modify the imputed ISP charge deduction and impute volume-based bitstream access pricing. Further, we are concerned that the proposed quarterly adjustment mechanism could lead to unexpected changes in the wholesale price and needs refining.
38. TelstraClear also believes that the churn charge should be determined and should also be adjusted quarterly, as it is dependent on both provisioning costs, which we expect to reduce, and on volumes, which we expect to increase. Further, the wholesale connection charge should be derived from the effective connection charge being offered in the retail market rather than Telecom's standard list price.

3.1 Uniform bitstream access price

39. TelstraClear agrees with the Commission's view that there is no justification for maintaining a differential wholesale price between bitstream for supply to residential and business end-users. A single wholesale price should be imputed unless there are differences in the wholesale access service for business and residential customers. As we have submitted previously, we are not aware of any country where wholesale bitstream prices differ by customer type, unless there is a difference in the service being provided, such as in contention. As the Commission notes:

*"Telecom provides internet-grade best-efforts Jetstream services with the equivalent quality of service characteristics to both residential and business customers. The costs to deliver the network components of the service to either a residential or business end-user will be the same."*³

³ Paragraph 24.

40. Variances between retail prices depending on customer type (along with speed and data cap) relate principally to the downstream elements that the network access seeker provides rather than the access component. As such, a uniform wholesale price will not remove incentives for access seekers to product differentiate and price discriminate in the retail market.
41. We note that Professors Newbery, Hausman and Ordober all seemed to agree at the Conference that there is no problem with a uniform wholesale price if the price covers Telecom's cost. Telecom has not put evidence before the Commission that the wholesale prices or methodology proposed by the Commission do not.

3.2 Calculation of the uniform bitstream access price

42. TelstraClear remains of the view that its proposed arithmetic approach should be adopted. The arithmetic approach is a simpler, robust methodology which is more appropriate than a regression analysis given the limited number of values or data points available to calculate the base line retail price. However, with the adjustments we propose, we would support the Commission's proposed linear regression.

3.3 Deduction of the ISP Charge

43. The Commission has deducted the ISP charge at the previous differential in residential retail prices including and excluding the Commission calculated ISP fee (\$8.89 GST exclusive) across all speed variants. TelstraClear agrees that the ISP charge should be deducted at its estimated retail price but, as previously submitted, we do not consider that the previous \$8.89 discount fully reflects the value of an Internet service, and propose that a greater proportion of the total price of the Telecom Jetstream service be deducted when imputing the retail price of the service.
44. Most ISPs do not specify a retail charge for ISP services split out from the end-to-end ADSL service retail price. This is the model Telecom has now moved to. Therefore the Commission must, as part of the imputation exercise, impute a price for the ISP component for the purposes of the deduction from the residential Jetstream retail price.
45. The Commission has chosen to do so based on the previous discount offered to customers who took ISP services from an alternative ISP. In imputing the baseline retail price, the Commission is not obliged to use Telecom retail prices – current or previous – for the deducted elements. In assessing whether the Telecom retail prices for the deducted elements are appropriate, the Commission should be alive to the risk that a retail minus wholesale pricing approach gives Telecom, as a vertically integrated operator, the opportunity and incentive to distort the wholesale price by

pushing more of the final retail price into those parts of the retail service stack which are equivalent to the wholesale service or, as Telecom has done since the commencement of the bitstream proceedings, to make its retail pricing more opaque by offering bundled pricing for the avoided and unavoided retail elements. As a result, access seekers would face a price squeeze, undermining the whole purpose of requiring an unbundled service compared to resale of the end-to-end service. The Commission's power to impute an equivalent retail price under the IPP exactly provides a safeguard against such an outcome.

46. TelstraClear believes that, consistent with the reliance on international benchmarks in the IPPs, the Commission can look to overseas retail pricing of equivalent deducted retail services in imputing the base line retail price. When compared internationally, the previous Xtra \$8.89 fee was very low. Network Strategies have benchmarked this charge against ISPs in countries that disaggregate ADSL access and Internet connectivity prices (France, Germany and the Netherlands). The largest ISPs in those countries (Wanadoo, T-Online and KPN) have monthly ISP charges ranging from NZ\$9 to NZ\$98 (using PPP exchange rates) – see Exhibit 1 below:

Exhibit 1: Retail ADSL Internet connectivity price preliminary benchmarking

<i>ISP and service name</i>	<i>Bandwidth of matched ADSL access service (kbit/s)</i>		<i>ISP Internet connectivity charge</i>	
	<i>Downstream</i>	<i>Upstream</i>	<i>Euro</i>	<i>NZD (PPP)</i>
KPN (Netherlands)				
ADSL Slim	288	128	5.00	9.06
ADSL Go	800	256	7.00	12.68
ADSL Lite	1600	512	15.00	27.17
ADSL Basic	3200	768	24.05	43.56
ADSL Extra	8000	1024	54.05	97.89
T-Online (Germany)				
T-Online dsl flat classic	n.a. Internet connectivity services are not matched to specific ADSL access services.		14.95	25.71
T-Online dsl flat max ¹			29.95	51.50
Wanadoo (France)				
ADSL 512/128	512	128	20.58	35.98
ADSL 1024/128	1024	128	30.00	52.44

¹ This service differs from the 'dsl flat classic' service in that the bandwidth is not throttled at periods of high network demand.

[Source: Network Strategies]

47. TelstraClear believes that, balancing the range of upstream speeds with the lower upstream speed of the Telecom retail services, this overseas evidence suggests that

a more reasonable, but still conservative, deduction for the ISP service component would be in the range of \$10 to \$25 range and TelstraClear suggests \$15, which is below the mid point (again to be conservative).

48. We note that in Jetstream resale pricing Telecom has sought to deduct the ISP component at avoided cost (which Telecom argues is [] TCNZRI)⁴ rather than price prior to the 16% discount being applied. We do not consider that this is appropriate in broadband access resale calculations or in the wholesale bitstream price imputation – if the ISP component is deducted at cost then any excessive retail pricing will flow through into the wholesale price and will not be subject to competition.
49. The IPP requires the Commission to first impute a retail price and then to move on to calculate the discount based on the avoidable costs, rather than requiring that the entire price setting exercise be done as an avoidable cost calculation. In the first step, the Commission has to assign a notional price that downstream retail customers would pay for the services not forming part of the wholesale service to arrive at the imputed price that they would pay for a retail service that is equivalent to the wholesale service. Telecom's downstream retail prices, particularly given that the Commission has determined the market is not competitive, are not cost based. Using a cost based formula to arrive at the imputed retail price for a service equivalent to the wholesale bitstream service would have the practical effect of loading all of the excess retail rents earned by Telecom across the whole retail service stack into the wholesale product. An avoidable cost approach is no less inappropriate for the ISP component as it is for the transmission component.

3.4 Calculation of the Calling Discount

50. The Commission calculates the proportion of the \$10 calling discount attributable to Jetstream by apportioning the discount across the three services included in the package – stand-alone Jetstream, tolls and ISP services. TelstraClear agrees with this approach.

3.5 Jetstream plans used in the Commission's regression

51. TelstraClear supports the Commission's approach of analysing only Telecom's Jetstream residential plans. We consider that business plans can safely be excluded, as we do not consider that any cross-subsidisation of residential plans is occurring.

⁴ Telecom Wholesale Broadband Briefing – Telecom Wholesale Services, June 2005.

The rationale for the regression exercise is to model the transmission / data cap related aspects of the retail pricing, as the access seeker provides these components. Given that the residential and business services are identical in service quality, the only differences in retail pricing are related to the differing elasticities of the customers. Therefore, including business prices in the regression exercise would impute into the wholesale bitstream price Telecom's retail pricing strategies and reduce the scope for innovation and differentiation.

3.6 Wholesale price adjustments over time

52. TelstraClear does not foresee a scenario where the wholesale price should increase – all components in the bitstream access service should be reducing in cost as new technology and economies of scale make DSLAMs increasingly cheaper and increasing competition should lead to reductions in retail broadband access prices. Given this, and since any wholesale price adjustment will lag retail price adjustments by a quarter in a dynamic market, TelstraClear considers that the wholesale price adjustment methodology should ensure that the wholesale price does not increase and reduces by a value close to the greatest percentage retail price reduction in Telecom's broadband services.

53. In the Statement for Consultation, the Commission states that:

“In a retail-minus environment, changes in retail prices should flow through to wholesale prices, to allow Telecom and efficient access seekers to continue to compete at the retail level.”⁵

54. We agree that clear rules are needed to deal with retail price changes and the impact on the wholesale price and support a quarterly adjustment of the wholesale bitstream price. We also support the Commission's view that the use of the regression methodology to reflect further pricing changes is inappropriate, as there is a risk that the relationships encapsulated within the regression model may no longer apply and that a regression methodology may not produce a statistically robust outcome. However, TelstraClear considers the weighted average price adjustment methodology proposed by the Commission may lead to unexpected changes in the wholesale price and therefore needs refining.

55. The Commission proposes that the wholesale price should be adjusted on a quarterly basis with the changes in the price determined by the percentage changes

⁵ Paragraph 39.

in a weighted average of Telecom’s residential retail prices and that the weights should be derived from subscription levels (i.e., the number, or proportion, of customers that have taken up each of Telecom’s service offerings).

56. While the Commission’s proposed approach is easily implemented, there is a risk that it may result in the wholesale price increasing while the Telecom retail prices continue to trend down. This is because movements in the weighted average retail price depend not only upon movements in the retail prices, but also upon shifts in the weighting between different Telecom retail products (the proportion of customers taking up each service). The likely trend, as the Commission notes, is that new and existing Jetstream customers will subscribe to higher speed services which, consistent with Telecom’s downstream price discrimination strategy, carry higher prices than lower speed services. As the proportion of higher speed services in Telecom’s retail customer base increases, the imputed retail price will also increase, even if the entire Telecom retail price points across low and high speed services continue to fall.

57. For example, take a scenario where **all** retail prices fell by 5% from the first quarter (Q1) to the second quarter (Q2), and where there has been a slight increase in the proportion of customers taking up the higher priced services, and a corresponding decrease for the lowest price services (Exhibit 2). This results in a fall in the weighted average retail price of only 3% (a smaller decrease than the 5% price reduction for each of the individual services). This may result in a price squeeze for some services:

Exhibit 2: Outcome where all prices are reduced by a constant amount, but there is a small change in the mix of customers

	Q1 retail price ¹	Q1 customers ² (% of total)	Q2 price change (%)	Q2 retail price	Q2 customers ² (% of total)
Xtra Broadband Go	49.95	45%	-5.0%	47.45	41%
Xtra Broadband Discover	54.95	20%	-5.0%	52.20	20%
Xtra Broadband Explorer	59.95	15%	-5.0%	56.95	15%
Xtra Broadband Adventure	79.95	10%	-5.0%	75.95	12%
Xtra Broadband Navigate	79.95	10%	-5.0%	75.95	12%
Weighted average retail price	58.45			56.67	
% change from Q1				-3.0%	

1 Retail prices are inclusive of the ISP charge.

2 This is for illustrative purposes only, and does not represent the actual mix of Telecom’s services.

[Source: Network Strategies]

58. To further illustrate the potential for distortion, take for example a situation where the tariffs for the two lowest priced services remain unchanged and there has been a decrease in prices for the other services, and there has been a slight increase in the proportion of customers taking up the higher priced services (Exhibit 3). Under this scenario, there is actually an increase in the weighted average retail price of 1% even though the tariffs for the individual services either remained constant or reduced. This may result in a price squeeze for some services:

Exhibit 3: Outcome where prices of some services are reduced, with a small change in the mix of customers

	Q1 retail price ¹	Q1 customers ² (% of total)	Q2 price change (%)	Q2 retail price	Q2 customers ² (% of total)
Xtra Broadband Go	49.95	45%	0.0%	49.95	39%
Xtra Broadband Discover	54.95	20%	0.0%	54.95	18%
Xtra Broadband Explorer	59.95	15%	-2.5%	58.45	17%
Xtra Broadband Adventure	79.95	10%	-5.0%	75.95	13%
Xtra Broadband Navigate	79.95	10%	-5.0%	75.95	13%
Weighted average retail price	58.45			59.06	
% change from Q1				+1.0%	

1 Retail prices are inclusive of the ISP charge.

2 This is for illustrative purposes only, and does not represent the actual mix of Telecom's services.

[Source: Network Strategies]

59. As the proposed adjustment mechanism is heavily influenced by Telecom's downstream price discrimination strategy, it is at odds with, and will progressively erode, the methodology used to calculate the initial price. The Commission's proposal to adopt a uniform wholesale price recognises, as set out above, that retail price discrimination relates to service elements, principally speed, which do not form part of the unbundled bitstream service. This approach recognises the fact that the retail bitstream access price imputation exercise is not an averaging of retail prices given the difference in the nature of the retail and wholesale services. As Professor Ordober pointed out at the conference, the imputed bitstream access price should be thought of as an 'option value' price imputed from a range of prices rather than any kind of weighted average price. For the same reason, we do not believe that the quarterly adjustment of the bitstream access price should link price movements to the relative popularity of the retail services among Telecom's retail customers, particularly where the price discrimination is based on the avoided transmission elements.
60. There are several alternative options that could be used to set the percentage

change in the wholesale price:

- (a) **Highest value of the wholesale price based on the smallest of the retail price reductions** – If we assume that retail prices will be falling over time (which should be the case), this option would result in a wholesale price that falls no faster than that of the most price-stable of the retail offerings. If Telecom chooses to reduce prices for all except one of the retail offerings, there would be no decline, or possibly an increase, in the wholesale price. This option would be open to gaming by Telecom and would not achieve the desired aim of flowing through retail price changes to allow efficient access seekers to continue to compete at a retail level;
 - (b) **Lowest value of the wholesale price based on the greatest of the retail price reductions** – Under this option, wholesale prices would change at the same rate as the retail price that is declining the most (or increasing the least, if all prices are rising). Given that the wholesale price adjustment will lag retail price movements by a quarter, TelstraClear considers that something approaching this is likely to best ensure efficient access seekers are able to continue to compete at a retail level; or
 - (c) **A value chosen based on a reduction rate within the range of retail price changes** – Under this option, the wholesale price would not fall as rapidly as the most aggressively priced retail service. Given the quarterly lag in wholesale price adjustments, this approach could significantly affect access seekers ability to compete if a high wholesale price value based on the smallest retail price reduction was chosen. If this approach is adopted, a value in the lower part of the range for the wholesale price should be used, such as the lower quartile.
61. It is also important that the relativities between resale and wholesale bitstream are monitored, as is increasingly happening overseas. Ofcom has set a margin between an end-to-end service sold to ISPs (IPStream) and the bitstream equivalent service (Datastream) to ensure that margin squeezes do not occur. As the bitstream access service requires ISPs to invest in order to deliver end-to-end services (for example, by investing in backhaul transmission and establishing interconnection with Telecom), the relative attractiveness of that investment should be safeguarded.
- 3.7 Churn charge**
62. As the Commission notes, the Draft Determination provided that Telecom should be able to recover those costs that it efficiently incurs as a result of transferring customers from retail to wholesale provision. The Statement, as with the Draft

Determination, proposes that with some guidance in the Final Determination, the parties should be able to reach agreement on the level of transaction charge to apply. If the parties are unable to agree the charge within one month of the final determination, the Commission proposes that they may request that the Commission determine the transfer charge.⁶

63. We consider that the Commission should determine the appropriate transfer fee in the Final Determination, rather than seek to allow the parties a month to negotiate, for the following reasons:

- (a) The transfer fee will become increasingly important as a potential barrier to customer switching as the retail broadband market evolves;
- (b) The Commission has indicated that the transfer fee should be cost-based yet Telecom's costs are classified as Restricted Information. Commercial negotiations are unlikely to achieve an optimal outcome where there is such an asymmetry of information;
- (c) Telecom has stated in its response to the Private Office Networking Draft Determination that a similar cost based reassignment fee should not be commercially negotiated between the parties but that Telecom should set the fee and if TelstraClear disagrees it should apply for a reconsideration under section 59 of the Act. If that is Telecom's attitude, it would be futile to require the parties to negotiate, and the Commission should proceed to determine the charge itself; and
- (d) TelstraClear has already sought to negotiate the fee with Telecom but an agreement has not been able to be reached.

64. TelstraClear also believes that the range set by the Commission for the reassignment charge is inappropriately high, for the following reasons:

- (a) Telecom's costs have been estimated on a "top-down" basis – i.e., the costs associated with the UBS Provisioning Team, which deals with retail to wholesale transfers, and the volumes they transact have been identified.⁷ Telecom itself has indicated that new systems and processes it is implementing (which should automate processes and reduce the number

⁶ Paragraph 52.

⁷ Telecom s98 Notice response regarding UBS transition costs, 7 April 2005, paragraph 5.

of manual exceptions) are likely to reduce its costs below those provided to the Commission in April;⁸

- (b) transaction volumes are estimated based on historical figures. We expect that there have been material increases in monthly transaction volumes since April and that these increases are likely to continue and accelerate following the Final Determination; and
- (c) We believe that the transfer fee should also be recalculated on a quarterly basis to reflect volume increases.

65. We consider that in determining the initial transfer fee to apply, the Commission should use a common cost mark-up in line with the Oftel percentage of 9.5%. The [] **TCNZRI** common cost mark-up used by Ofcom was applied only to direct costs and was called into question in the final statement. Telecom's costs should also be validated against benchmarks such as the UK estimate of transfer costs of NZ\$8 per churn, especially given that Telecom states that the activity being costed in the Ofcom decision was [] **TCNZRI**.

66. TelstraClear also believes that there should be an initial rebate or reduction in both the reassignment fee and the new connection charge to reflect that by Telecom initially using inefficient reassignment and provisioning systems Telecom raises TelstraClear's own costs. The report provided by Deloitte outlines the magnitude of additional costs faced by TelstraClear: [] **TCLR** incremental cost per order using the previous eOR system. While the initial web based interface (eOR for Broadband improvements) may increase the efficiency of some parts of the process, TelstraClear continues to face significant manual processes on its side of the interface because the Telecom and TelstraClear OSS are not electronically bonded through a B2B solution: that is, TelstraClear personnel must manually access the web portal to enter, view and download some information. Further, some key processes will not be available for some time through the web interface and will continue to rely on manual processes, such as many aspects of fault reporting.

67. Clearly, the initial inter-carrier processes will not comply with the SAPs but through increasing automation of the inter-carrier interface, Telecom will be progressively working towards this goal. As TelstraClear is not receiving the same level of service that Telecom provides to itself, it is not appropriate that TelstraClear should pay

⁸ Ibid, paragraphs 6 and 9.

“full price” for the service. That is, the IPPs assume that the service that is being provided is a service that complies with the SAPs (as reflected in the specification of the SAPs in the service description). If Telecom cannot meet the SAPs, the access seeker would not be “getting the service it paid for” if the price at the IPP level is charged without an adjustment.

68. TelstraClear’s proposed approach is consistent with the exception to the SAPs that allows an access seeker to request a service that has a lower grade of service than Telecom provides to itself, which presumably an access seeker would not do unless there was a corresponding adjustment in the service price that would otherwise apply. If the access seeker has no choice because Telecom is unable to deliver a service that meets the requirements of the SAPs, the Commission should make an adjustment in the price until Telecom is able to comply.
69. Further, TelstraClear also believes that it is appropriate for the Commission to take an incentive based approach. Reducing the reassignment charge and the new connection fee to reflect the added costs caused to TelstraClear provides Telecom with an incentive to move to a more efficient interface that would entitle Telecom to a charge that fully recovers its costs.
70. TelstraClear proposes that the reassignment charge and the new connection fee should be phased as follows:
 - (a) 80% reduction in the first 6 months of the roadmap;
 - (b) 40% reduction in the balance of the period covered by the roadmap; and
 - (c) Full entitlement to cost based reassignment charge and standard (effective retail rates less 16% – see section 3.8 below) new connection charges on implementation of OSS interfaces with the functionality contemplated by the roadmap, presumably at the point Telecom delivers on the SAP requirements.
71. TelstraClear is also concerned to ensure that we are not further penalised by the fact that we have been unable to participate in the broadband market using bitstream access by taking this determination. We therefore consider that the Commission should determine that any TelstraClear broadband **resale** customers connected during the term of the determination proceedings should be able to be migrated to wholesale bitstream at no charge.

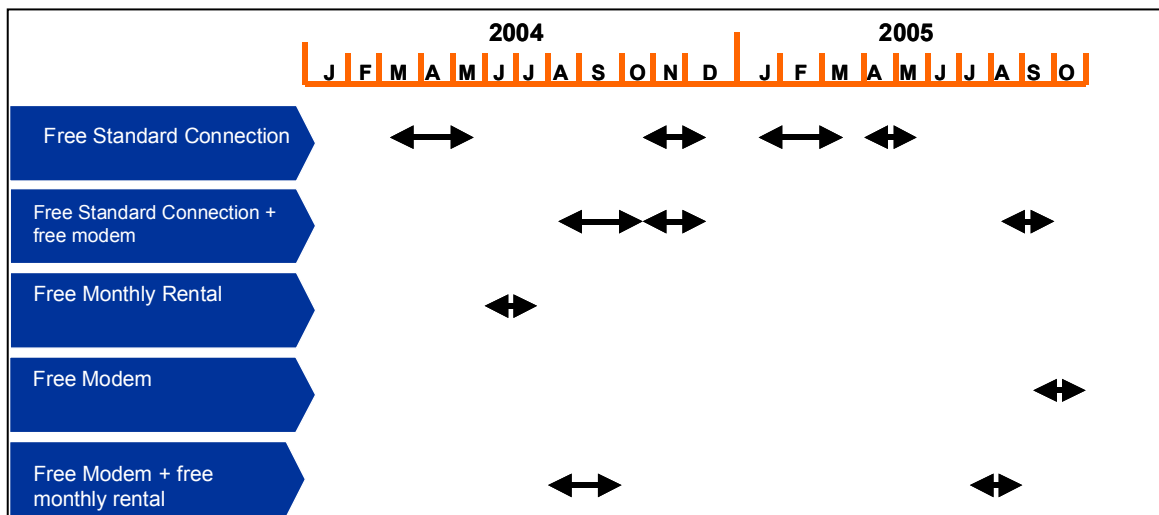
3.8 Other pricing issues

72. TelstraClear considers that the Final Determination should specify the way in which

the wholesale connection fee should be calculated. In the Draft Determination, the Commission proposed that the wholesale connection fee should be Telecom’s standard retail new connection charge discounted by the avoided costs saved discount of 16%.⁹ However, Telecom has consistently been retailing its broadband services with a free connection or an equivalent discount based on one-month free rental or two months free rental, or a free modem, or a combination of these, such that the “standard” fee is clearly at a lower level.

73. TelstraClear has reviewed the marketing offers in Telecom’s Wholesale Informers between January 2004 and September 2005, and its Television advertising for the period August 2004 to September 2005. From this sample alone, it is clear (as set out in Exhibit 4) that Telecom has almost had continuous offers in place to customers with either a free connection, or a free connection and a free modem.¹⁰

Exhibit 4: Telecom’s Broadband Marketing Offers to Residential and Home Business Customers



74. We rang Telecom by calling 123 in a period when Telecom was not providing these marketing offers to check on their future availability. The Telecom staff member advised that they did not know when the next offer was coming up, but said that it would not be long as the offers were “virtually back-to-back”. They suggested putting the caller on Telecom’s 150 hour per month dial-up internet plan for 2 months for free, and said they would phone the caller back when Telecom next had

⁹ Wholesale Bitstream Draft Determination, 21 April 2005, para 276.

¹⁰ While these offers have often required customers to enter into term contracts, this is not always the case.

a broadband offer in place and transfer them onto a broadband plan at that time.

75. In effect, a free connection is becoming the standard retail offer due to the frequency of Telecom's promotions of this nature. Therefore, the wholesale connection charge should be based on the average retail connection charge in place in the market during the preceding 3 months.
76. While TelstraClear has disagreed in other proceedings with the exclusion of temporary discounts from the calculation of the average modal price due to the type of discounts, the issue here is that a temporary discount assumes that the undiscounted price is the "real" price which otherwise applies and that, as the interim price is short term, it can be reasonably and safely disregarded without distorting the wholesale price. However, as shown in Exhibit 4, few retail end users pay any connection charges as a result of the rolling availability of sign up offers. While Telecom may implement a free connection charge through successive marketing plans that should not obscure the fact that this is the standard price most consumers pay. Accordingly, in this case, the average modal price for the connection charge should take into account all offers made by Telecom.
77. The inefficient inter-operator processes currently used by Telecom also raise TelstraClear's costs in the case of new connections. TelstraClear also proposes that the discounts proposed above for reassignment charges also should apply to wholesale new connection charges.
78. Finally, TelstraClear considers that the Commission should take account of scale economies in imputing the wholesale bitstream access price. Clearly, as with other telecommunications services, Telecom will realise efficiencies in being able to sell a higher volume of services to an individual wholesale customer. These scale economies can be reflected in resale services by using the volume scale which Telecom offers retail customers: the average modal price reflects the price points for volume discounts offered by Telecom to retail customers. However, Telecom does not appear to offer retail volume discounts for Jetstream services, probably because most customers buy one or a small number of Jetstream services and so individual retail customers do not purchase at a scale that warrants volume discounts. However, as wholesale customers are aggregating a large number of individual customers, the wholesale customer will allow Telecom to realise scale efficiencies at the wholesale level that Telecom may not consider are realisable at the retail level.
79. We note that Telecom's commercial unbundled bitstream service offers a \$2 per month discount for monthly connection volumes in excess of 150 per month, and a further \$1 per month for monthly connection volumes in excess of 500 per month.

This suggests that there are efficiencies in providing significant volumes of bitstream connections and we consider that these efficiencies should be reflected in the imputed regulated bitstream access prices.

80. There is overseas precedent for differential bitstream pricing dependent on scale and also on contract duration. KPN operates a wholesale discount scheme that is based on total end user per access seeker bitstream revenues generated in one calendar year (see Exhibit 5 below). Further, BT in the UK offers discounts of 3%, 6%, 8% and 10% on the annual virtual circuit and virtual path rental based on contract durations of 2, 3, 4 and 5 years respectively.

<i>Revenue (EUR millions)</i>	<i>Discount</i>
Less than EUR1 million	0.0%
Between EUR1–3 million	4.0%
Between EUR3–6 million	6.0%
Between EUR6–10 million	9.0%
EUR10 million and above	12.0%

Exhibit 5: KPN Bitstream OLO discount scheme
[Source: KPN]

81. TelstraClear requests that the Commission include a volume discount scheme in the pricing of the regulated wholesale bitstream service similar to that offered by Telecom in their commercially offered UBS service. That is:
- (a) Each quarter the average monthly sales volumes of the previous quarter will be calculated to determine the discount band for the current quarter;
 - (b) The discount band will apply to the monthly rental of all existing and new wholesale bitstream access connections purchased; and
 - (c) The initial volume discount levels dependent on the calculated average monthly sales we suggest are:
 - (i) \$2 per month per service for >150 services;
 - (ii) \$3 per month per service for >500 services; and
 - (iii) \$4 per month per service for >1000 services.

4. OPERATIONAL SUPPORT SYSTEMS

82. TelstraClear welcomes the Commission's elaboration of the principle of equivalence from an end-customer perspective set out in paragraph 276 of the Draft Determination. As we have stated previously, we consider that non-price terms will be an important determinant of the success of bitstream access in facilitating retail broadband competition. We agree with the specification of the interim and longer-term OSS deliverables and the provisions regarding dispute resolution and cost allocation.

83. However, in our view, the Final Determination should specify some form of reporting by Telecom to demonstrate equivalence is being achieved in relation to provisioning and fault repair. Telecom is the only party with access to all the underlying information in both its retail and wholesale channels and without this reporting any notion of equivalence will be entirely opaque.

4.1 Interim Solution for OSS

84. TelstraClear supports the proposed interim OSS requirements as set out in paragraph 46 of the Statement for Consultation. The system and the three modifications need to be available at the same time as Telecom provides the bitstream access service (i.e., any modifications should be completed within the implementation timeframe set out in the Final Determination).

4.2 Longer term B2B Solution for OSS

85. TelstraClear agrees with the proposed longer term B2B OSS requirements as set out in paragraphs 47 and 48 and with the inclusion of the roadmap (as annexed to TelstraClear's post-workshop submission¹¹) in the Final Determination.

4.3 Dispute Resolution

86. TelstraClear agrees with the proposed dispute resolution terms set out in paragraphs 49 and 50 of the Statement.

4.4 OSS Price Terms

87. TelstraClear agrees that each party should bear its own costs in relation to the

¹¹ TelstraClear Wholesale Bitstream Workshop – Additional information requested, 16 August 2005, annex 1.

implementation, operation and maintenance of operational support systems required to support the regulated bitstream service and the costs of interfacing with the other party's operational support systems.

4.5 Key Performance Indicators

88. At paragraph 53, the Commission states that it will not specify Key Performance Indicators for OSS in relation to such functions as provisioning and fault repair. Instead the Commission reiterates the requirement that Telecom must provide the service on terms and conditions that are consistent with those terms and conditions it provides to itself, such that there is no material difference in the experience of retail customers of Telecom and those of TelstraClear.
89. TelstraClear welcomes the reiteration of the principle of "no material difference from an end-customer's perspective". However, we consider that some form of reporting must be mandated if this principle is to be maintained and enforced. The customer experience in terms of provisioning and fault repair will have a material impact on competition in the broadband arena. As recent press coverage demonstrates,¹² customers frustrated at the time taken or treatment able to be given by alternative ISPs often revert to Telecom. There have been several customer complaints of differing treatment being received from Telecom and alternative ISPs for 'downstream' broadband services, based on differing 'upstream' terms and conditions provided by Telecom.
90. Without some reporting, consistency cannot be monitored. Transparency is also an effective and highly practical means of enforcing the SAPs without having to resort to expensive and time consuming litigation in the High Court.
91. This area has received considerable attention in the UK and Australia and regulators there have concluded that some reporting should be required in relation to wholesale services, such as broadband access. As submitted in our 20 May 2005 submission on the Draft Determination, we consider that Telecom should be required to report on the measures set out in Exhibit 6 below:

¹² For example, 'Provisioning problems provoke law change', Computerworld, 17 October 2005.

Exhibit 6: International Best Practice re: KPIs applicable to wholesale network elements

KPI	OFCOM UK ¹³ BT	ACCC Telstra	USA Bell Atlantic Pennsylvania ¹⁴	TelstraClear's comments on applicability to TCL
orders provisioned within KPI period or reported by relative timing between retail and wholesale and orders rejected	✓ on monthly basis ¹⁵	✓ on quarterly basis	✓ on monthly basis	✓ on monthly basis
Fault Reporting	✓ on monthly basis	✓	✓	✓ on monthly basis
Maintenance and restoring service against KPI or reported by relative timing between retail and wholesale	✓ on monthly basis ¹⁶	✓	✓	✓ on monthly basis
repeat faults	✓ on monthly basis	X	✓	✓ on monthly basis
Appointments kept	✓	✓	✓	✓

¹³ Services are DataStream end user access, Virtual Paths, WLR, FRIACO and Interconnection circuits (excluding FRIACO) including ATM interconnect.

¹⁴ The Joint Petition of Nextlink, Pennsylvania Public Utility Commission, Harrisburg, PA 17105-3265 – other applicants include RCN Telecommunications Services of Pennsylvania, Inc.; Hyperion Telecommunications, Inc., ATX Telecommunications, Focal Communications Corporation of Pennsylvania Inc., CTSI, Inc., MCI Worldcom, eSpire Communications and AT&T Communications of Pennsylvania Inc. for an Establishing of Formal Investigation of Performance Standards, Remedies and Operations Support Systems Testing for Bell Atlantic-Pennsylvania, Inc., 20 July 200.

¹⁵ Except the FRIACO and Interconnection circuits service which are quarterly.

¹⁶ As above.

5. IMPLEMENTATION TIMEFRAME

92. TelstraClear agrees with the Commission's view that a 20-week timeframe to implement the bitstream service described in the statement is unacceptable. We note that Telecom has indicated that it intends to submit a detailed implementation plan to the Commission. In our view, the implementation timeframe should be the minimum needed for Telecom to create the new profiles (minimal), modify existing support systems and processes and make available the *eOR for Broadband* system to TelstraClear.