



COMMERCE COMMISSION

30 August 2005

TelstraClear Bitstream Application Proposed technical specification of the Bitstream Access Service Request for comment

Purpose

1. The Commission seeks comment on the proposed technical specification for *access to, and interconnection with, Telecom's fixed PDN* ('bitstream access'). This revised technical specification follows the Commission conference and the workshop.

Introduction

2. In preparation for the workshop, the Commission provided an agenda which included a proposed technical specification of the bitstream access service.¹ This proposal sought to address the spectrum management issues identified by Telecom at the Commission conference.
3. Prior to the workshop, Telecom provided an alternative specification that sought to mitigate the spectrum management issues.² TelstraClear also provided an alternative specification during the workshop.³
4. At the workshop, TelstraClear proposed that, in order to mitigate problems raised by Telecom, the Commission should define a PIR and SIR for the bitstream access service.⁴
5. At the workshop, Telecom and TelstraClear also provided further analysis that sought to quantify the spectrum management issues associated with an unconstrained downstream bitstream service. The Commission has now had the opportunity to further consider that material and discussion at the workshop.⁵
6. This document sets out the Commission's revised technical specification of the bitstream access service. The Commission seeks comment from the parties on this specification not later than 6 September 2005.

¹ Letter from Commission (Borthwick) to the parties, *OSS & Technical Workshop Agenda and Questions*, 14 July 2005

² Letter from Telecom (Oakley) to the Commission (Borthwick), *TelstraClear bitstream access application – technical and OSS agenda for 21 and 22 July*, 19 July 2005

³ TelstraClear, *Comments on proposed refinement to service proposal, Wholesale Bitstream Access Application for Determination*, 22 July 2005

⁴ TelstraClear, *Comments on proposed refinement to service proposal, Wholesale Bitstream Access Application for Determination*, 22 July 2005, p.2

⁵ Please refer to the Commission's decision on objections made at the Bitstream Workshop held on 21 and 22 July.

AUCKLAND:

66 Wyndham Street, P.O. Box 105-222,
AUCKLAND CENTRAL, NEW ZEALAND.
Tel: (09) 920 3480 Fax: (09) 920 3481

WELLINGTON:

44 - 52 The Terrace, P.O. Box 2351,
WELLINGTON, NEW ZEALAND.
Tel: (04) 924 3600 Fax: (04) 924 3700
Main Office

CHRISTCHURCH:

31 Victoria Street, P.O. Box 25-193,
CHRISTCHURCH 1, NEW ZEALAND.
Tel: (03) 964 3450 Fax: (03) 964 3451

Technical Specification

7. The Commission seeks comment on the following technical specification:

<p>Downstream Peak Information Rate (PIR) for data traffic sent to the end-user</p>	<p>The PIR (excluding allowance for overheads) should be set to either.</p> <ul style="list-style-type: none"> (a) 3.5 Mbps⁶; or (b) any speed above 3.5 Mbps where Telecom introduces an internet-grade best efforts service with a downstream PIR in excess of 3.5 Mbps on a common route; or (c) the maximum feasible PIR where a line route qualification check confirms availability of a downstream speed PIR exceeding 3.5 Mbps on a common cable route. <p>The following exception applies to the above PIR setting rule:</p> <ul style="list-style-type: none"> (i) where Telecom has limited capacity between the ATM switch and the DSLAM, the PIR is set to the maximum capacity available for dimensioning between the ATM switch and the DSLAM.
<p>Downstream Sustained Information Rate (SIR) for data traffic sent to the end-user</p>	<p>The SIR allocated per end-user is calculated as the weighted average SIR allocated per end-user by Telecom for internet-grade best efforts services provided by Telecom.</p>
<p>Upstream speed⁷</p>	<p>The service requires a maximum upstream throughput rate of 128 kbps for data traffic sent from the end-user.</p>
<p>Sharing of a best efforts internet grade Virtual Path.</p>	<p>Telecom and TelstraClear to share a single Virtual Path from the L2TP Access Concentrator (LAC) to the DSLAM currently used by Telecom's best efforts traffic - Unspecified Bit Rate (UBR) services.</p>

⁶ Technical and OSS Workshop 21-22 July 2005, Dr. Lee M. Garth Presentation, Slide 11

⁷ In accordance with the Telecommunications Act 2001, Schedule 1, "Limits on access principles: (a) the service requires a maximum upstream throughput rate of 128 Kbps for data traffic sent from the end-users"

Proposed specification of the Peak Information Rate ('PIR')

8. The Commission considers that it is necessary to specify a constrained PIR. This is also consistent with the refined proposal put forward by TelstraClear at the workshop. In determining the PIR value, the Commission has considered the analysis provided by both parties that sought to demonstrate the effect of an unconstrained downstream bitstream service.
9. In the absence of certainty on the extent of any degradation of service arising from a higher PIR, the Commission considers that it is necessary to set the default PIR to 3.5Mbps.
10. Telecom has indicated that it may introduce higher speed broadband DSL services over and above the current retail broadband DSL offerings. Telecom indicated⁸ that there were issues associated with identification/qualification of short binders and where there is fibre in the feeder that the distribution cable is short.⁹
11. Should Telecom introduces a retail internet grade best efforts service with a downstream PIR in excess of 3.5 Mbps in a common route used for DSL services, Telecom is required to also provide bitstream access with the higher PIR to TelstraClear on that route contemporaneously.
12. To mitigate the risk that a default PIR of 3.5kbps is unnecessarily conservative, the Commission will also require that, at the request of TelstraClear, Telecom would be required to undertake a route qualification utilising its existing area mapping, to assess whether an individual route would support a PIR greater than 3.5 Mbps. Telecom would be entitled to recover the incremental cost of undertaking such a line qualification check from TelstraClear.
13. The Commission seeks the parties' comments on the proposed specification of the PIR.

Sustained Information Rate

14. At the workshop, TelstraClear proposed that the SIR per end-user should be set to the higher of either the average allocated throughput per end-user achieved or planned by Telecom for its own retail services, and that a single SIR would be set across the network, rather than at individual DSLAMs.¹⁰

⁸ TelstraClear Bitstream Application Technical/OSS Workshop 21-22 July 2005, pg 65, Line 15, Dr Milner

⁹ TelstraClear Bitstream Application Technical/OSS Workshop 21-22 July 2005, pg 65, Line 9, Dr Milner

¹⁰ TelstraClear, *Comments on proposed refinement to service proposal, Wholesale Bitstream Access Application for Determination*, 22 July 2005, pp.5-6

15. The Commission considers that the SIR allocated per TelstraClear end-user should be calculated as the weighted average SIR allocated per end-user by Telecom for present and future internet grade best efforts services.
16. The Commission believes that the SIR would be based upon current network dimensioning applied across the network by Telecom for internet grade best efforts services. TelstraClear would receive an aggregated average SIR based upon Telecom's SIR's for internet grade best efforts services.
17. The Commission accepts that the use of an average SIR calculated across Telecom's network will, in respect of the SIR, mean that there is no material difference in the cost of delivering a data stream to Telecom's own retail arm or to a wholesale customer. In accepting the use of an average SIR suggested by TelstraClear, the Commission notes that this would not preclude any future application requesting SIR bands consistent with Telecom.
18. Telecom would be required to update TelstraClear on the average SIR achieved across its network on a quarterly basis. TelstraClear may, at its option, request that Telecom amend the average SIR for the bitstream access service to be consistent with the average SIR Telecom achieves across its network.
19. The Commission seeks the parties' comments on the proposed specification of the SIR.

Operational Support Systems ('OSS')

20. The Commission seeks comment whether the characteristics of the proposed service would result in any material delay in the delivery of electronic OSS consistent with the timetable set out in Telecom's OSS Roadmap provided at the Commission workshop.

Comment sought

21. The Commission invites comment on the proposed technical specification for the bitstream access service not later than 6 September 2005. Written comments should be sent to osmond.borthwick@comcom.govt.nz.

Yours sincerely



Osmond Borthwick
Manager
Network Access Group