



COMMERCE COMMISSION

**Determination on the applications for determination for access to,
and interconnection with, Telecom's fixed PDN**

Decision 582

Determination under section 27 of the Telecommunications Act 2001 ('the Act') in the matter of applications for determination for the designated bitstream access service under section 20 of the Act by:

**IHUG LIMITED
CALLPLUS LIMITED**

The Commission: Douglas Webb

Summary of Applications: Ihug Limited and CallPlus Limited separately applied on 10 March 2006 for a determination with respect to the bitstream access service under section 20 of the Act.

Date of Determination: 22 June 2006

**CONFIDENTIAL MATERIAL IN THIS REPORT IS CONTAINED IN SQUARE
BRACKETS**

CONTENTS

EXECUTIVE SUMMARY	III
INTRODUCTION	4
THE APPLICATIONS	6
THE FRAMEWORK FOR THE DETERMINATION.....	7
SCOPE OF THE BITSTREAM ACCESS SERVICE	11
Access Principles & limits on the application of Standard Access	
Principles	11
MARKET DEFINITION AND COMPETITION ASSESSMENT	13
Introduction.....	13
Relevant Markets.....	15
Competition Assessment	18
<i>National wholesale market for the provision of broadband access</i>	<i>18</i>
<i>Conclusion on competition assessment.....</i>	<i>22</i>
Conclusion on markets and competition assessment	22
CHARACTERISTICS OF THE BITSTREAM ACCESS SERVICE	23
APPLICATION OF THE INITIAL PRICING PRINCIPLE.....	31
<i>Wholesale services</i>	<i>31</i>
<i>Incentives for access seekers to price discriminate</i>	<i>32</i>
<i>Incentives for access seekers to product differentiate.....</i>	<i>34</i>
<i>Conclusion on a uniform bitstream access price</i>	<i>35</i>
Calculation of the uniform bitstream access price	35
<i>Comparable services</i>	<i>35</i>
<i>Conclusion on comparable services</i>	<i>36</i>
<i>Retail price imputation mechanism in Decision 568</i>	<i>36</i>
<i>Alternative imputation mechanisms</i>	<i>37</i>
Removal of avoided costs saved.....	41
Initial price payable	41
Wholesale price adjustments during the determination.....	42
SUNDRY CHARGES RELATING TO SUPPLY OF BITSTREAM ACCESS	43
Reassignment charges/Churn fees	43

New connections	43
Moves, adds, and changes ('MACs')	44
OPERATIONAL SUPPORT SYSTEMS ('OSS')	45
Price terms for OSS	46
Key Performance Indicators	46
IMPLEMENTATION TIMEFRAME	47
DATE OF COMMENCEMENT AND EXPIRY	48
Date of Commencement	48
Date of Expiry	48

List of Tables & Figures

Table 1: ADSL and mobile broadband	21
Table 2: Residential Jetstream plans as at 20 December 2005.....	39
Table 3: Telecom retail plans introduced on 2 April 2006.....	39
Table 4: Migration from old plans to new plans	39
Table 5: Weighted Average Retail Price Calculation as at 20 December 2005.....	40
Table 6: Weighted Average Retail Price Calculation as at 10 June 2006.....	41
Figure 1: Retail price discrimination.....	33

EXECUTIVE SUMMARY

- i. Bitstream access is a wholesale service provided by Telecom between an end-user's premises and an ATM switch. This service is used by a telecommunications provider to deliver retail broadband services. A telecommunications provider must supply other components including national and international transmission, connection to the internet and ISP services.
- ii. On 10 March 2006, ihug Limited and CallPlus Limited ('the Applicants') separately applied to the Commission for a determination of the terms of access to the regulated bitstream service. The Applicants sought access to this service on the terms determined by the Commission in the TelstraClear Bitstream Determination, dated 20 December 2005 ('Decision 568'), or as otherwise determined by the Commission.
- iii. Telecom is required to provide the Applicants with bitstream access which has an unconstrained downstream speed and an upstream speed of 128kbps. The availability of unconstrained bitstream access will allow the Applicants to innovate and differentiate their broadband offerings from those of Telecom.
- iv. Telecom is required to provide bitstream access to the Applicants at a uniform wholesale price which does not distinguish between customer type, speed or generation of ADSL technology. Maximum innovation will occur where the Applicants are not constrained by Telecom's own retail price and product differentiation strategies. The Commission has concluded that a uniform wholesale price will not remove incentives for ongoing diversity in retail broadband services available at different prices.
- v. The Commission has determined that the price for bitstream access is \$28.04 plus GST per month.
- vi. Telecom is required to make available electronic operational support systems to facilitate the efficient provision of bitstream access to the Applicants.
- vii. Telecom must provide the Applicants with bitstream access within 18 weeks from the date of this determination.
- viii. This determination applies for 24 months or, when the service expires or is omitted from the Act.

INTRODUCTION

1. The Telecommunications Act 2001 ('the Act')¹ regulates the supply of telecommunications services in New Zealand.
2. The Commerce Commission ('the Commission') is responsible for making determinations in respect of designated access services.
3. On 10 March 2006, the Applicants each applied for a determination, under section 20, for access to the designated access service called "access to, and interconnection with, Telecom's fixed PDN".
4. In contrast to the Applicants, Telecom required the Commission to release a draft determination before the release of this determination. The Commission believes that it is not required to release a draft determination and that a final determination is all that is required to satisfy the requirements of subpart 2 of Part 2 of the Act. In preparing this final determination, the Commission considers that it has received adequate information on the views of ihug, CallPlus and Telecom and that in considering this material, it has addressed all of the terms and conditions that were requested in the Applications.
5. In deciding that the Parties would not be disadvantaged by the release of a final determination in the absence of a draft determination, the Commission was mindful that the Applicants requested the same terms as in Decision 568, and that the Commission only recently completed Decision 568 which involved extensive consideration of the many issues that were also the subject of this determination. Further, the Commission believes that the Parties have had an adequate opportunity to participate in the determination process required by the Act including presenting their views on all matters at stake in this proceeding and responding to arguments raised by the Parties during the cross-submission stages of the process.
6. Commercially sensitive information cited in this determination was provided subject to orders made under section 15(i) of the Act and section 100 of the Commerce Act 1986. The Commission released separate confidentiality orders in relation to each Application. The orders are as follows:
 - (a) Confidentiality order dated 7 April 2006 in relation to ihug's application dated 10 March 2006 ('ihug's Order'); and
 - (b) Confidentiality order dated 7 April 2006 in relation to CallPlus' application dated 10 March 2006 ('CallPlus' Order')
7. The above orders are available on the Commission's website.
8. Information which is labelled as ihug's restricted information [] is subject to ihug's Order and information which is labelled as CallPlus' restricted information [] is subject to the CallPlus Order. In relation to Telecom's restricted information, this is

¹ All terms and phrases that are defined within the Act have the same meanings in this Determination. All references to Parts, Schedules and sections are to the Parts, Schedules and sections of the Act.

denoted as []. Commission only information is denoted as [COI}. Information designated in accordance with the provisions of that order is enclosed within square brackets and marked as RI. All such information has been extracted from the public version of the determination.

THE APPLICATIONS

1. On 10 March 2006, the Commission received applications from both ihug and CallPlus ('the Applicants') under section 20 of the Act ('the Applications').
2. Both the Applications sought a determination in regard to the designated access service called 'access to, and interconnection with, Telecom's PDN' ('bitstream access'). The Applicants sought access to this service on a nationwide basis, and on the terms determined by the Commission in the TelstraClear Bitstream Determination, dated 20 December 2005 ('Decision 568'), or as otherwise determined by the Commission.
3. As the Applications request the same price and non-price terms, the Commission has decided to address the terms and conditions for the supply of bitstream access between ihug and Telecom, and CallPlus and Telecom, within a single document.
4. The Commission notified the Applicants and Telecom (together 'the Parties') of the Applications and sought submissions under section 24(c) of the Act.
5. On 29 March 2006 the Commission decided to investigate the Applications under section 25. Submissions and cross submissions were provided by the Parties. InternetNZ, Federated Farmers, Rural Women of New Zealand and the Tourism Industry Association of New Zealand all provided cross submissions on the Application.
6. Key documents are available on the Commission's website at:
<http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/Wholesale/WholesaleDeterminatons/callpluswholesalebitstreamserviceap.aspx>

THE FRAMEWORK FOR THE DETERMINATION

7. This determination is made under Part 2 of the Act.
8. Section 18 states:
- (1) The purpose of this Part and Schedule 1 to 3 is to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.
 - (2) In determining whether or not, or to the extent to which, any act or omission will result, or will be likely to result, in competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand, the efficiencies that will result, or will be likely to result, from that act or omission must be considered.
 - (3) Except as otherwise expressly provided, nothing in this Act limits the application of this section.
 - (4) Subsection (3) is for the avoidance of doubt.
9. Section 19 directs the Commission, when making a determination under Schedule 1, to satisfy itself that the determination best gives, or is likely to best give, effect to the purpose set out in section 18:
- If the Commission or the Minister (as the case may be) is required under this Part or any of Schedules 1 to 3 to make a recommendation, determination, or a decision, the Commission or the Minister must –
- (a) consider the purpose set out in section 18; and
 - (b) if applicable, consider the additional matters set out in Schedule 1 regarding the application of section 18; and
 - (c) make recommendation, determination, or decision that the Commissioner or Minister considers best gives, or is likely to best give, effect to the purpose set out in section 18.
10. Section 27 requires that after investigating the matter, the Commission must –
- (a) prepare a determination; and
 - (b) give a copy of the determination to the parties to the determination; and
 - (c) give public notice of the determination.
11. Section 28 requires that the Commission make reasonable efforts to prepare a determination under section 27 not later than 50 working days after the date on which it gave written notice to the parties of its decision to investigate, that being 13 June 2006. Despite reasonable efforts, the Commission was unable to meet that time limit.
12. Under section 29(a), a determination must, in the opinion of the Commission, be made in accordance with the applicable access principles and any limits on those applicable access principles, and any regulations made in respect of the applicable access principles.²

² No such regulations have been issued.

13. Sections 29(b) and (c) provide that a determination must, in the Commission's opinion, comply with any relevant approved codes,³ and in the case of a determination regarding a designated access service, be made in accordance with the applicable initial pricing principle (as affected, if at all, by clause 2 or clause 3 of Schedule 1) and any regulations that specify how the applicable initial pricing principle must be applied.
14. Section 30 prescribes the matters to be included in the determination. A determination must include –
- (a) the terms on which the service must be supplied; and
 - (b) the reasons for the determination; and
 - (c) the terms and conditions (if any) on which the determination is made; and
 - (d) the actions (if any) that a party to the determination must do or refrain from doing; and
 - (e) the expiry date of the determination.
15. This determination concerns the designated access service, *access to, and interconnection with, Telecom's fixed PDN*, set out in the amendment⁴ to Part 2 of Schedule 1 of the Act ('bitstream access'):
16. Bitstream access is:

Description of service: 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-user's 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 multiplexer (DSLAM)

Conditions: That either-

- (a) Telecom faces limited, or is likely to face lessened, competition in a market for the service; or
- (b) Telecom does not face limited, or is not likely to face lessened, competition in a market for the service, and the Commission has decided to require that service to be wholesaled in that market

Access provider: Telecom

Access seeker: A service provider who seeks access to the service

Access principles: The standard access principles set out in clause 5

Limits on access principles: The limits set out in clause 6 and the following additional limits:

- (a) the service requires a maximum upstream throughput rate of 128 kbps for data traffic sent from the end-user; and

³ There are no such codes yet in existence.

⁴ See Telecommunications (Fixed Public Data Network) Order 2004, 2 August 2004, clause 3.

- (b) the service requires a downstream throughput rate for data traffic sent to the end-user that must---
 - (i) not be less than 32 kbps; and
 - (ii) have an average of not less than 256 kbps; and
- (c) the service is not required to support any function that relies on real time network capability; and
- (d) Telecom is only required to provide access to the trunk side of Telecom's first ATM data switch or equivalent facility (for which purpose a DSLAM is not an equivalent facility)

Initial pricing principle:

Either-

- (a) retail price (as imputed by the Commission having regard to any comparable service) less a discount benchmarked against discounts in comparable countries that apply retail price minus avoided costs saved pricing in respect of the service, in a case where Telecom faces limited, or is likely to face lessened, competition in a market for that service; or
- (b) retail price (as imputed by the Commission having regard to any comparable service) less a discount benchmarked against discounts in comparable countries that apply retail price minus actual costs saved pricing in respect of the service, in a case where Telecom does not face limited, or lessened, competition for that service

Final pricing principle:

Either-

- (a) retail price (as imputed by the Commission having regard to any comparable service) minus a discount comprising avoided costs saved pricing, in a case where Telecom faces limited, or is likely to face lessened, competition in a market for the service; or
- (b) retail price (as imputed by the Commission having regard to any comparable service) minus a discount comprising actual costs saved, in a case where Telecom does not face limited, or lessened, competition for the service

Requirement referred to in section 45 for final pricing principle:

Nil

Additional matters that must be considered regarding application of section 18:

Nil

17. The Applications raise a number of issues as to the scope of the designated access service. These issues are discussed in the following section.
18. The Commission is required to determine the relevant market or markets, and the state of competition in those markets. In a relevant market for bitstream access in which Telecom faces limited competition, the Commission must determine terms of access. In a relevant market for bitstream access in which Telecom does not face limited competition, the Commission may nevertheless determine that access should be

provided if the Commission has decided to require that service to be wholesaled in that market.

19. The initial pricing principle ('IPP') for bitstream access requires that the Commission determine a wholesale price by imputing a retail price having regard to any comparable service, and deducting from that imputed retail price a discount benchmarked against discounts provided in comparable countries that apply retail price minus:
 - (i) avoided costs saved pricing, in respect of markets in which Telecom faces limited competition; or
 - (ii) actual costs saved pricing, in respect of markets in which Telecom does not face limited competition.

SCOPE OF THE BITSTREAM ACCESS SERVICE

20. The Applications request that the Commission determine specific price and non-price terms relating to the provision of bitstream access.

21. Bitstream access is described in Schedule 1 as:⁵

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-user's 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 multiplexer (DSLAM).

Access Principles & limits on the application of Standard Access Principles

22. The standard access principles and their limits must be considered in deciding the scope of bitstream access. The scope must also be consistent with the additional limits on the access principles set out in the designated bitstream access service.

23. Section 29 specifies the requirements for the determination and states that:

A determination must, in the opinion of the Commission, -

(a) be made in accordance with –

- (i) the applicable access principles and any limits on those applicable access principles; and
- (ii) any regulations made in respect of the applicable access principles and any limits on those applicable access principles.

24. The standard access principles and limits on the access principles in Schedule 1 are:

5 Standard access principles for designated access services and specified services

The following standard access principles apply to designated access services and specified services:

- (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.

6 Limits on application of standard access principles set out in clause 5

Principles 1 to 3 set out in clause 5 are limited by the following factors:

- (a) reasonable technical and operational practicability having regard to the access provider's network;
- (b) network security and safety;

⁵ Telecommunications (Fixed Data Network) Order 2004, 2 August 2004.

- (c) existing legal duties on the access provider to provide a defined level of service to users of the service;
- (d) the inability, or likely inability, of the access seeker to comply with any reasonable conditions on which the service is supplied;
- (e) any request for a lesser standard of service from an access seeker.

25. Additional limits on these standard access principles apply specifically to bitstream access. These additional limits are:⁶

The limits on access principles set out in clause 6 and the following additional limits:

- (a) the service requires a maximum upstream throughput rate of 128kbps for data traffic sent from the end-user; and
- (b) the service requires a downstream throughput rate for data traffic sent to the end-user that must –
 - (i) not be less than 32 kbps; and
 - (ii) have an average of not less than 256 kbps; and
- (c) the service is not required to support any function that relies on real time network capability; and
- (d) Telecom is only required to provide access to the trunk side of Telecom's first ATM data switch or equivalent facility (for which purpose a DSLAM is not an equivalent facility)

26. Standard access principle 3 requires that the access provider supplies 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. With regard to bitstream access, this means that there should be no material difference between the network-based characteristics of the bitstream, including latency, jitter and contention ratios, supplied to the Applicants and the characteristics of the bitstream access used by Telecom to supply its own retail services.

⁶ Telecommunications (Fixed Data Network) Order 2004, 2 August 2004.

MARKET DEFINITION AND COMPETITION ASSESSMENT

27. This section provides the Commission's analysis of the relevant market for bitstream access, and whether Telecom faces limited competition in that market.

Introduction

28. The conditions for bitstream access are:

That either –

- (a) Telecom faces limited, or is likely to face lessened, competition in a market for the service: or
- (b) Telecom does not face limited, or is not likely to face lessened, competition in a market for the service, and the Commission has decided to require that service to be wholesaled in that market

29. The Commission must accordingly identify the market in which bitstream access is supplied and the state of competition in that market.

Summary of 'Relevant Markets and Competition' in Decision 568

30. In Decision 568, the Commission defined a national wholesale market for the provision of broadband access. The product dimension of this market included the provision of copper-based bitstream access, cable, satellite, fibre, and fixed-wireless access (FWA). The geographic dimension was considered to be national, due to a number of factors, including the following:

- Telecom's commercial unbundled bitstream service has a uniform national price, and the service is offered at a national level. Telecom has maintained this uniform national price, despite the presence and emergence of competing regional broadband infrastructure;
- National pricing has been a commercial decision by Telecom, rather than a result of any regulatory pressure. This is particularly the case in respect of business services, which were not the subject of Telecom's broadband commitment;
- Telecom's broadband services are marketed at a national level;
- Telecom stated that geographically differentiated pricing adds considerable operational complexity, for example at the level of marketing and billing.

31. In assessing the level of competition in this market, the Commission considered the ability of competing broadband networks to constrain Telecom. Competing network providers use a variety of platforms over which to supply broadband connections. However, the Commission found that Telecom's share of broadband connections had been increasing. In December 2004, Telecom had 168,272 broadband customers connected to its network, or around 86% of total connections in New Zealand and by September 2005, Telecom had 301,813 connections, or 89% of the total.⁷

⁷ The Commission notes that as at December 2005, Telecom had 340,269 broadband connections, with 47% of the new connections since September 2005 being provided at wholesale.

32. The Commission noted that competing fixed networks (such as TelstraClear's residential cable network in Wellington and Christchurch, and Wired Country's fibre network in South Auckland/Waikato) are likely to remain geographically limited, and that fixed wireless access ('FWA') networks may face technical limitations in respect of supplying more bandwidth-intensive applications over time. The Commission also identified a number of barriers to entry and expansion for fixed network operators, as well as the limitations of FWA in competing with Telecom's ubiquitous copper access network.
33. The Commission concluded that Telecom faced limited competition in the national wholesale market for broadband access.

Summary of views of the Parties to the Applications

34. The Applicants support the view that there is a national market for broadband access, and that Telecom faces limited competition in that market.
35. Telecom submits that a distinction should be drawn between metropolitan areas, in which Telecom asserts there is effective competition, and non-metropolitan areas.
36. In Annex A of its submission, Telecom argues that competition should be assessed at the retail level as well as the wholesale level. While Telecom acknowledges that the regulated bitstream service is a wholesale service, Telecom argues that demand for the regulated services is derived from demand for retail products, that regulated access should only be supplied in those instances where competition is limited at the retail level, and that factors other than competition at the wholesale level are relevant to assessing competition at the retail level.
37. Telecom also asserts that the relevant geographic dimension is sub-national. Specifically, Telecom argues that a distinction should be drawn between metropolitan and non-metropolitan areas, with the boundaries defined such that:⁸
- where an FWA broadband competitor is present in a geographic area, the entire area should be designated as a metropolitan market; and
 - where only fixed network broadband competitors are present in a region, the 200 metre (business) and 100 metre (residential) rule should be retained.
38. Telecom argues that it could not raise its prices in metropolitan areas, due to the presence of effective competition from a "strong competitive fringe of rival broadband firms", and is also constrained from the threat of new entry "by well-resourced aggressive international competitors (for example, Vodafone)".⁹ However, it asserts that it could introduce a small yet significant non-transitory increase in price ('ssnip') in non-metropolitan areas, as there is no competing infrastructure in those areas.
39. According to Telecom, in Decision 568 the Commission ignored these competitive differences, and deviated from the standard snip test which is used elsewhere by the

⁸ Telecom submission, 12 April 2006, Annex A, paragraph 9 (reference made to previous Telecom submission, 20 May 2005, paragraph 279).

⁹ Telecom submission, 12 April 2006, Annex A, paragraph 29.

Commission and in other regulatory jurisdictions, including the US, EC, and Australia. Telecom claims that:¹⁰

... the analysis of market boundaries must be based on competitive constraints (i.e. demand and supply side substitution), not on a judgment of firms' operational challenges in implementing price rises.

40. Telecom submits that the level of rivalry between broadband suppliers has become significantly more evident in the past year, with prices falling and quality improving.
41. In considering the threat of new entry, Telecom focuses on the emerging WiMAX technology. According to Telecom, WiMAX has the potential to overcome most of the disadvantages faced by current FWA operators in New Zealand, and that WiMAX networks will be operating within the next two years.
42. Telecom concludes that there is effective competition in the metropolitan broadband markets in New Zealand, and that the Commission's finding of limited competition in Decision 568 lacks "a credible theory setting out how Telecom would be able to exercise market power."
43. In their joint cross-submission, the Applicants comment only briefly on market definition and competition assessment. In essence, the Applicants submit that there has been no material change since Decision 568, and that the Commission's findings in that determination continue to be relevant. The Applicants refer to a comment by Telecom's Chief Executive in March 2006:¹¹

Clearly we've rolled out DSL to 93% of New Zealand lines. We've got a huge scale advantage over anyone even if there is a technology shift.

44. The Applicants provide comment on the significance of WiMAX, noting that while it has potential, it is still at a very early stage and equipment costs are substantially higher than for ADSL.
45. No further comment is made by Telecom in its cross-submission in relation to market definition and competition.

Relevant Markets

Product dimension

46. The Commission determined in Decision 568 that the relevant product market is that for wholesale broadband access, including copper-based bitstream, cable, satellite, fibre and FWA (but excluding 3G mobile services).
47. The Parties have not expressed concerns with this approach.

¹⁰ Telecom submission, 12 April 2006, Annex A, paragraph 22.

¹¹ Ihug/CallPlus cross-submission, 9 May 2006, paragraph 8.2.

Functional dimension

48. Bitstream access is an input into the provision of retail broadband services. The Commission considers that the relevant functional dimension of the market in which bitstream access services are supplied is the wholesale level.
49. Telecom argues that competition at the retail level should be assessed, as demand for the regulated bitstream access service is derived from demand for retail products; and that there are factors other than wholesale competition that are relevant for assessing competition at the retail level.
50. It is likely that the level of competition at the retail level will be largely determined by the level of competition at the wholesale functional level. In particular, the Commission has focused on what has been occurring at the network level, as this provides a clearer indication of the extent to which competitors at the retail level are able to effectively and sustainably compete with Telecom.

Geographic dimension

51. The Commission recognises that the deployment of competing infrastructure is likely to be relevant to this dimension, in particular where this has generated geographic pricing responses which suggest that competitive conditions in those areas are different.
52. It is appropriate to examine any geographic pricing constraints faced by Telecom in supplying a particular service. In some cases, such a constraint may be imposed on Telecom. For example, under the Telecommunications Service Obligation Deed for Telecom's local residential telephone service, Telecom is required to maintain a uniform residential line rental in respect of rural areas, although it has some ability to selectively offer lower line rentals on a geographic basis.¹²
53. In terms of the geographic dimension of the market, Telecom's submission does not provide any new evidence that a national market is inappropriate. Telecom asserts that in defining a national market, the Commission has deviated from the standard *ssnip* approach to market definition.
54. While Telecom disputes the use of a national market, contending that 'operational complexity' is irrelevant, the considerations used in Decision 568 continue to be relevant, in terms of both the application of a *ssnip*, and the need for a commonsense, pragmatic approach to market definition.¹³
55. The Commission notes that Telecom set uniform national prices at both the retail and wholesale levels (for example, its commercial UBS pricing); that such geographically averaged pricing did not seem to be driven by any regulatory distortion; that Telecom runs a national advertising campaign for broadband services; and that Telecom had

¹² In such a case, where a uniform pricing constraint has been imposed by regulation, it should not be assumed that such uniform pricing would continue absent that regulation.

¹³ Commerce Commission *Mergers and Acquisitions Guidelines*, page 14.

submitted that it would be costly and problematic to maintain regional pricing differentials for broadband services.

56. All of the above suggests that the smallest geographic dimension over which a ssnip could be applied would be national. Any switching of marginal customers in those areas where competing broadband access networks have been deployed appears to have been insufficient to warrant any price reaction (or any other substantive competitive reaction) from Telecom in those areas.
57. The Commission re-iterates that the definition of a national geographic market for the purposes of this determination reflects a number of factors, including evidence that Telecom sets geographically averaged broadband prices. The Commission is not aware of any response from Telecom at a regional level to any localised deployment of competing broadband infrastructure. However, the Commission does note that it may be appropriate to review market boundaries in the future, for example were Telecom to de-average its pricing, as was the case with residential local access services.
58. Telecom characterises the above approach to determining the geographic dimension of the broadband access market as being inconsistent with the approach taken in other regulatory jurisdictions. The Commission does not agree with this assertion. For example, in considering the geographic boundaries of a telecommunications market, Ofcom explicitly considers whether there is a common pricing constraint, and found that in respect of broadband access:¹⁴

BT's uniform broadband access pricing ... means that any response by BT to broadband internet access competition in a given area in the form of lower prices would apply throughout the areas of the country where BT offered these services. This national common pricing constraint suggests that the geographical extent of the relevant markets should be regarded as the whole of the UK excluding the Hull Area. Therefore, it is appropriate to define a national market excluding the Hull Area where a single national pricing constraint holds.

59. Ofcom noted that other broadband providers tend to price and advertise on a national basis, and concluded that this supports a national geographic market.¹⁵
60. While the EC and the US use the ssnip test to assist in defining telecommunications markets, both also consider aggregation of areas where "competitive conditions are similar". This has resulted in the EC confirming national geographic markets relating to broadband access services.¹⁶

Conclusion on market definition

61. The Commission adopts a national wholesale market for the provision of broadband access as the relevant market.

¹⁴ Ofcom, *Review of the Wholesale Broadband Access Markets*, 13 May 2004, paragraph 2.112. Ofcom's draft review was reviewed by the EC and other European NRAs.

¹⁵ Ofcom did acknowledge that such a national market does exhibit local characteristics.

¹⁶ See for example, ComReg, *Market Analysis: Wholesale unbundled access (including shared access) to metallic loops and sub-loops*, 15 June 2004, section 3 (ComReg notes the EC confirmed ComReg's national market).

Competition Assessment

62. The following section sets out the Commission's view on whether Telecom faces limited, or is likely to face lessened, competition in the national wholesale market for the provision of broadband access.
63. In assessing whether competition in a market is limited, the Commission considers the following factors:

Existing Competition

- the number and relative size of competitors in the market, including an assessment of trends in shares over time where possible;
- the extent to which there is product differentiation;
- the degree to which competitors engage in independent rivalry;
- the degree of vertical integration;
- the absence of barriers to customer switching;
- the movement in prices over time, and any evidence of their broad relationship to underlying costs;
- the existence of any countervailing power;
- the constraints imposed by the regulatory environment; and
- evidence that the access provider is acting inefficiently or achieving excess returns.

Potential Competition

- The potential for entry and the significance of any barriers to entry that may exist, and evidence of recent entry;
- the movement in prices over time, and any evidence of their broad relationship to underlying costs;
- the constraints imposed by the regulatory environment; and
- evidence that the access provider is acting inefficiently or achieving excess returns.

National wholesale market for the provision of broadband access

Existing competition

64. In Decision 568, the Commission concluded that Telecom faced limited competition in the national wholesale market for broadband access. The Commission has reviewed the Parties' submissions and does not consider that there has been any significant change in either Telecom's market share for broadband access, or that of its competitors, since Decision 568.
65. Telecom's submission identifies a number of recent pricing and service developments. However, as the Applicants note, the Commission was aware of a number of these developments prior to finalising Decision 568.

66. In addition, while prices have generally decreased in recent times, a number of the specific price reductions identified by Telecom are accompanied by reductions in non-price terms such as the monthly data cap. For example, the price of the Telecom entry level plan falls from \$39.95 to \$29.95, but the cap also becomes more restrictive (falling from 1GB to 0.2GB). In other words, while the price of the entry plan has declined, the amount of data that can be downloaded each month under that plan has also been reduced.¹⁷ The reductions in the caps suggest that the value of the entry level plans listed in Telecom's submission have not increased by the extent suggested by Telecom.
67. Furthermore, regulated bitstream access has itself provided some of the stimulus for some of the developments listed by Telecom, for example ihug's launch of 2Mbps ADSL-based broadband plans in October 2005. Telecom's reductions in business broadband pricing are also a consequence of Decision 568.
68. Telecom's submission of competitive improvements in respect of broadband prices could therefore be evidence of regulated bitstream access providing benefits to end-users.
69. Having reviewed submissions in respect of the current Applications, the Commission concludes that the remaining factors listed above in relation to existing competition need not be considered further, as the competitive environment in respect of these factors has not changed since they were considered in Decision 568

Potential competition

70. There does remain considerable uncertainty over the timing and, in particular, the competitive positioning of WiMAX-based broadband services. An important feature of WiMAX-based services is that they are delivered using radio spectrum that is shared across customers located within reach of a base station. The resulting range and quality of services available will depend on a number of factors, including the number of customers sharing the available bandwidth. As more customers are added to a fixed amount of spectrum, service quality and speed will tend to degrade. This can be contrasted with dedicated capacity that is available to a customer over a fixed connection.¹⁸
71. In considering the implications of WiMAX for competition and regulation, the OECD recently outlined a number of concerns over the ability of WiMAX to compete directly with wired broadband infrastructure:¹⁹

DSL, cable and fibre will be able to provide much faster connections when wired infrastructure is already in place but WiMAX equipment may still be competitive with lower-speed wired connections.

¹⁷ The Commission notes that the prices of a number of the other entry level plans referred to in Telecom's submission have reduced since December 2004, but the data caps have also become more restrictive

¹⁸ Even with a fixed customer connection, contention issues may arise in respect of shared capacity deeper into the network; however, the access connection is typically dedicated to the customer.

¹⁹ OECD Working Party on Telecommunication and Information Services Policies, *The Implications of WiMAX for Competition and Regulation*, 2 March 2006, page 10.

72. These concerns are similar to those expressed by the Commission in Decision 568 over FWA technologies in general. In particular, such limitations may become more exposed as services over wired infrastructure are migrated over time towards higher speeds. This migration has been seen with the introduction of higher speed bitstream access services (with increases in downstream and upstream speeds), and further with ADSL2+. Any commercial roll-out of WiMAX is likely to be faced with competing at these higher speeds.

73. This has again been recognised by the OECD:²⁰

One key area where WiMAX is likely to be successful is in providing higher-speed data connections to rural areas. The fixed-version of 802.16 should help rural communities obtain higher broadband speeds with lower infrastructure costs, a role very similar to that envisioned earlier for LMDS and MMDS, although the bandwidth and data rates are different. What will make the WiMAX rollout different is the level of support from vendors and the strong effort to standardise equipment.

Areas where the likelihood of WiMAX success is debatable will be the provision of DSL and cable modem-type broadband connectivity to households in previously wired areas as well as the delivery of highly mobile data services. DSL and cable modem networks are expanding quickly in OECD countries and offer higher speeds per user than WiMAX will be able to accommodate. Mobile WiMAX will also face stiff competition from mobile phone networks as higher-speed 3G data technologies evolve.

74. The Commission is aware that a number of parties are looking at delivering broadband and voice services in New Zealand using WiMAX. However, at this stage it appears that WiMAX may be more suited to delivering services in more remote, less densely populated regions.²¹

75. These concerns suggest that FWA technologies represent more of a complementary service in terms of reaching areas less suited to fixed access.

76. Telecom's submission points to Vodafone's recent promotion of its mobile data plans, where the monthly price of the Mobilise Data 1GB plan has been reduced.

77. Telecom has introduced a similar promotion on its Mobile Broadband 1GB data plan.²²

78. Table 1 below summarises the comparison made in Decision 568, as well as a comparison of the new prices and services referred to above.

²⁰ OECD, page 15.

²¹ For example, according to BCL: "The next stage will be engaging with customers on the possibilities of WiMAX technologies, and *how they might compliment existing fixed-line and mobile access technologies*. ... WiMAX may also prove to be a useful tool to further improve broadband services *in provincial and rural areas*." BCL media release, 15 September 2005 (emphasis added).

²² <http://www.telecom.co.nz/content/0,8748,202032-200509,00.html>

Table 1: ADSL and mobile broadband

		Monthly charge	Data cap (MB)	extra MB	Speed (kbps)
Decision 568	Telecom Mobile Broadband 500	\$199	500	\$0.50	500
	Xtra Broadband Business 3GB	\$119.95	3000	\$0.04	1000
Current	Vodafone Mobilise Data 1GB	\$49/\$149	1000	\$1.00	300-500
	Xtra Broadband GO	\$39.95	1000	-	2000
	Xtra Broadband Explorer	\$49.95	5000	-	3500

Note: the Xtra plans reduce to 64kbps once the data cap is reached.

79. In considering the monthly price, the promotional rate of \$49 is comparable to the existing Xtra Go and Explorer plans. However, the standard Mobilise Data price of \$149 remains considerably higher.
80. In addition, the other key components of the mobile data plans are considerably less attractive. In particular, under the Xtra Explorer plan (the price of which is close to the Vodafone 1GB plan), the monthly data cap is five times that of the Vodafone 1GB plan, and whereas the Xtra plan does not charge for additional usage (the speed is instead reduced), the Vodafone plan charges an additional \$1.00 per MB.²³
81. The mobile data plans also tend to deliver lower speeds than the DSL plans. It is also worth noting that the DSL speeds are increasing, with ADSL2+ shortly to be deployed by Telecom offering speeds of up to 24 Mbps.
82. Furthermore, the other Vodafone Mobilise Data plans are unaffected by the current promotion. For example, Vodafone's 3MB, 15MB, and 50MB plans are available for between \$10 and \$39 per month. The data caps on these plans are considerably lower than the entry level Xtra Basic plan (200MB, \$29.95), and the charge per MB in excess of the data caps are much higher (\$1-\$2 per MB).
83. Having regard to the price and performance features of current mobile data relative to ADSL plans, the Commission does not view mobile data services as a constraint on fixed broadband services.
84. The continuing recent deployment of FWA by operators such as Woosh suggests that some of the above entry barriers may not be as significant for wireless entry. In particular, entry using FWA avoids some of the significant sunk costs involved in rolling out a wireline access network.
85. The Commission considers that further fixed wireless deployments are likely in the near term. However, there are limitations in terms of both satellite and FWA-based

²³ While the majority of the DSL plans available in New Zealand are flat rate plans (with flat rate plans, once the data cap is reached, the speeds are reduced rather than additional charges incurred), Xtra's Basic and Pro plans do have additional data charges. These additional charges are 2c per MB in excess of the respective data caps. The additional data charge for Vodafone's 1GB plan is significantly higher, at \$1.00 per MB (fifty times higher).

services being able to compete with fixed broadband services such as ADSL, particularly with respect to increasingly bandwidth-intensive services.

86. New entry is emerging through the continuing deployment of FWA and satellite, although during the period of this determination, the Commission expects that the portion of the market contestable by these technologies will be constrained by limitations of coverage, bandwidth, and in the case of satellite, significantly higher pricing. In the case of cable and fibre-based broadband networks, existing deployments have to date been geographically limited, and significant new entry by fixed network operators is unlikely to emerge within the two-year timeframe relevant to this determination.
87. Having reviewed submissions in respect of the current Applications, the Commission considers that the remaining factors listed above in relation to potential competition need not be considered further, as the competitive environment in respect of these factors has not changed since they were considered in Decision 568.

Conclusion on competition assessment

88. There are a number of competing suppliers of broadband access, using a range of technologies. In addition to Telecom's ADSL-based services, competitors offer broadband access across cable and fibre networks, fixed wireless and by satellite.
89. Telecom's share of broadband connections remains high, and this share has been increasing in recent years. This is despite the emergence of FWA providers in particular, who can relatively rapidly deploy networks.
90. Telecom's prices have declined in recent years, and non-price terms, including monthly data caps, have also improved. The Commission considers that this is likely to be in part a response to the emerging competitors in this market, and in part to the regulatory environment.
91. Given the barriers to entry and expansion that remain for fixed network operators, the limitations of FWA technology, and the limited capacity and significantly higher pricing of satellite, the Commission concludes that Telecom faces limited competition in this market.

Conclusion on markets and competition assessment

92. The market relevant to the Applications is a national market for the provision of wholesale broadband access.
93. The Commission considers that Telecom faces limited competition in that market.

CHARACTERISTICS OF THE BITSTREAM ACCESS SERVICE

94. The Applicants have requested a determination that has the same terms as the service in Decision 568, adjusted for price.²⁴
95. The key characteristics of the service as determined by the Commission in Decision 568 are as follows:²⁵

Downstream speed	<p>Peak Information Rate</p> <ul style="list-style-type: none"> • The maximum theoretical line rate that the DSLAM can support allowing for standard DSL overheads. • The PIR may differ where Telecom has limited transport capacity between the DSLAM and ATM switch. <p>Sustained Information Rate</p> <ul style="list-style-type: none"> • Calculated as the weighted average of SIRs of Telecom's retail best efforts services across its whole network. • The SIR which applies to the access seeker's bitstream access connections is to be recalculated by Telecom and updated quarterly.
Upstream speed	<ul style="list-style-type: none"> • The upstream speed is prescribed in the Act. • A maximum throughput rate of 128kbps for data traffic sent from the end-user.
Shared virtual path	<ul style="list-style-type: none"> • Telecom and the access seeker are required to share a single Virtual Path from the DSLAM to the LAC currently used by Telecom's best efforts traffic – Unspecified Bit Rate Plus (UBR+) services.
Data downloads and uploads	<ul style="list-style-type: none"> • No limits to be applied
Interleaving	<ul style="list-style-type: none"> • The access seeker may request that interleaving is switched off for specific end-users.
IP addressing	<ul style="list-style-type: none"> • The service must not prevent the access seeker from providing end-users with either a static or dynamic IP address.

Peak information rate (PIR)

96. The service description in the Act does not limit the downstream speed of the regulated bitstream access service. The Applicants have requested an unconstrained downstream speed as determined in Decision 568.

²⁴ Ihug/Callplus submission, 12 April 2006, para 3.1

²⁵ Decision 568, 20 December 2005, Table 7, page 56

97. Telecom provides information on its recent upgrading of customers to higher speed retail and unregulated wholesale broadband plans.²⁶ Although the upgrade has been completed, results for only two exchanges, Remuera and Browns Bay, are quoted and show that the lines that are operating at a noise margin of less than the target 12dB, have increased from about 10% before the upgrade to about 12% after the upgrade. Telecom then deduces that if there is a significant further increase in permitted line speed from the introduction of regulated unconstrained services, these existing lines risk not achieving their plan speed or becoming unstable. Telecom has not quantified this risk but plans to undertake further analysis as part of developing its spectrum management plan.
98. Telecom has now grandfathered its full speed plans at retail and wholesale and expects that, over time, customers will migrate off those plans onto its plans with a 3.5Mbps downstream speed. While Telecom had initially expected that this migration would be completed by 30 June 2006, it has subsequently submitted that the migration will be completed by the end of 2006.²⁷ The Commission notes that Telecom has recently informed its wholesale customers that these full speed plans will remain grandfathered until further notice.²⁸

Spectrum management

99. Telecom submits that New Zealand should move to higher speed ADSL line PIRs only once a sensible spectrum management regime is in place. Telecom is “seeking to move to implementation of a spectrum management regime later in 2006 with a view to increasing the line PIR only within a controlled environment and with the minimum impact on reach and service degradation”.²⁹
100. Both Telecom and the Applicants provide opinions regarding the benefits of the various types of management regimes that could be adopted to provide the optimal trade-off between speed and reach, including the ACIF approach and Telecom’s “Bit Rate Limiting PLUS” approach.
101. After considering further information from the Parties and observing the Australian experience with unconstrained services, the Commission now considers that the introduction of unconstrained ADSL services is unlikely to have a significant detrimental impact on other ADSL services in the same cable with regard to reach. This is evident from the ACIF benchmark where the difference between the minimum acceptable performance and the maximum achievable performance at longer cable lengths, is very small.
102. Telecom has chosen to market asymmetric services by nominating maximum downstream speeds (either 256 kbps, 2 Mbps or 3.5 Mbps), rather than providing the customer with the maximum downstream speed that the line will support, as is common overseas. Telecom advises that these speed caps have been introduced to control the noise in the cable.

²⁶ Telecom submission, 12 April 2006, pages 10 - 11

²⁷ Telecom submission, 12 April 2006, para 76

²⁸ Telecom Wholesale Informer, Issue No TW 2006-05-31

²⁹ Telecom submission, 12 April 2006, para 43

103. Telecom submits that, as well as reach, the introduction of an unconstrained service will also have a detrimental impact on the speed achieved by other services in the cable, such as symmetrical committed bit rate business services, and that Telecom has contractual obligations to provide a specific level of service performance for these services³⁰. Telecom states that this is new information that was not available in December 2005 and that it has become aware of this potential effect in the course of its work on the spectrum management plan.
104. The Commission notes that a common feature of overseas spectrum management regimes is to manage the interaction between different technologies (for example HDB3, SHDSL, ADSL). However, it is less common to find regimes which deal with interference between services with the same technology, ie ADSL services at different speeds. As noted above, the Commission does not expect that there will be dramatic impacts on ADSL services, such as loss of service, from the introduction of unconstrained ADSL services into the network. The Commission does not consider that its purpose of promoting competition requires it to impose a regime to manage the more modest impacts of the introduction of unconstrained services on ADSL services. These issues are best dealt with by the Parties through the management of the marketing of these services to retail customers.
105. The Commission intends to work with the industry to ensure that a robust and appropriate spectrum management regime that deals with the impact of one technology (eg SHDSL) on another (eg ADSL) is implemented to ensure the efficient utilisation of Telecom's copper cable access network.
106. Should such a regime be introduced in a form approved by the Commission, the Commission requires that all new bitstream access service connections thereafter comply with that regime. The regime would be expected to apply in the same manner to both new Telecom connections and to those of the Applicants.
107. Given the implementation timeframe for this determination and Telecom's anticipated completion date for agreement on a spectrum management regime, the Commission considers that, if there is a risk of unconstrained bitstream access services adversely impacting services on Telecom's copper cable access network, it is very low.

Commission's view on PIR

108. The Commission does not consider that there is good reason to alter its view determined in Decision 568. The Commission considers that there should be no maximum PIR for the downstream speed of the bitstream access service.

Cost benefit analysis (CBA)

109. In Decision 568, the Commission concluded that:³¹

³⁰ Telecom cross-submission, 9 May 2006, paras 44-59

³¹ Decision 568, 20 December 2005, para 246

While a quantified cost benefit analysis can be useful in informing a decision as to the consumer benefits or detriments of alternative future scenarios, the Commission rejects the claim that it is a mandatory requirement for this aspect of the decision making process. The Commission does not consider that the present issue is one where a cost benefit analysis would be feasible or helpful.

110. Telecom submits that the Commission should consider the empirical basis on which it makes the trade-off between reach, speed and differential pricing and conduct a cost benefit analysis in order to ensure that its determination of price structure and device definition is in the long term benefit of all end-users, not just some end-users. Telecom expressed a view that a CBA would allow the Commission to weigh the benefits to the customers whose service improves as a result of the bitstream access service against the detriment to those customers whose service deteriorates.³²
111. The Applicants submit that a CBA is not required and that Telecom has not provided adequate reasons or further information as to why the Commission should depart from its previous decision.³³
112. The Commission does not consider that there is good reason to alter its view in Decision 568. The Commission does not consider that a cost-benefit analysis would be feasible or helpful in assisting the Commission to reach a conclusion on the form in which the bitstream service should be provided.

ADSL2+ and future investment

ADSL2+

113. Telecom submits that it intends shortly to begin installing ADSL2+ equipment and roll out this technology where it makes economic sense, and that if this technology is regulated by this determination, then Telecom's investment incentives would be adversely impacted.³⁴
114. The Applicants submits that no distinction should be made between services provided using ADSL1 and ADSL2+ technologies.³⁵
115. Telecom submits that the Commission should not seek to regulate new investment and that the regulated service should only correspond with Telecom's retail broadband services. Alternatively, if an unconstrained service is regulated, that service should have a maximum PIR of 7.6 Mbps.³⁶ If the Commission decides to regulate new investment, Telecom considers that it will need to reassess its incentives to invest in new technology that will enable higher speeds and that it may choose not to deploy the technology, to delay deployment, or to severely limit the geographic availability of ADSL2+.

³² Telecom cross-submission, 9 May 2006, para 35

³³ Ihug/Callplus cross-submission, 9 May 2006, para 4.26

³⁴ Telecom submission, 12 April 2006, paras 56 - 57

³⁵ Ihug/Callplus cross-submission, 9 May 2006, para 4.27

³⁶ Telecom submission, 12 April 2006, para 59

116. Telecom also submits that it currently has a significant investment in ADSL1 line cards and that, if higher speed services were priced the same as any other speed services, a number of perverse matters are likely to occur. These would include the possibility of ISPs requesting that their customers be churned to ADSL2+, raising the risk that Telecom's existing investment in ADSL1 line cards may become stranded.³⁷
117. The bitstream access service description in Schedule 1 of the Act is DSL technology neutral and does not provide for any limiting of the PIR.
118. ADSL2+ is a technology which many operators overseas have, or are intending to, invest in. These operators include both incumbents and new entrant competitors. Ihug has indicated that it will install ADSL2+ on unbundled local loops.³⁸ ADSL2+ is the new generation of DSLAM which will allow new services to be offered to customers and Telecom describes some of the benefits of these new services.³⁹
119. The Parties have not provided information regarding the likely future cost trends for ADSL2+ equipment, nor have they advised the Commission on investment already undertaken but not deployed. The Commission expects that as operators worldwide naturally migrate to this next generation of equipment, ADSL2+ will fast become the technology of choice and prices will drop dramatically.

Commission's view on ADSL2+

120. This determination does not differentiate between ADSL technologies. Telecom has already announced that it will roll out ADSL2+ notwithstanding the Commission's position in Decision 568. The price and non-price terms relate to bitstream access services provided using any generation of ADSL technology.
121. The Commission requires that Telecom deal with service requests by the Applicants on the same basis as requests for its own retail connections. The Commission considers that there is an equal risk of sunk investment in ADSL1 line cards at both the retail and wholesale level. Telecom must give notice to the Applicants of the completion of an ADSL2+ upgrade to its network in any exchange service area, not later than the date on which Telecom makes ADSL2+ services available to its own retail sales and customer support groups for supply to its customers in that exchange service area.

Future investment

122. The use of a retail minus pricing principle to determine the regulated bitstream access price is considered adequate to address any concerns about the investment incentives for Telecom in respect of ADSL2+ or any other investment relating to the regulated bitstream access service. Any attempt to differentiate or define the bitstream access service according to specific technologies, for example to exclude ADSL2+, would generate a considerable risk that the service is rendered obsolete and ineffective through the introduction of new technology.

³⁷ Telecom submission, 12 April 2006, para 65

³⁸ Ihug media release, 27 March 2006

³⁹ Telecom submission, 12 April 2006, para 58

Sustained information rate (SIR)

123. Telecom has provided a commitment to its wholesale customers to provide bitstream services with a minimum downlink average throughput of 32 kbps during 99.9% of all 15 minute periods on demand. Telecom also notes that actual experience is generally much better than this.⁴⁰
124. This minimum downlink average throughput aligns with the downstream limit on the access principles for the bitstream access service in the Act, which is “not less than 32 kbps”.
125. As Telecom has now offered a commercial arrangement which aligns with the Act, the Commission consider that it is appropriate that this minimum data throughput (not less than 32 kbps) must also apply to the bitstream access service to be provided by Telecom to the Applicants under this determination.
126. Accordingly, the SIR for the bitstream access service under this determination will be a minimum downlink average throughput of 32 kbps during 99.9% of all 15 minute periods.

Virtual path

127. Telecom accepts that the Parties will share a single virtual path from the DSLAM to the Local Access Concentrator/Broadband Remote Access Server.⁴¹ Accordingly, the Commission’s view on the sharing of the virtual path is as determined in Decision 568.

Upstream speed

128. Telecom must provide the Applicants with access to the bitstream service with an upstream speed of 128 kbps for data sent from the end-user to the DSLAM.

Interleaving

129. In Decision 568, the Commission determined that interleaving should be turned off for bitstream access connections when requested to do so by the access seeker. Should Telecom consider that it will incur incremental costs in supporting this interleaving option, Telecom could request that the Commission approve an efficient charge for that service.⁴² The Applicants have applied for the same terms.
130. Telecom submits that the adverse impacts of turning interleaving off may not become fully apparent until a material number of lines in a cable have interleaving turned off. Telecom proposed a trial where interleaving is turned off on a significant number of

⁴⁰ Telecom High Speed Internet Service, Customer Briefing, 17-19 May 2006

⁴¹ Telecom submission, 12 April 2006, para 29

⁴² Decision 568, 20 December 2005, para 278

lines in selected DSLAMs and the performance monitored over a period of at least 2 weeks.⁴³

131. Telecom also submits that it monitors lines on an ongoing basis and is in a position to identify issues with cables where interleaving is turned off.⁴⁴ However, Telecom has not provided any trial results or evidence that would quantify the alleged adverse impacts.
132. The Commission is not persuaded by Telecom's argument that an interleaving trial is prudent. Accordingly the Commission's view on interleaving remains as determined in Decision 568.

Usage limits on data downloads and uploads

133. Telecom accepts that there should be no data download and upload limits.⁴⁵ The Commission agrees and determines that the applicable data download and upload limits remain as determined in Decision 568.

Static IP addresses

134. Telecom accepts that the Applicants should be able to provide end-users with either a static or dynamic IP address.⁴⁶ Accordingly, the Commission's view, for the purposes of this determination, on static IP addresses is as determined in Decision 568.

Summary of Commission's conclusions

135. The following table summarises the key characteristics of the bitstream access service.

Downstream speed	<p>Peak Information Rate</p> <ul style="list-style-type: none"> The maximum theoretical line rate that the DSLAM can support allowing for standard DSL overheads. The PIR may differ where Telecom has limited transport capacity between the DSLAM and ATM switch. <p>Sustained Information Rate</p> <ul style="list-style-type: none"> A minimum average throughput on the shared virtual path of 32 kbps during 99.9% of all 15 minute periods.
Upstream speed	<ul style="list-style-type: none"> The upstream speed is prescribed in the Act. A maximum throughput rate of 128kbps for data traffic sent from the end-user.
Shared virtual path	<ul style="list-style-type: none"> Telecom and the Applicants are required to share a single Virtual Path from the DSLAM to the LAC currently used by Telecom's best efforts traffic – Unspecified Bit Rate

⁴³ Telecom submission, 12 April 2006, para 73

⁴⁴ Ibid, para 74

⁴⁵ Telecom submission, 12 April 2006, para 29

⁴⁶ Telecom submission, 12 April 2006, para 29

	Plus (UBR+) services.
Data downloads and uploads	<ul style="list-style-type: none">• No limits to be applied
Interleaving	<ul style="list-style-type: none">• The Applicants may request that interleaving is switched off for specific end-users.
IP addressing	<ul style="list-style-type: none">• The service must not prevent the Applicants from providing end-users with either a static or dynamic IP address.

APPLICATION OF THE INITIAL PRICING PRINCIPLE

136. This section sets out the Commission's approach to the Initial Pricing Principle ('IPP') to calculate the price payable for bitstream access.⁴⁷
137. The IPP for the bitstream access service is 'retail price (as imputed by the Commission having regard to any comparable service) less a discount benchmarked against discounts in comparable countries that apply the retail price minus avoided costs saved pricing in respect of the service, in a case where Telecom faces limited, or is likely to face lessened competition in a market for that service'.
138. In Decision 568, the Commission concluded that bitstream access would be provided at a single uniform wholesale price, irrespective of the speed of the resulting retail broadband service.

Wholesale services

139. Bitstream access is a wholesale service and differs from regulated resale of retail services as it is an input into a retail broadband service, along with ISP services, national and international data transmission.
140. Telecom submits that they have aligned their commercial wholesale UBS suite of services with their retail broadband services.⁴⁸ Telecom argue that as the commercial wholesale UBS suite of services is consistent with retail, the Commission should define the range of those commercial wholesale UBS services as the range of regulated UBS services.⁴⁹ This has the practical effect of retaining the tight link as between its commercial wholesale and retail prices.
141. However, in Decision 568, the Commission concluded that it was not required to define a range of bitstream access speeds to retain a 'tight link' between wholesale and retail pricing.⁵⁰ To do so would give rise to a resale rather than wholesale environment, with Telecom's own retail offerings constraining the access seeker's ability to differentiate its broadband services from Telecom's own retail broadband services.⁵¹
142. Potential dynamic efficiency benefits in the form of increased innovation, both in terms of product variety (product differentiation) and pricing, will be greatest where a uniform access price is determined.
143. The Commission does not believe that there is any reason to depart from Decision 568, and concludes that a uniform access price for the purposes of this determination, will stimulate competition between the Applicants and Telecom.

⁴⁷ Unless otherwise noted, all prices referred to in this section are exclusive of GST.

⁴⁸ Telecom *submission*, 12 April 2006, Para 91, p.21.

⁴⁹ *ibid*

⁵⁰ Decision 568, 20 December 2005, Para 299, p.59.

⁵¹ *ibid*

Incentives for access seekers to price discriminate

144. Telecom submits that if there is not a range of bitstream services at wholesale, the market is likely to converge towards a single high value low priced plan.⁵² Telecom submitted that competition will occur on price, not product variety or differentiation.⁵³ Telecom also submitted that as a result of a single high-speed wholesale bitstream access price, entry level plans will likely cease to exist.⁵⁴
145. Telecom submits that access seekers other than TelstraClear would not have an incentive to engage in price discrimination as they have lower fixed and common costs.⁵⁵
146. The Applicants note that ihug's ADSL retail price points mirror those of Telecom's ADSL retail price points, but had variations on the downstream speed and data cap,⁵⁶ and also considered it unlikely that ISP's would offer an 'average' price.⁵⁷
147. The Applicants also submit that an access seeker would attempt to extract what customers were willing to pay, and would be unlikely to risk losing the customers not prepared to pay the 'average' price.⁵⁸
148. A uniform wholesale price is likely to best give effect to the promotion of competition for the long-term benefit of end-users.⁵⁹ In reaching this conclusion, the Commission considered whether firms would, or would be likely to engage in price discrimination at the retail level with a uniform wholesale price.
149. The availability of a uniform wholesale price was intended to provide the Applicants with maximum flexibility to use bitstream access to differentiate their own retail services from Telecom's retail broadband offerings.⁶⁰
150. Incentives to price discriminate at the retail level will remain, even where a uniform wholesale bitstream price is set, and even in the absence of substantial fixed and common costs incurred by the access seeker. This is because the general conditions that underpin the incentives to engage in price discrimination are likely to remain undisturbed by the use of a single bitstream price.⁶¹
151. The following conditions are typically required for a firm to be able to engage in price discrimination between discrete groups or segments of consumers:
- the firm has some degree of market power (or at least can set prices above marginal cost);

⁵² Telecom *submission*, 12 April 2006, para 18, p. 7.

⁵³ *ibid*

⁵⁴ *ibid*, para 20, p. 7.

⁵⁵ *ibid*, para 19, p. 7.

⁵⁶ John de Ridder, *Report supplied with the Applicants' submission*, 12 April 2006, p. 6.

⁵⁷ *ibid*, Section 2.3, p. 7.

⁵⁸ *ibid*

⁵⁹ Decision 568, 20 December 2005, para 317, p. 63.

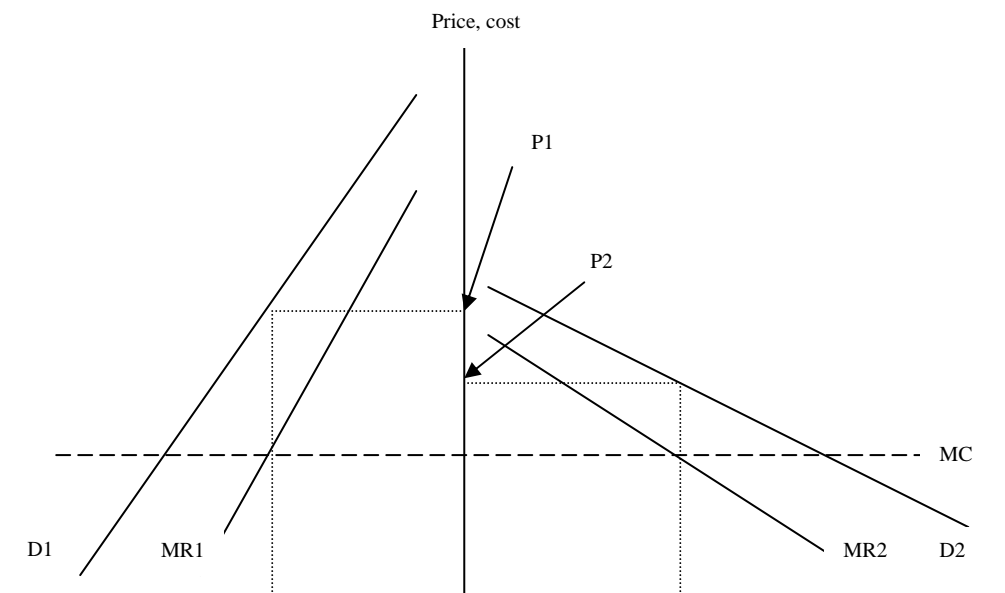
⁶⁰ *ibid*, para 329, p. 65.

⁶¹ *ibid*, para 308, p. 61.

- the firm can identify different customer groups, each with a different willingness to pay; and
- the firm can prevent resale between customer groups.

152. The incentive for retail price discrimination, with a uniform wholesale price, can be seen from Figure 1. The uniform cost line represents the wholesale bitstream price paid by an access seeker. If that access seeker attempts to maximise profits (i.e. by equating marginal revenues with marginal costs) and can segment the retail market according to different demand elasticities, then retail price discrimination may result, with a higher retail price (P_1) being charged for those customers with relatively inelastic demand. With a constant marginal access price, price discrimination may naturally result from profit maximising behaviour, rather than the need to recover high fixed and common costs efficiently. The latter is not necessarily a condition for the former.

Figure 1: Retail price discrimination



153. The level of fixed and common costs will vary between firms dependent upon the size of the firm, efficiency of operations, and strategic intent, and the level of investment in infrastructure deployed for the provision of services. Existing access seekers and potential new entrants with differing levels of fixed and common costs will seek to efficiently price discriminate, as they seek to maximise the long-term return on their investment. To do otherwise would reduce the long-term gains that may be received from lower prices (with an increased subscriber base). Both fixed and common costs would be expected to rise if subscriber numbers rose as the result of increased uptake of low-priced high-speed plans. Therefore, the incentive for forward-looking firms would be to price discriminate, just as firms with higher fixed and common costs, to ensure that in the future they were still able to compete.
154. In the absence of substantial fixed and common costs incurred by access seekers, retail price discrimination may still occur with a uniform wholesale price, because access seekers are assumed to be profit-maximising. If an access seeker can identify

different demand characteristics across different customer groups, it may be possible to increase profits through price discrimination. This is in contrast to an access seeker offering a single retail plan, that would provide a generic service at a single point on the demand curve. The Applicants' submission recognised this:⁶²

... it would not make any commercial sense to offer a single retail plan as this would sacrifice profits. ISPs "price down the demand curve" with segment pricing. To offer an average price might attract heavy users while "leaving money on the table" (ie not extracting what these customers were willing to pay) and would lose customers not prepared to pay this average price (and who might have been persuaded to trade-up later).

155. The Applicants can increase their profits through retail price discrimination as long as they are able to identify and segment customers with different demand elasticities.
156. The Commission notes that there is evidence of price discrimination based on speed occurring in the retail broadband market, and considers that this is likely to continue.⁶³
157. It can be seen that competitors in the marketplace including ihug, CallPlus, and Orcon, have a variety of monthly prices for broadband plans. While some competitors have the same price points as Telecom, others apply their own price points.
158. Furthermore, most competitors, including Telecom, offer services with a 3.5 Mbps downstream speed with product differentiation occurring primarily through data allowance, and on a secondary level through upstream speed.⁶⁴

Incentives for access seekers to product differentiate

159. Whereas price discrimination refers to setting different prices for the same product, product differentiation tends to refer to a range of products with differing characteristics. This is of particular relevance in the case of broadband services, where points of differentiation occur around a range of features including data caps.
160. The Commission considers that in the event of a single uniform wholesale bitstream price, a profit maximising firm would seek to price a range of services at the retail level, with differentiated products.⁶⁵
161. Telecom submits that competition will occur on price, not on product variety and differentiation.⁶⁶
162. It can be seen from developments in the marketplace since December 2005, (for example, ihug's 'Pay as you go' plan and Orcon's \$19.95 per month 'Surfer Basic' plan) that there are still competitive entry-level plans available to consumers.

⁶² John de Ridder, Appendix to Ihug submission, 12 April 2006, Section 2.3, p. 7.

⁶³ For example, Inspirenet and Actrix offer a range of broadband speeds, of which multiple plans contain the same data cap.

⁶⁴ John de Ridder, Report supplied with the Applicant's submission, 12 April 2006, p. 6.

⁶⁵ Decision 568, 20 December 2005, para 323-324, p. 64.

⁶⁶ Telecom submission, 12 April 2006, para 19, p. 7.

163. There are a number of price points that ISPs share with Telecom, where the same quality of service is offered. For example Telecom, ihug, Slingshot and Orcon all offer retail broadband plans at the price point of \$59.95. These plans have similar speed and quality attributes. Orcon and Slingshot offer 5GB data caps, while Telecom and ihug have 10GB caps. This is evidence of product differentiation occurring in the retail space.

Conclusion on a uniform bitstream access price

164. The Commission has considered the submissions of the Parties, and changes that have occurred in the market for retail broadband services, including plans introduced by Telecom and competitors since December 2005, and has reached the same conclusion as in Decision 568. A uniform wholesale bitstream access price will be to the long-term benefit to end users by providing opportunities for innovative new products and services.

Calculation of the uniform bitstream access price

165. The IPP for the regulated bitstream service is:

Retail price (as imputed by the Commission having regard to any comparable service) less a discount benchmarked against avoided costs saved in comparable countries that apply retail price minus avoided costs saved pricing in respect of the service, in a case where Telecom faces limited, or is likely to face lessened competition, in a market for that service

166. In imputing the retail price, the Commission must determine a price which reflects only the bitstream access component and excludes other components, such as transmission and ISP components.

167. In imputing that retail price, the Commission is required to:

1. have regard to which services are considered comparable for the purposes of imputing the bitstream price; and
2. use those comparable services to impute the retail bitstream price; and
3. remove avoided costs saved from the imputed retail price.

Comparable services

168. The requirement that the Commission *have regard* to comparable services recognises that identifying services with identical characteristics is unlikely. In imputing a retail price, the Commission is required to identify those services that exhibit similar, but not necessarily the same, characteristics as the regulated service. The Commission considers that the quality of service is the relevant parameter to assist in identifying comparable services for the purpose of imputing the retail price for bitstream access.

169. In Decision 568, for the purposes of assessing those services that are comparable, the Commission considered different criteria that could be used as a basis for comparability, including the quality of service, downstream speed, and upstream

speed.⁶⁷ The population of comparable services to which it had regard were Telecom's residential and business Xtra plans.⁶⁸ The Commission concluded that only those Telecom services with an upstream speed of 128kbps are comparable services.⁶⁹

170. Telecom submits that its retail plans should define the range of wholesale plans.⁷⁰ Telecom submits that the "current market highlights the 3.5 Mbps downstream speed/128 kbps upstream speed as the most comparable, from which the Commission must then impute the retail price of a higher speed, unconstrained service."⁷¹
171. The Applicants submit that plans with an upstream speed of 128 kbps be used as part of the imputation process, in line with the approach used by the Commission in Decision 568.⁷²

Conclusion on comparable services

172. Submissions from the parties in respect of comparability are substantially similar to those received during the Decision 568 proceedings. The Commission has considered criteria that could be used as the basis for comparability: quality of service; downstream speed; and upstream speed.
173. The regulated service will deliver a number of achievable downstream speeds based on several factors, including proximity of the customer to the DSLAM. For this reason, comparison should not be tightly linked to downstream speed, which will allow the Applicants to deliver a range of downstream speeds.⁷³ Accordingly, selection of comparable services insensitive to downstream speed, consistent with Decision 568.
174. On this basis, the Commission determines that Telecom's internet grade plans with an upstream speed of 128 kbps are the relevant comparable services, and should be used to calculate the imputed price and in the price adjustment mechanism.

Retail price imputation mechanism in Decision 568

175. In Decision 568, the Commission applied a linear regression methodology to remove the data transmission component from the retail price. This was necessary to impute a retail price for bitstream access, as data transmission is not included in the price in an explicit or transparent manner.⁷⁴

⁶⁷ Decision 568, 20 December 2005, para 355, p. 70.

⁶⁸ *ibid*, para 368, p. 72.

⁶⁹ *ibid*, para 367, p. 72.

⁷⁰ Telecom submission 12 April 2006, para 91, p. 21.

⁷¹ *ibid*, para 23, p. 8.

⁷² John de Ridder, *Report supplied with the Access Seekers' submission*, 12 April 2006, Section 1.3, p. 3.

⁷³ Decision 568, 20 December 2005, para 364, p. 71.

⁷⁴ *ibid*, para 388, p.76.

176. The Commission also recognised that under a retail minus pricing principle, retail price changes flow through into wholesale prices, in order to allow efficient access seekers to be able to compete in the retail markets. However, the Commission noted that the sensitivity of the linear regression methodology to the introduction of new retail plans at new price points may be ‘prone to gaming by the access provider, wherein decreases in the retail prices of one or more of their higher-end services increase the imputed access price.’⁷⁵ To remedy the sensitivity of that linear regression, the Commission chose a mechanism to adjust the wholesale access price during the life of that determination.⁷⁶
177. The Commission’s mechanism was designed to allow the bitstream access price to move in proportion to movements in a weighted average retail price (an index price). The weighted average retail price was calculated at the commencement of the determination by weighting the prices based on Jetstream subscriber numbers. This mechanism allowed changes in retail prices and retail subscriber numbers to flow through to changes in the wholesale bitstream access price.
178. Telecom submits that this mechanism is robust, and will by its nature ensure that access seekers can compete and that Telecom is adequately compensated.⁷⁷
179. Telecom submits that the Commission’s regression model implemented in Decision 568 needs to reflect the market and weight price observations by their market frequency, and take account of all relevant plans.⁷⁸
180. Using a fresh linear regression when new plans are introduced would cause large fluctuations in the wholesale access price during the term of the determination which is unlikely to satisfy the requirement of section 18.
181. The price adjustment mechanism links the wholesale bitstream access price to a weighted average retail price, with the latter taking into account both new plans that have come into effect since the last price was set, as well as changes in the distribution of Telecom’s ADSL retail customers across the plans.
182. It would be problematic to propose a pricing mechanism (based on a recalculated linear regression) that provided a significantly different wholesale price each quarter, and upon the introduction of new Telecom plans. Use of an index-based mechanism to impute the initial price provides relative certainty in the wholesale bitstream access price.

Alternative imputation mechanisms

183. Telecom and the Applicants submit alternative imputation mechanisms.
184. Telecom submits that the Commission should set a range of wholesale bitstream prices linked to services supplied at retail using a ‘weighted average’ model.

⁷⁵ *ibid*, para 423, p. 83.

⁷⁶ *Ibid*, para 423, p. 83.

⁷⁷ Telecom *submission*, 12 April 2006, para 98, p. 22.

⁷⁸ *ibid*, para 86, p. 20.

Therefore a “new calculation of the average needs to be undertaken as there have been significant structural shifts in the retail market since Decision 568.”⁷⁹

185. Telecom also submits that an update of the initial price in Decision 568 would not be adequate as structural changes that have occurred in the market since that decision would represent an inconsistent approach to setting the initial price of bitstream access.⁸⁰
186. Telecom then submitted that a weighted pricing mechanism that would be:⁸¹
- weighted by Telecom’s Explorer and Adventure plans customer numbers; and
 - adjust by the weighted average data consumption used by these plans;
 - adjust by an individual ISP’s usage being higher or lower than Telecom’s average consumption, impute out the effect of tolls;
 - subtract costs associated with running an ISP (cost submitted during Decision 568 of \$4.67); and
 - subtract the cost of backhaul of national and international capacity based on the cost per GByte multiplied by the number of GBytes used by the ISP.
187. Telecom’s approach represents a substantial departure from the retail-minus pricing principle. This cost-based allocation mechanism explicitly refers to consumption of a resource and removes cost-based elements, including costs associated with operating an ISP. Such an approach is not consistent with a retail-minus pricing regime, and accordingly, the Commission does not consider this to be an appropriate imputation mechanism.
188. The Applicants submit that the Commission’s methodology for determining the initial price in Decision 568 should be applied to the current application.⁸² The Applicants calculate that this would result in an initial price of \$22.70 + GST.⁸³

Conclusion on the imputation mechanism

189. For the reasons outlined above, the approach for imputing the retail price of bitstream access for this determination is based on the price adjustment mechanism set out in Decision 568.⁸⁴
190. The forward-looking approach taken in setting a weighted price adjustment mechanism in that decision is appropriate in relation to this determination. This approach will encourage the introduction of new plans, and changes in the customer numbers on Telecom plans will flow through to the wholesale bitstream access price for the Applicants.

Plans to be used in the price imputation

⁷⁹ Telecom submission, 12 April 2006, para 98, p. 22.

⁸⁰ *ibid*, para 100, p. 22.

⁸¹ *ibid*, para 112, p. 26.

⁸² ihug/CallPlus submission, 12 April 2006, para 6.1, p. 4.

⁸³ Staff have found an error in the ihug/CallPlus submission, and found the initial price to be \$22.36 + GST.

⁸⁴ Decision 568, 20 December 2005, para 423-432, p. 83-84.

191. In Decision 568, the Commission considered that, due to the significant proportion of residential Jetstream customers, Telecom was likely to be recovering most of its costs through the provision of Jetstream to residential customers.⁸⁵ On this basis, the Commission imputed the retail price of the bitstream access service using only the residential plans with a 128 kbps upstream speed when performing the price imputation.⁸⁶
192. The residential plans forming part of the imputation process in Decision 568 were as follows:

Table 2: Residential Jetstream plans as at 20 December 2005

Plan Name	Speed (downstream/upstream)	Data Cap (GB)	Retail Price	
			Excl. Tolls	Incl. Tolls
Go	256/128 kbps	1	\$49.95	\$39.95
Discover	1 Mbps/128 kbps	1	\$54.95	\$44.95
Explorer	256/128 kbps	3	\$59.95	\$49.95
Adventure	2 Mbps/128 kbps	10	\$69.95	\$59.95
Navigate	2 Mbps/128 kbps	10	\$69.95	\$59.95

193. Telecom has subsequently introduced the following new plans and price changes which took effect on 2 April 2006.

Table 3: Telecom retail plans introduced on 2 April 2006

Plan Name	Speed (downstream/upstream)	Data Cap (GB)	Retail Price	
			Excl. Tolls	Incl. Tolls
Basic	256/128 kbps	0.2	\$39.95	\$29.95
Go	2 Mbps/128 kbps	1	\$49.95	\$39.95
Explorer	3.5 Mbps/128 kbps	5	\$59.95	\$49.95
Adventure	3.5 Mbps/128 kbps	10	\$69.95	\$59.95
Pro	3.5 Mbps/512 kbps	10	\$89.95	\$79.95
Pro Advanced	3.5 Mbps/512 kbps	20	\$109.95	\$99.95
Pro Ultra	3.5 Mbps/512 kbps	40	\$159.95	\$149.95

194. Telecom has publicly advised that existing Xtra broadband customers will be migrated to a faster plan (for example from 'Discover' to 'Go') with either a drop or no change in the customer's monthly charge.⁸⁷ Telecom also has publicly advised the relationship between the old and new plans and this is shown in Table 4 below.⁸⁸ Customers have now been transferred across to the new plans.

Table 4: Migration from old plans to new plans

⁸⁵ Decision 568, 20 December 2005, para 411, p. 80.

⁸⁶ *ibid*, para 413, p. 80.

⁸⁷ Reference: <http://www.telecom.co.nz/chm/0,8763,202859-202533,00.html>

⁸⁸ *ibid*

Plans as at December 2005	Plans as at April 2006
	Basic (256/128 kbps)
Go (256/128 kbps)	Go (2 Mbps/128 kbps)
Discover (1 Mbps/128 kbps)	Go (2 Mbps/128 kbps)
Explorer (256/128 kbps)	Explorer (3.5 Mbps/128 kbps)
Adventure (2 Mbps/128 kbps)	Adventure (3.5 Mbps/128 kbps)
Navigate (2 Mbps/128 kbps)	Adventure (3.5 Mbps/128 kbps)

195. Accordingly, the Commission has selected the Xtra Broadband Basic, Xtra Broadband Go, Xtra Broadband Explorer, and Xtra Broadband Adventure plans as the current plans to be used in the price adjustment mechanism in Decision 568.
196. However, the Commission is aware that, while all customers have been migrated to the new plans, in some cases Telecom's records still show customers on the old plans (ie the Discover and Navigate plans). To capture this effect, the relevant customer information for those plans has also been included in Table 6 below to ensure the correct weighted average retail price (WARP) has been calculated.

Calculation of the imputed retail price

197. The Commission's calculation of the initial WARP, to be used as the 'index' price as at 20 December 2005, is shown in the following table.

Table 5: Weighted Average Retail Price Calculation as at 20 December 2005⁹⁰

Plan name	Speed (down/upstream)	Number of customer connections	% of total	Retail price ⁸⁹ (incl. tolls)	Contribution to weighted average
Go	256/128 kbps	[] COI	[] COI	\$39.95	[]
Discover	1Mbps/128 kbps	[] COI	[] COI	\$44.95	[]
Explorer	256/128 kbps	[] COI	[] COI	\$49.95	[]
Adventure	2Mbps/128 kbps	[] COI	[] COI	\$59.95	[]
Navigate	2Mbps/128 kbps	[] COI	[] COI	\$59.95	[]
TOTAL		[] TCNZRI			[] COI

198. Table 6 shows the current WARP calculation. For the purposes of this determination, information as at 10 June 2006 has been used.⁹¹

⁸⁹ All prices in this table are GST exclusive.

⁹⁰ Only Telecom plans which include Telecom toll calling have been used to calculate the WARP, consistent with Decision 568. The inclusion of Telecom plans where the customer did not purchase Telecom toll calling has a negligible effect on the WARP calculation.

⁹¹ The Commission obtained this information from Telecom by way of a Section 98 request.

Table 6: Weighted Average Retail Price Calculation as at 10 June 2006

Plan name	Speed (down/upstream)	Number of customer connections	% of total	Retail price ⁹² (incl. tolls)	Contribution to weighted average
Basic	256/128 kbps	[] COI	[] COI	\$29.95	[] COI
Go	2 Mbps/128 kbps	[] COI	[] COI	\$39.95	[] COI
Discover	1 Mbps/128 kbps	[] COI	[] COI	\$39.95	[] COI
Explorer	3.5 Mbps/128 kbps	[] COI	[] COI	\$49.95	[] COI
Adventure	3.5 Mbps/128 kbps	[] COI	[] COI	\$59.95	[] COI
Navigate	2 Mbps/128 kbps	[] COI	[] COI	\$59.95	[] COI
TOTAL		[] TCNZRI			[] COI

199. The WARP has increased by 0.59% between 20 December 2005 and 10 June 2006. Applying this increase to the imputed price in Decision 568 (\$33.18) results in the imputed price of \$33.38 in this determination. It is from this imputed price that the avoided costs saved are removed.

Removal of avoided costs saved

200. Following imputation of the retail price for bitstream access, the IPP requires that a further deduction is made for the benchmarked costs that an access provider avoids by providing a service at wholesale rather than retail. Avoided costs saved is defined in the Act as:⁹³

‘the difference in the access provider’s costs between supplying the service on a wholesale basis only and supplying the service on both a wholesale and retail basis, including a share of the retail-specific costs.’

201. Telecom accepts a 16% discount for the purposes of this application.⁹⁴

202. The Applicants note that for commercial wholesale services, Telecom offers an 18% discount. However the Applicants are prepared to accept a 16% discount for this determination.⁹⁵

203. As both parties have accepted a 16% discount for the avoided costs saved, this discount is deducted from the imputed retail price.

Initial price payable

204. Telecom will make the bitstream access service available to the Applicants as an input for the delivery of broadband services to end-users at the following monthly price:

⁹² All prices in this table are GST exclusive.

⁹³ Schedule 1, part 1, subpart 1, clause 1.

⁹⁴ Telecom submission, 12 April 2006, para 126, p. 29.

⁹⁵ CallPlus/ihug submission, 12 April 2006, para 4.2, pp. 3.

Imputed retail price	\$33.38
Less avoided costs saved (16%)	<u>\$5.34</u>
Bitstream access price per month	\$28.04 + GST

Wholesale price adjustments during the determination

205. Telecom accepts the price adjustment mechanism described in Decision 568 in principle.⁹⁶
206. The Commission considers that the price adjustment mechanism is robust and will allow price changes at retail to flow through to wholesale prices on a regular basis, allowing efficient access seekers to continue to compete in retail markets. The effect of such changes may be to either raise or lower the wholesale bitstream access price.
207. The Commission notes that between 20 December 2005 and 10 June 2006, there has been a slight increase in the WARP. There are a number of factors that can cause such an increase, such as, a general migration of customers from lower value to higher value plans, or where higher value plans experience significant uptake by new customers.

Conclusion on wholesale price adjustments

208. Telecom is required to make adjustments to the bitstream access price on a quarterly basis commencing from the date of this determination, and whenever a Telecom retail broadband plan price change occurs. Telecom must submit the results of any adjustments to the Commission for prior approval.

⁹⁶ Telecom submission, 12 April 2006, para 127, p. 29.

SUNDRY CHARGES RELATING TO SUPPLY OF BITSTREAM ACCESS

209. The Applicants request that the Commission determine price terms as established in Decision 568 or price terms as the Commission determines. This includes other charges relating to the provision of the bitstream service, including reassignment charges (also known as ‘churn fees’), new connections, and moves, adds and changes.
210. These are charges that are additional to the price of the bitstream access service. The costs of modems, routers, new connections, and installation have been omitted from the imputation calculation. They are generally recovered separately from the retail price, although from time to time Telecom does offer free installation, new connections and modems. Telecom sets separate prices for these items or waives those charges under special promotions which are generally of short term duration.

Reassignment charges/Churn fees

211. Telecom charges access seekers of its commercial wholesale UBS service a one-off charge to transfer an existing Telecom retail customer to a wholesale broadband service.
212. Telecom reiterates its submissions made in the Decision 568 proceedings.
213. The Commission does not consider that there is any justification for altering its view as expressed in Decision 568. Accordingly, the reassignment charge is set at \$20.99.

New connections

214. There are costs associated with providing a new connection for a new customer who does not have a current ADSL connection.
215. In Decision 568, the Commission determined that:⁹⁷
- Where new connections charges arise for the connection of a retail customer, and to the extent that those functions also occur in provisioning a new bitstream access service customer, Telecom may charge TelstraClear a new connection charge calculated by deducting from the standard new connection charge, the avoided costs saved discount of 16%.
216. The Applicants have applied for this charge and Telecom agrees with this approach.
217. Accordingly, the Commission endorses this approach. For the purposes of this determination, Telecom may charge the Applicants a standard new connection charge. It is calculated by deducting from the standard new connection charge, the avoided costs saved discount of 16%.

⁹⁷ Decision 568, 20 December 2006, para 448

Moves, adds, and changes ('MACs')

218. MACs are the charges incurred when a customer adds services, moves location, or changes the services received.

219. In Decision 568, the Commission determined that:⁹⁸

Telecom may recover from TelstraClear the retail charge for MACs, less a discount reflecting the avoided costs saved of 16%, where a wholesale customer moves an ADSL connection between premises.

220. The Applicants have applied for this charge and Telecom agrees with this approach.

221. Accordingly, the Commission endorses this approach. Telecom may recover from the Applicants the retail charge for MACs, less a discount reflecting the avoided costs saved of 16%.

Access line rental

222. Telecom submits that its retail prices for broadband services are set on the assumption that Telecom will receive an access line rental in addition to broadband revenue.⁹⁹

223. The Applicants submit that Telecom receiving access line rental in addition to broadband revenue is neither part of Decision 568 nor part of the definition of the service in Schedule 1.¹⁰⁰

224. When determining the price for the bitstream access service in Decision 568, the Commission assumed that the common costs associated with the line were recovered by Telecom through revenue from the voice access service rather than the bitstream access service when provisioned on the same line. The Applicants sought the same terms and conditions as set out in Decision 568. Therefore, as the bitstream access price in this determination has been determined using the same method, the same assumption regarding revenue for a voice access service must be made.

⁹⁸ Decision 568, 20 December 2006, para 450

⁹⁹ Telecom submission, 12 April 2006, para 132

¹⁰⁰ Applicant's cross-submission, 9 May 2006, para 5.1

OPERATIONAL SUPPORT SYSTEMS ('OSS')

225. The Applicants request access to the bitstream access service on the same price and non-price terms as determined in Decision 568, and have not made any specific requests in relation to OSS.

Summary of views of the Parties to the Applications

226. In its submissions on the Applications, Telecom notes that all of the modifications that the Commission determined must be made to *eOR for Broadband* (the 'Interim Solution') have been made or are about to be completed. It is therefore unclear what is being requested. Telecom assumes this part of the application should be withdrawn.¹⁰¹
227. In relation to a longer term B2B solution, Telecom notes that Decision 568 appears to recognise Telecom's industry roadmap, that it is difficult to set feasible timeframes for a high level roadmap prior to discussions between Parties on more detailed aspects of the system. Telecom also notes that it is hindered in its ability to respond because it is unclear what the Applicants are seeking. Telecom also considers that it is difficult to comment on any need for a dispute resolution mechanism given that it is unknown where any areas of disagreement might be.¹⁰²
228. Telecom agrees with the term of Decision 568 relating to price terms for OSS and thus with the Applicants' request.¹⁰³
229. With regard to the requirement in Decision 568 that:

Telecom provide a level of operational support to TelstraClear such that there is no material difference in provisioning or fault repair in regard to the experience of retail customers, whether retail services reliant on bitstream access are supplied to TelstraClear or Telecom customers

Telecom notes that it is committed to this through principles 1 and 3 of Telecom's Wholesale Charter.¹⁰⁴

230. In their joint cross-submission, the Applicants clarify that they are requesting the terms for OSS as set out in Decision 568. The Applicants also accept the points made by Telecom in its submissions on the Applications.

Non-price terms for OSS

231. The Commission is satisfied that Telecom's '*eOR for broadband*' system is an acceptable interim OSS solution, considering that the three modifications set out in Decision 568 have been made to the system, or have almost been completed. The Commission considers that this interim solution should be made available to the Applicants if the Parties are not yet in a position to implement the longer term solution.

¹⁰¹ Telecom submission, 12 April 2006, page 32

¹⁰² *ibid*

¹⁰³ *ibid*

¹⁰⁴ *ibid*, page 31

232. In relation to a 'Longer term Business to Business (B2B) solution for OSS', the Commission determines that the 'Roadmap' for implementation of the B2B solution (as annexed to TelstraClear's post-workshop submission¹⁰⁵) is incorporated within this determination as terms and conditions.
233. The Commission also determines that a dispute resolution process can be invoked by any party where they disagree on matters relating to implementation of OSS. In the event of a dispute, the Parties may appoint an independent facilitator to assist with dispute resolution. If the Parties cannot agree on the terms of reference for and the appointment of an independent facilitator within 30 days, the Commission will, at the request of either party, decide on those matters. The costs of the facilitator must be borne equally by the parties.
234. Should the parties be unable to resolve a dispute notwithstanding the assistance of the facilitator, the dispute may be referred to binding arbitration.

Price terms for OSS

235. The Commission determines that each party will bear its own costs in relation to the implementation, operation and maintenance of operational support systems required to support the bitstream service and the costs of interfacing with the other party's operational support systems.

Key Performance Indicators

236. Telecom must provide the service on the terms and conditions (excluding price) that are consistent with those terms and conditions on which the access provider provides the service to itself. Telecom is required to provide a level of operational support to the Applicants such that there is no material difference in provisioning or fault repair in regard to the experience of retail customers, whether retail services reliant on bitstream access are supplied to the Applicants' or Telecom customers.

¹⁰⁵ TelstraClear, TelstraClear Wholesale Bitstream Workshop – Additional information requested, 16 August 2005, annex 1.

IMPLEMENTATION TIMEFRAME

237. The Applicants request no more than 16 weeks for implementation of the service from the date of determination.¹⁰⁶ In their joint submission on the Application, the Applicants clarify that they are requesting a maximum of 18 weeks from the date of determination but state that they consider that the service can be implemented much more quickly.¹⁰⁷
238. In its submissions on the Applications, Telecom states that the timeline submitted in the Decision 568 proceedings remains the minimum timeframe within which Telecom could implement an unconstrained/128 kbps service. Additional complexities may however arise and Telecom wishes to flag these early and reserve the opportunity to update its position. These complexities may affect whether the 18 week minimum timeframe is sustainable or alternatively, require delay in other products or matters for retail and wholesale.¹⁰⁸
239. Telecom has had adequate notice of the likelihood of having to implement a regulated bitstream service of the type determined and has also implemented similar commercial wholesale bitstream services for access seekers. Accordingly, the Commission determines that the period of implementation of the bitstream access service must be no more than 18 weeks from the date of this determination.
240. The Commission notes that it has adopted an 18 week implementation timeframe at the Applicants' request. The Commission is not making a finding as to the implementation period that would best balance the interests of consumers in seeing the onset of additional competition and Telecom's internal priorities. Should Telecom require additional time to complete implementation, the Commission will approve an extension of the implementation period if it is satisfied that it is justified in all the circumstances.

¹⁰⁶ CallPlus application, *10 March 2006*, para 12; ihug application, *10 March 2006*, para 13

¹⁰⁷ Ihug/CallPlus submission, 12 April 2006, para 8.1

¹⁰⁸ Telecom submission, 12 April 2006, page 31

DATE OF COMMENCEMENT AND EXPIRY

Date of Commencement

241. The Applicants request that the commencement date be the date of the determination.¹⁰⁹ Telecom agrees that the commencement date should be the date of the determination.¹¹⁰
242. The Commission considers that the date of this determination is the appropriate date of inception.

Date of Expiry

243. The Applicants request that the determination applies for a period of 24 months from the date on which it takes effect. The Applicants note that this was the period requested by, and determined by the Commission, in Decision 568.¹¹¹
244. Telecom submits that in contrast to Telecom and TelstraClear in Decision 568, there is no agreement between the Parties on the appropriate term. Telecom also submits that it has not yet formulated a view on the appropriate term of a determination.¹¹²
245. The Applicants submit that Telecom has not proposed any alternative term and that no reason to depart from the two year period in Determination 568 has been demonstrated.¹¹³
246. The determination will expire on the earlier of:
- (a) 24 months from the date of this determination; or
 - (b) when the service expires or is omitted from the Act.

DATED this 22nd day of June 2006



Douglas Webb
Telecommunications Commissioner

¹⁰⁹ CallPlus application, 10 March 2006, para 13; ihug application, 10 March 2006, para 14

¹¹⁰ Telecom submission, 12 April 2006, para 133.

¹¹¹ CallPlus application, 10 March 2006, para 13; ihug application, 10 March 2006, para 14

¹¹² Telecom submission, 12 April 2006, para 134.

¹¹³ Ihug/CallPlus, cross submissions, 9 May 2006, para 6.1