



**FINAL REPORT**

# **Review of Bitstream Access Report by Professor Ordover**

**Submitted to**

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## 1. INTRODUCTION AND EXECUTIVE SUMMARY

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1. Professor Janusz Ordover has written a report analysing market definition in New Zealand for wholesale bitstream access services.<sup>1</sup>
2. Professor Ordover argues that the market is a national one, that competition is limited in even the Auckland and Wellington central business districts, and that accordingly Telecom should be required to wholesale the bitstream service in all areas, including those where there are alternative networks.
3. Professor Ordover argues that this conclusion follows because:
  - Competition for some customers in a geographic market does not imply that that market is competitive because there may not be competition for all customers in that geographic market;
  - Telecom’s retail broadband Internet access and wholesale bitstream pricing is uniform across the country;
  - There would be significant costs involved in attempting to delineate sub-national markets; and
  - Mandatory wholesaling of the bitstream service at retail minus is unlikely to affect the investment decision-making of entrants or Telecom.
4. Telecom has asked us to review Professor Ordover’s report.
5. We agree with Professor Ordover that the geographic dimension of the relevant wholesale and retails markets should not be defined by Exchange Service Areas (ESAs). However, we disagree that the markets should be defined as national. In our view the Commission is correct in applying its supply-side substitutability analysis (i.e., the “near entrant” test) to define the geographic boundaries of the relevant markets. We do not see why this should be any more complicated than for the case of local access markets.
6. We find Professor Ordover’s analysis to be incorrect in several important respects.
  - His analysis of the incremental cost of serving customers, and the implications of this for the competitiveness of markets, is inconsistent with standard tests for market power.
  - There is no necessary connection between a single national price and the definition of the market.

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<sup>1</sup> “Market Definition and Competition Assessment for Wholesale Bitstream Access in New Zealand”, 14 December 2004. The report was commissioned by TelstraClear.

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- The potential costs of regulation are substantial (as Professor Ordover himself notes) and should be avoided wherever geographic markets are workably competitive. This is particularly important in markets for new services, where investment is a key feature of competition and inappropriate regulation has the potential to generate very large welfare losses for society.
7. We provide further explanation of these views in the remainder of this report.

## 2. MARKET DEFINITION FOR BROADBAND ACCESS

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### 2.1. IMPLICATIONS OF THE SUPPLY-SIDE SUBSTITUTABILITY TEST

8. We agree with Professor Ordover's conclusion that the geographic market for bitstream access (and the related retail services) should not be defined by reference to ESAs. Given the proliferation of new broadband access technologies and associated network architectures, there is no reason to define market boundaries on the basis of Telecom's legacy copper network wire centres.
9. However, we disagree with Professor Ordover's assessment that the geographic dimension is national. Rather, it seems to us that the logic he uses to reject ESA market boundaries leads one to delineate boundaries by reference to network competition. This is the approach that the Commission has previously taken when defining access markets under the Telecommunications Act,<sup>2</sup> and we would endorse for present purposes the use of the Commission's supply-side substitutability test. As we have stated before,<sup>3</sup> conceptually this approach divides the competitive constraints on Telecom into three categories:
  - Those arising from rivals that already have a broadband internet access "pipe" to a customer ("existing competitors");
  - Those arising from rivals that have a network that is close enough so that the rival can build a broadband internet access "pipe" to the customer without having to incur significant sunk costs ("near entrants"); and
  - Those arising from rivals that do not yet have a network presence in the particular region ("potential entrants").
10. Working down this list, the intensity of competitive constraints reduces (although the constraint exerted by potential entrants may still be material, particularly given the ease of roll-out of wireless technologies). Two key reasons for this are that the further one works down the list, the more delay there is before the rival is actually in a position to provide service to a customer, and the greater is the sunk investment required.
11. Under the Commission's supply-side substitutability test, the geographic boundary is drawn to include "existing competitors" and "near entrants".

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<sup>2</sup> The landmark report being *Decision 497*.

<sup>3</sup> See for example our report titled "Response to Certain Questions for Wholesale Workshop", dated 9 October 2002.

## 2.2. TESTS FOR MARKET POWER

12. Professor Ordover argues "...a demonstration that the incumbent faces effective competition for some customers is not sufficient to warrant lifting the regulatory burden for all customers [in a geographic market]" (page 25). In his view, competition across the whole market can only be demonstrated where "the *unserved* (sic) customers can, in principle, be served at incremental cost that is materially no different from that incurred to serve those customers that *are served*" (page 3).
13. We note first that it would be irrational for an entrant in this or any other market to do other than to first offer service to those customers who have the potential to provide the greatest profit. Contrary to Professor Ordover's statement, the cost of serving those customers will not in and of itself be relevant – only the relationship between cost and the revenue stream generated will be relevant.
14. In this case, then, it is our view that the standard assessment of market power should apply. This assessment would consider whether the entrant could expand the volume of its services offered in a geographic market in response to a SSNIP by the incumbent provider, and whether this response would be sufficient to make it unprofitable for the incumbent to introduce the SSNIP. This response need not provide a second network connection to every building within the range of the network – it must just provide an alternative to enough potential customers to make the SSNIP unprofitable.
15. If, as we have argued, the boundaries of competition should be viewed as those delineated by networks, then the incremental costs of serving individual customers will be quite small (the common costs of the network already having been incurred). Thus, it appears to us to be entirely plausible that in locations where there are competing networks, a vigorous response to any SSNIP could be expected.
16. Professor Ordover's views about the necessity of constant incremental costs of service within a market, and actual competitive supply to every building, for a finding of competition in a market are therefore at variance with widely accepted views about the nature of competition and tests for market power.

## 2.3. TELECOM'S PRICING STRATEGY

17. Professor Ordover points out that both Telecom's commercial wholesale bitstream access and retail broadband Internet access prices are uniform across New Zealand. He concludes that the relevant markets are national in geographic dimension. (We are advised by Telecom that its wholesale broadband Internet access prices are differentiated between metropolitan and non-metropolitan areas.)

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18. A uniform price can be indicative of a single market. For example, in the red meat industry, livestock prices tend to be similar across the North Island, and they tend to move together over time. In these circumstances, it is correct to define the geographic dimension of the livestock markets as being the North Island. However, it is critical to recognize that the driver of the uniform price in such markets is quite different to the driver of Telecom's existing broadband access pricing behaviour. In the livestock markets, the uniform price is enforced by the possibility of arbitrage between regions if price does get out of line in one region. In other words, the *competitive constraints* operating in all regions of the North Island are effectively similar.
19. The same cannot be said for broadband access markets. While the price may be uniform across New Zealand, the competitive constraints quite clearly differ between regions, depending on network rollout, population density, terrain, etc.
20. The focus on competitive constraints in defining geographic markets is inherent to the Commission's own statement of the relevant test:<sup>4</sup>

*The Commission defines the geographic dimension of a market to include all of the relevant, spatially dispersed sources of supply to which buyers would turn should the prices of local sources of supply be raised.*

21. Even though Telecom consumers in areas with multiple networks pay the same price as Telecom consumers in other areas, the former consumers benefit from the other dimensions of competition: choice over provider and price; choice over quality (whether it be the retail product itself, or other dimensions of quality such as speed of access to help lines); and choice over technology and functionality (for example, the Woosh product offers portability). Consumers in other areas do not benefit from these other dimensions of competition.
22. Professor Ordover appears to accept this point himself. At page 18 of his report he states:

*These unaddressed customers may still miss out on competition based on service features, quality of service and other non-price terms that could be made possible if the incumbent were required to wholesale the service at properly discounted prices.*

23. And at page 25 he states:

*As I have shown, the simple network economics of the two groups of customers in this case are very different from one another.*

24. In light of the varying competitive constraints that Telecom faces across regions, why then does Telecom continue to set a uniform price across New Zealand?

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<sup>4</sup> See page 18 of the Commission's *Mergers and Acquisitions Guidelines*.

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25. We would expect this behaviour to be explained by countervailing pressures on Telecom. Likely forces would include the following:
- Even in those areas where Telecom has the only broadband access network, other services that Telecom provides would be subject to competitive pressure e.g., fixed calling. Accordingly, differential pricing between regions may entail consumer resentment and loss of custom for other services; and
  - As part of the discussions surrounding the Government's response to the Commission's unbundling recommendations, Telecom has committed to the Government that 250,000 residential customers will be subscribing to broadband Internet access services by December 2005. This can be regarded as in effect a form of light-handed regulation of Telecom, with pricing implications.
26. Whether Telecom's existing pricing strategy is a stable one remains to be seen, and will presumably reflect the (possibly shifting) balance of the various pressures it faces, while trying to maximize its profit.
27. We would also like to comment on the following statement by Professor Ordover (page 19):
- If Telecom cannot confine price reductions to those customers that are subject to effective competition, then its best strategy might be not to reduce the rates (thus keeping them relatively high) throughout its network, even if that means losing some customers in those portions of an ESA where there is actual effective competition.*
28. While we are not privy to information about the rationale for Telecom's pricing strategies, we find Professor Ordover's views implausible because it would be surprising to us if Telecom were willing to lose many customers from the competitive areas as part of the trade-off that he suggests. We would expect that many of Telecom's largest and most strategically important customers (across Telecom's whole business) would be located in those areas where network competition is occurring (of course, this is precisely why rivals would roll out their networks in those areas).
29. Furthermore, the available information on pricing implies that Telecom's products are comparable in the competitive areas to those of its rivals.

#### 2.4. THE PRACTICALITY OF APPLYING THE SUPPLY-SIDE SUBSTITUTABILITY TEST

30. A further argument that Professor Ordover makes in favour of a national market is the complexity of delineating narrower markets. At page 21, he states:

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*Boundary lines would need to be drawn, similar to the current “200-metre distances from existing facilities” rule used in relation to resale services, but potentially much more precise and specific.*

31. Professor Ordover does not say why the boundary lines for broadband access would be “potentially much more precise and specific”, and it is not obvious to us why this should be so.
32. It is worth noting that as well as providing an entrant with an extra connection option, wireless technologies have several advantages over wireline technologies.
  - As the Commission noted in *Decision 447* (paragraph 199), fixed wireless technologies have relatively low sunk costs, as the assets can be easily redeployed.
  - There is no requirement to trench or to hang wires from power poles. Accordingly:
    - Labour costs are lower;
    - Resource Management consents are easier to obtain; and
    - Rollout is far quicker.
  - More granular scalability enables targeted, small-scale entry.
  - Unlike wired technology where capital costs of building the network are sunk before any users are connected, most costs are only incurred when the user is connected in a wireless network.

### 3. THE COSTS OF REGULATING COMPETITIVE MARKETS

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33. Professor Ordover argues that the Commission could avoid the costs of delineating separate geographic markets by simply deeming the entire country to be subject to limited competition, and so therefore requiring Telecom to sell the bitstream access service everywhere, even in areas with multiple networks.<sup>5</sup>
34. Professor Ordover argues that such a policy would not affect the investment incentives of either entrants or Telecom. In our view, Professor Ordover greatly understates the risks inherent in regulating competitive markets.
35. We do not dispute that the retail minus pricing principle is better for investment incentives than the TSLRIC pricing principle. However, under either approach, regulation of Telecom would still provide an entrant with a “free option”: if a Telecom investment were unsuccessful, the entrant would not seek access to it; however, if the investment were successful, the entrant would access the investment at the regulated price. Entrants would reduce their investment because of this subsidy – access to a successful investment with no risk.
36. Accordingly, we do not think it is correct for Professor Ordover to state that (page 22), “the fact that the wholesale price is set at “retail-minus” acts as a stimulus to entrant’s investment”.
37. Furthermore, Professor Ordover’s analysis appears to assume that there will be no regulatory error in the setting of the wholesale price. However, given the information constraints that the regulator faces, this is surely too sanguine. The risks in setting the price for the bitstream access service must be particularly high, given that there is no direct retail equivalent and therefore no existing retail price. Rather, some method of imputation is probably required.
38. Errors (in either direction) in setting the discount from that imputed price would have costs (we would argue that this error is asymmetric, i.e., setting the discount “too high” would be the worse outcome, because of the impacts on dynamic efficiency).
39. Where Professor Ordover has outlined the economic basis for his view that the costs of regulating competitive portions of a national market would be small, we consider his views to be at variance with mainstream thinking in economics. For example, Professor Ordover suggests that:

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<sup>5</sup> This approach amounts to skipping the problem definition and jumping straight to the solution. Market definition and competition analysis quite appropriately forms a key input into the Commission’s processes under the Telecommunications Act; the Commission should not regulate until it is satisfied that there is a problem (and of course that the costs of regulation will not actually outweigh the benefits).

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*Unless the Commission is of the view that the entrants are “gaming” the regulatory scheme and insisting on resale where network rollout is feasible, there is no need for the Commission to substitute its own judgement about where it is economic to build for the private decisions that would otherwise be made by the market.*

In our view all of the modern literature in the economics of strategy suggests that the Commission and the incumbent must assume that the entrants are gaming the regulatory scheme since such gaming forms a key component of their strategic options.

40. On a broader note, the reason that the Telecommunications Act is aimed at promoting competition is because competitive markets are the best way for society to allocate its resources. Regulation of a workably competitive market can only lead to welfare losses. If a market is workably competitive, the resulting pressure will force firms to price appropriately (allocative efficiency), produce efficiently (productive efficiency) and invest and innovate (dynamic efficiency). Given that the regulator will have neither the information nor the incentives to improve on these competitive market outcomes, it is very difficult to see how any form of regulation could improve welfare in a workably competitive market.
41. This is likely to be particularly so in a new and dynamic market like that for broadband access, with rapidly changing technologies and consumer preferences. It should also be kept in mind that Telecom is not an inactive participant in this market. Rather, on the contrary, Telecom is likely to be feeling extremely threatened by these new technologies and business strategies, and is planning to invest in a Next Generation Network, with its access links provided over xDSL. In these circumstances, it is critical that the Commission thinks very carefully about the implications of its actions in respect of bitstream access on investment incentives.
42. It is important to note too that regulation of Telecom in areas where there are multiple networks would be asymmetric, limiting Telecom’s ability to respond to competitive threats and to invest, and more generally distorting resource allocation.
43. Finally, if the Commission were to adopt the policy prescribed by Professor Ordover, it would set a very poor precedent and signal regarding the Commission’s attitude towards competitive markets, investment and property rights. While Professor Ordover’s suggestion might superficially seem like “the easy way out”, it could ultimately prove to be very costly.