Securing Our Digital Trade Routes

A framework for New Zealand's economic transformation

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Ensuring the future growth of New Zealand

As a New Zealand entrepreneur I've been frustrated by the lack of action on Broadband access, which I believe is critical to ensure the future growth of New Zealand.

This paper is intended as a discussion document to spur thought and debate, and challenge the status quo.

Some examples

Trade Me

Trade Me Internet charges increased ten-fold in 2005 when Telecom and Telstra de-peered from the Wellington Internet Exchange. Telstra and Paradise Internet customers now access Trade Me content by connecting through Australia, increasing international traffic usage and unnecessarily clogging limited international bandwidth.

AfterMail

Email software company AfterMail (now Quest) subscribed in 2006 to a US Internet telephony service that provided US phone numbers, conference facilities and capped calling of $US35 per month, for anywhere in North America. While the call savings were useful, the real benefit was appearing closer to US customers. However, the service was found to be unusable from New Zealand, so AfterMail had to revert to New Zealand phone numbers, making it more difficult to sell and support its product. Voice-over-IP services such as this use only a small amount of traffic. It is disturbing that richer internet communications such as desktop video conferencing and high-resolution multi-screen conferencing have little chance of adoption in New Zealand.

Radio New Zealand

Radio New Zealand provides audio content for download and streaming on the Internet, allowing people globally to listen to RNZ programmes at their convenience. RNZ hosts this content both here and in the USA, although about 70% of the US traffic is bound back to New Zealand. Oddly, this is still cheaper than paying for domestic transit in New Zealand. This introduces an unnecessary import component to a strong content export story.

Assertions

1. As one of the world's most isolated countries, establishing digital trade routes is vital for New Zealand.
2. The market has failed and will continue to fail to deliver communication networks capable of delivering competitive advantage to New Zealand.

3. New Zealand's telecommunications infrastructure is suffering from under investment. Copper-based technologies will not satisfy long-term bandwidth requirements.
4. New media-rich applications such as video sharing, and television on demand will overload our current network capacity. Existing infrastructure will not be sufficient for medium to long-term requirements.
5. It does not make sense that an individual company is responsible for New Zealand's telecommunications infrastructure, when it is solely focussed on delivering value to shareholders.
6. Bandwidth is currently managed as a scarce resource.
7. The focus for investment is currently on the network plumbing (due to monopoly rents that can be made). We should be investing in rich digital content that runs through the pipes. Much of the economic potential of the Knowledge Economy is in content such as media, applications and rich communications.
8. Once bandwidth is available, the market will deliver innovative services which utilise all available capacity.
9. Delivering a world-class communications connection to the world benefits almost all aspects of New Zealand life.
10. A hodgepodge of initiatives currently consuming significant funding will not deliver economic transformation.
11. New Zealand is small enough that it can coordinate to make tough decisions, act, and make a difference.

What's needed

1. The people of New Zealand, via the New Zealand Government, would own and seek investment for a physical Broadband fibre network, connecting all New Zealand cities.
2. This would be a new State-Owned Enterprise (eg. NewZealand.Net) with a governance system to drive efficiency.
3. This physical network would be open to all parties and charged on a Cost-plus (say 10%) basis, creating a level playing field for all providers.
4. The connection to each city would be delivered to a central peering office, a carrier neutral facility managed by NewZealand.Net. Each NewZealand.Net city office would be the point of connection for other network providers.
5. Each peering location would provide local interconnect for network efficiency and resiliency.
6. NewZealand.Net would administer interconnect charging between all providers.
7. Local networks would be the domain of Local Government and open to commercial providers.
8. NewZealand.Net could commission a new high capacity undersea fibre cable to connect New Zealand to the world. Again this would be charged on a Cost-plus basis.
9. International traffic would be metered separately and therefore differentiated from local traffic ensuring a fair user pays model and promote network efficiency.

Industry impacts

1. NewZealand.Net could purchase existing fibre infrastructure assets on an agreed basis.
2. Free from the obligation to provide our national network backbone, existing providers would be best placed to rollout and market new technologies and services.
3. The carriers already have customers and diverse offerings (from wholesale communications to media and content) so they are well placed for change.
4. Financial markets may reward those companies that separate long-term infratructure investments (which may suit a bond style risk reward profile) from investment in shorter term service offerings (which may suit the public markets).

Costs and benefits

1. This initiative may be cost neutral or significantly better for the New Zealand taxpayer.
2. The New Zealand Government is already one of the biggest users of New Zealand's communications links. This infrastructure would be used for Government traffic and initiatives such as the Govenmnet Shared Network (GSN) and Kiwi Advanced Research and Education Network (KAREN), consolidating demand. Using a Cost-plus model the Government's expenditure may significantly drop.
3. With the Government behind this scheme, finance would be easy to attract and available at low cost. Interest costs would be recovered in the Cost-plus model.
4. NewZealand.Net would have a largely fixed cost so the more services deployed over the network would either result in more income to NewZealand.Net for further investment or reduced costs for consumers.
5. Teleworking and more virtual meetings would potentially reduce other infrastructure costs.
6. The level playing field and certainty would foster significant investment in services running over the physical network, and provide an explosion of technology companies earning more revenue and tax revenue.
7. Being the new global leader in communications would foster a series of global innovations that would significantly increase Gross Domestic Product (GDP) and attract immigrants to New Zealand.

Summary

As an entrepreneur, my natural leanings are for minimal regulation and small government. But in the case of Broadband, I believe there are fundamental reasons why the people of New Zealand should own this important piece of infrastructure.

I do not believe the market can deliever the step change required to enable our many talented New Zealanders to participate fully in the the global economy.

I believe it is entirely appropriate for New Zealanders to consider taking ownership of the physical digital pathways that connect our cities to each other and to the world.

About the author

Rod Drury is founder and CEO of accounting Software as a Service (SaaS) provider Xero. New Zealand Hi-Tech Entrepreneur of the Year in 2006, Rod sold his previous business AfterMail to US public company Quest Software in January 2006. Rod co-founded Boston-based Context Connect in 2000, developing several patents in the mobile directory space. Rod developed one of New Zealand's first Microsoft development companies, which was acquired by Advantage Group in 1999.

In the late 80s to early 90s, Rod worked primarily for Ernst & Young, but also spent several years working on telecommunication billing systems both in New Zealand and the USA. Through his career Rod has maintained a close relationship with Microsoft and was selected as New Zealand's first representative on the Microsoft MSDN Regional Director programme, holding the role from 1997–2000.

Rod was an independent director of Trade Me and SQL Services at the time of their acquisitions, and continues on the Trade Me Advisory Board. Rod is also on the NZTE Beachheads Advisory Board.

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