

**ADDRESS TO TELECOMMUNICATIONS SUMMIT, AUCKLAND,
TUESDAY 24 JUNE 2008
ERNIE NEWMAN, CHIEF EXECUTIVE, TUANZ
(TELECOMMUNICATIONS USERS ASSOCIATION OF NZ INC)**

INTRODUCTION – THE POLITICAL CONSENSUS IS HISTORIC

History will see 2008 as the year when New Zealand took its giant leap in telecommunications. As the year our political leaders came to recognize the enormous potential of the technology to transform New Zealand's position in the world. As the year we recognised just how massively the services enabled by the next generation of telecommunications can improve the relative attractiveness of more isolated countries like ours as places in which to live. As the year our policy makers recognized the role of telecommunications in delivering lives that are healthy, self-sufficient, secure, sociable, and enriched by superior access to life long learning. 2008 is indeed a watershed year for telecommunications in this country.

In historic terms it will rank way ahead even of 2006, when the extraordinary political events of 3rd May impelled New Zealand to catch up lost time in the old generation of telecommunications.

But 2006 was merely about just that - catching up. The promises this year by John Key for National on 22 April, and Michael Cullen for Labour on 22 May, are of a different order of historical magnitude. They add serious state funding to that of the private sector for ultra high speed networks. They are about not just settling for the mediocrity of catching up, but the realising the vision of getting ahead. They are about New Zealand's private and public sectors working together in using this amazing technology to address many of our country's economic and societal problems.

THE STATE OF OUR BROADBAND MARKET

Before looking at the exciting lure of the future, let's take stock quickly of where the last year has taken us.

A year ago at this Conference TUANZ said New Zealand remained in a crisis – that the real opportunities of the digital age were gigabitting past while we dithered along at dial-up pace, and that never before had our country fallen so far behind the rest of the developed world in our embracing of a new, life-changing technology.

The past year has been one of real progress.

We have fixed, or are fixing some of the shortcomings I identified around the cohesion and development of our Digital Strategy by changing some of the institutional structures that underpin it. In particular the Minister's initiative in forming the new Digital Development Council, provided it does not fall into the trap of being captured by the Wellington establishment, offers a real prospect of a step change.

The government and the main opposition party have both clarified their commitment to public sector investment in fibre optic networks in a dramatic and visionary way.

The operational separation of Telecom is complete, competition is alive and exciting, and the business cases of competitive carriers and ISPs have been made more secure as a result.

We've climbed two steps up the OECD's ladder for broadband uptake. In December 2006 we had about 14% per capita broadband penetration; a year later we reached 18%. That propelled us from 21st position on the OECD table to 19th. Moreover we are now ranked sixth in the OECD for broadband growth.

All that is serious and meaningful progress. We are indeed moving more rapidly along the digital path. Credit must go to many people. At the risk of crossing a boundary into politics I must give credit to Hon David Cunliffe who has shown exceptional leadership and drive in one of the most intellectually challenging portfolios in government. History will show his tenure in this portfolio in a very positive light.

It would be too much to expect that absolutely everything was well. It is not. It has taken far too long to make progress on reviewing our antiquated universal service obligation or Kiwi Share, which has increasingly worked against competition in the market and retarded the development of innovative rural solutions.

And in mobile we still see the monopoly on GSM services, failure of a third entrant to emerge after seven years of trying, and inexplicable complete absence of mobile virtual network operators despite many promises. This means New Zealanders have arguably less real choice than anyone in the developed world. Suggestions of skulduggery around the statistics make it hard to be certain about the effect this is having on pricing.

But mobile and Kiwi Share excepted, overall we are way better positioned than a year ago and ready to move rapidly into the next and exciting phase of fibre optic.

FIBRE AND THE END USER

The fibre future that both National and Labour have now committed to will revolutionise our telecommunications. It will also offset the problem of isolation which has been a barrier to New Zealand being one of the most attractive countries on the planet in which to live. The two proposals are quite different in detail, and both have strengths that can be worked through. But the big development is not the differences – its the cross-party consensus that state investment alongside the private sector in fibre to the premises, the next hugely-enabling step for users, is necessary for economic and social progress.

Fibre will revolutionise the telecommunications industry and its customers by replacing bandwidth scarcity with bandwidth abundance. No longer will service providers be able to use bandwidth as a means to ration New Zealanders' use of the Internet, nor to gouge excessive surcharges through data caps. Bandwidth will become effectively unlimited.

That does not mean that everything will suddenly become ultra-cheap or free. Our international connectivity still presents issues around competition and capacity that will impact on consumer pricing, to which we need to find creative solutions. There are obviously no free lunches and finally the consumer still has to pay for their connectivity, if not through bandwidth or data caps then through subscriptions or some other means of measurement. Indeed in the new era users will probably spend more money on telecommunications than now, but they will get far, far more social and economic benefit for their outlay.

A nationwide, ubiquitous fibre to the premises network, with mobile telephony as a crucial niche extender and IP everywhere, will be an enabler of a whole new world of communications. It will materially improve the attractiveness of New Zealand as a place to live in numerous ways:

Location-Independent Working

Location-independent working – the ability to work in one city, suburb or country and earn income from another – is one very obvious outcome that has major benefits not only to the user but for the environment. The latest census showed the interesting result that more Aucklanders now work from home each day than use the city's public transport system, while other cities including Wellington are not far behind.

One example is where people work completely independently of where their employer is based, often in a different country. High speed connectivity for day to day communication and file sharing has a huge role in making this possible, while telepresence – the huge leap forward in videoconferencing – will add a great deal more utility. There's a lot of publicity about Kiwis moving to Australia in search of better incomes, but isn't the ideal a New Zealand location coupled with an Australian salary.

Consider this. Jo Kensington is a graphic designer for a Sydney studio which employs 30 people. She works on accounts for international companies such as McDonalds. She designed the branding for McCafes, which can be seen around the world (it looks especially fetching in Russian at the Moscow branches I'm told). When TUANZ board member Kevin Drinkwater sat next to her on a plane last week, Jo was returning from the first trip she had paid to the Sydney studio in seven years.

Isn't that the ultimate - a Long Bay lifestyle on a Sydney salary?

Then there's the potential for people in cities to work from home a day or more each week, known as telework. This can create huge savings in cost both to the community and the individual. As oil prices rise to an extent that to many, many people is threatening the viability of going to work or becoming lifestyle-changing, the opportunity to avoid commuting a day or more a week is moving from concept to necessity.

Telework is far from a new concept, but until now it has not taken off as a mainstream practice. Yet with the price of petrol now the stand-out element of many household budgets it has increasing attraction for both employees and employers. A significant barrier for employers has been a concern about supervision, and whether the employee is genuinely working – not necessarily a rational concern but an understandable one. The greater ability to communicate visually as well as by audio could remove a serious barrier and open the way for a significant increase in telework.

Work-related travel is also coming under ever-increasing pressure. Organisations that operate nationally have had a resigned acceptance of the inevitability that many staff fly among the main centres constantly and expensively to maintain relationships and do business, but air fares are calling a lot of this into question.

It's fortunate that the oil cost issues have coincided with an enormous leap forward in the quality and versatility of what we used to call video conferencing, but is now being called telepresence. Telepresence is effectively a substitute for oil. It can operate in many settings. These include rudimentary one-on-one desk to desk or desk to home configurations, or elementary office to office links for

group meetings. Most significantly we now have access to stunningly realistic many-to-many telepresence facilities with customized identical furniture and lighting, life size images across a table, directional voice, and breathtaking realism in video and audio. At the top end these applications are not cheap and in the old world of scarcity they look bandwidth-hungry, but they are highly competitive against the alternative of flights, hotels, expenses and down time, and the relative competitiveness can only improve.

To make the most of telepresence we need ultra fast speeds. Fast speeds domestically so that thousands of Aucklanders and Wellingtonians can work from home a day or two a week. Fast speeds internationally so that thousands of go ahead people can follow Jo Kensington's lead by doing international work from New Zealand rather than relocate across the Tasman or beyond. Remember too, that all these applications have significant benefits for environment sustainability.

Many of the people who are leading the clamour for connectivity are in the scientific and creative industries – a group I recently heard derided as "people with sweaty t-shirts." Yet these are the very people from whom our innovation is coming and they are a group we have a strong economic imperative to satisfy.

Entertainment

Telecommunications is turning the entertainment market world wide, upside down. The most significant contributor is Internet television along with Internet Protocol TV.

The video market is evolving from broadcast to personal, so that increasingly entertainment will come across telephone lines rather than through conventional television. Today's television will be replaced by tomorrow's infinitely more flexible converged multi media entertainment ecosystem. It will be bi-directional, interactive, always on, on demand, and personalised.

We'll use it to interact with programmes. We'll watch several sports games of our choice simultaneously on a split screen. We'll send our family photos back to the network for safe storage.

IPTV is far more than the TV we are used to. It's communication, Information, entertainment, and transactions. It will share content with our mobile phones or a screen forming part of our fixed phones, as well as on our computers or home TVs. We'll use it for games and have neighborhood gaming competitions with a leader board among the families in our street.

(Show video clip)

And let me assure you that every one of the applications I've mentioned is already available commercially somewhere in the world.

Just six months ago the BBC released BBC i-Player, a streaming video service that allows viewers to download programmes for up to 7 days after screening. There have been 75 million downloads in 2008 including 21 million in April alone. Traffic is increasing 20% a month. All the UK's ISPs have become very concerned with the rocketing traffic and the demand for bandwidth. That's the dilemma in a world of scarcity. The solution is not to go back to rationing, but to go forward by creating plenty.

IPTV is not all about fun and idly whiling away time watching the 'soaps.' It has a serious application for education and lifestyle as well. And anyway, entertainment is a valid component of our lifestyles and well-being as well as a huge industry in its own right. The message for New Zealand is that our ability to harness and utilize this kind of service will need the ultra fast bandwidth that happily our political leaders have promised.

Closely allied to entertainment is the phenomenon of social networking as illustrated by high profile sites such as Facebook, Bebo and YouTube. Last year 77.6 million happy people watched 3.2 billion videos on YouTube alone. Its also moving into professional and career applications – politicians routinely use it to promote their candidacies, while progressive event organisers use it to promote conferences.

TUANZ has talked for many years about the opportunities leading edge communications offers for improving productivity in almost any workplace you can name. One example lies in the transport sector where the concept of the connected truck is well established – Volvo alone already has 10,000 examples on the road and will have a million by 2015. These systems provide for increased uptime, dynamic service planning, remote fault diagnostics, predictive maintenance; parts planning, breakdown assistance, driver time management, security services, fuel management, and driver training. They also make for happier drivers which in many countries with labour shortages is a big issue. They connect to the truck firm's headquarters, the fleet operator, parts suppliers, cargo owners, and finance or insurance companies. Insurance companies monitor driving practices including special surveillance of new or underage drivers. Such systems depend mostly on mobile technology but there is still a major fixed line component.

There is huge potential on New Zealand farms for the use of fast broadband to enhance productivity and resource management. So much that next week TUANZ is running another two day symposium solely to continue identifying and aggregating the business case for fibre to the farm.

Then there's security. Given the state of law and order, how many of us wouldn't feel a whole lot more comfortable in the knowledge that we could pull up a live video link of our homes or workplaces any time we were logged in?

There are many, many more applications I could mention. Health, including the aging population, and education are the two most obvious but are also the best understood. They are probably the sectors where the national business case can most effectively be made.

Holding on to our Young People

But the really important beneficiaries of the new generation of connectivity will be New Zealand's young people. Today's 15-18 year olds will spend 10,000 hours on mobile phones, send and receive 250,000 emails, spend 5000 hours playing video games, and 3500 hours on social networking sites. The really innovative applications – social media, interactivity and mobility constitute the so-called "me media," which is an essential tool of the digital natives and a key component of their future.

Five years on these digital natives – today's 15-18 year olds - will have serious money to spend. What's more, they will be internationally mobile. When they evaluate whether to settle in New Zealand or elsewhere, the quality of services they can access across this new generation of connectivity will have a significant weighting in the decision. Not all of them will leave if we don't measure up to their expectations – of course not - but the ones that do are likely to be the ones we can least afford to lose.

QUANTIFYING THE BUSINESS CASE

So how do you assess the economic business case for ubiquitous ultra high speed Internet?

You can't do it with precision. As was observed in a report issued this month by the Broadband Stakeholder Group in the UK, determining the economic and social impact of any particular technology or innovation is difficult. Economic historians still debate the economic contribution that canals, railways and electrification had on development around the world. Evidence of the impact of ICT on labour productivity remains scarce, and the precise impact of the Internet over the last ten years is still being explored. So predicting the future economic and social impact of a revolutionary technology that has yet to be deployed is fraught with challenges.

What can be done is to identify a range of wider economic benefits that would accrue in the long term. These include reducing costs of transport congestion, achieving the productivity benefits of cities and clusters without the need for people to be physically located in such places, and improved economic adaptability and resilience.

Economists also recognize that in terms of social value, there must be real benefits from improved access to lifelong learning - social inclusion, more flexible working and enhanced social capital.

A report by the OECD last month also underlines a range of potential benefits arising from the application of advanced broadband in health, care of the aged and education. However, the studies the OECD draw on do not attribute benefits to different forms of broadband including wireless, current and next generation broadband.

Yet it does not need a cluster of economists to recognize that the benefits of becoming one of the world's earlier adopters of fibre to the premises will have enormous social and economic payback, while the cost of the reverse would be still greater. Parents and grandparents understand how important the technology has become, and recognize that sometimes a leap of faith is necessary decades before economists finish haggling about the measuring methodology.

THE INDUSTRY'S INCENTIVES VERSUS THE NATION'S INCENTIVES

The excellent work by the New Zealand Institute early this year demonstrated the disparity between the incentive of the industry to deliver a fibre network, and the needs of the country. This is unsurprising for two reasons. First, most revolutionary infrastructure technologies throughout history have required hands-on government support in their early stages. Second, it is rational for infrastructure owners to prefer to milk their current assets to the maximum before moving to a new wave of investment – they will seek to get away with delaying as long as they can. That's why the government, whatever its colour, will step in - its role is not to optimise the industry, but to optimise the country.

Internationally, the telecommunications industry these days lives in a constant state of revolution. Telecommunications companies, ISPs and broadcasters worldwide are all repositioning for the digital age, and the outcome is very unclear. Most telcos now see themselves in the entertainment industry.

In this country however, the telcos are not about to deliver a fibre network unaided. Minister Cunliffe noted in a speech in Korea last week there remains a significant gap between the government's level of aspiration for New Zealand as a centre of innovation and technology, and the existing commitments of market

participants. Even now, while willing to accept government financial support for development, they seem focused on the short term.

As custodian of the technology that can solve so many problems, the industry should not be clinging to the past nor seeking to dampen user expectations. Every one of the uses of broadband I have mentioned is a significant new opportunity for telecommunications service suppliers. Take for instance the price of oil - as customers gravitate towards telecommunications as a substitute for oil, the industry has a whole lot of new sources of revenue. Suddenly telcos are competing not only with each other but with Shell, Honda, Boeing and Qantas. Its time for them to look at growing revenue from non traditional directions.

The triple play services I have mentioned are not just new sources of revenue, but arguably the key to the telecommunications sector's survival. Internationally their deployment is being led by small independent telcos. They require the best bandwidth that can be achieved. How fortuitous that the government, right now, is set to share the burden with you, the industry. If you seize the moment the future is bright. If not, you are taking the position of denial that blacksmiths took in opposing the introduction of railroads, or that Kodak in the face of digital cameras. Don't look a gift horse in the mouth.

Fibre optic, with very limited exceptions, is the key. That does not deny a rosy future for mobile – there is, but as a niche provider. Wireless is to fibre as air freight is to container ships. Both used in tandem, playing to their respective strengths, can add value to the market for the mutual benefit.

If you want a successful case study, look to Sweden which already has fibre to 20% of premises including homes and farms. It started from a position of considerable advantage – tax breaks for home PCs in support of distance learning led to exceptionally high penetration of home computers, coupled with strong government and social commitment to online education. Like us the Swedes have low population density across much of their country, but they saw this as an imperative to take the initiative on fibre rather than a reason not to. We are about to follow that lead.

TODAY'S MEDIOCRITY; TOMORROW'S LEADERSHIP

Sadly New Zealanders have come to accept mediocrity in many elements of our lives. In our workplaces, in sport, and most of all in education we've lost some of our drive and determination. In earlier and more prosperous times when faced with seemingly insurmountable challenges we'd make enormous efforts to achieve the goal, and more often than not we would win against all odds. These days our response is to move the goalposts closer.

Let our fibre future be an exception and the start of a new approach to infrastructure investment. Our politicians have made a bold statement. The industry should take the signal, lift its sights and work collaboratively with central and local government – please don't drive down expectations. The community should support the direction the politicians are going and keep them to their word. Parliament should work to a political consensus like the historic one that led to the Telecommunications Amendment Act 2006.

Fibre to the premises is about keeping our young people here.

Its about keeping our aging people safe and healthy in their own homes in an affordable way.

Its about life long learning accessible to all Kiwis accessible to all age and socio-economic groups in all parts of the country.

Its about New Zealanders obtaining work on an international market and earning accordingly, working from a New Zealand base.

Each of those objectives is of huge value. Collectively they represent the start of an historic step change for this country. Lets all do our respective bits in making it happen.

END