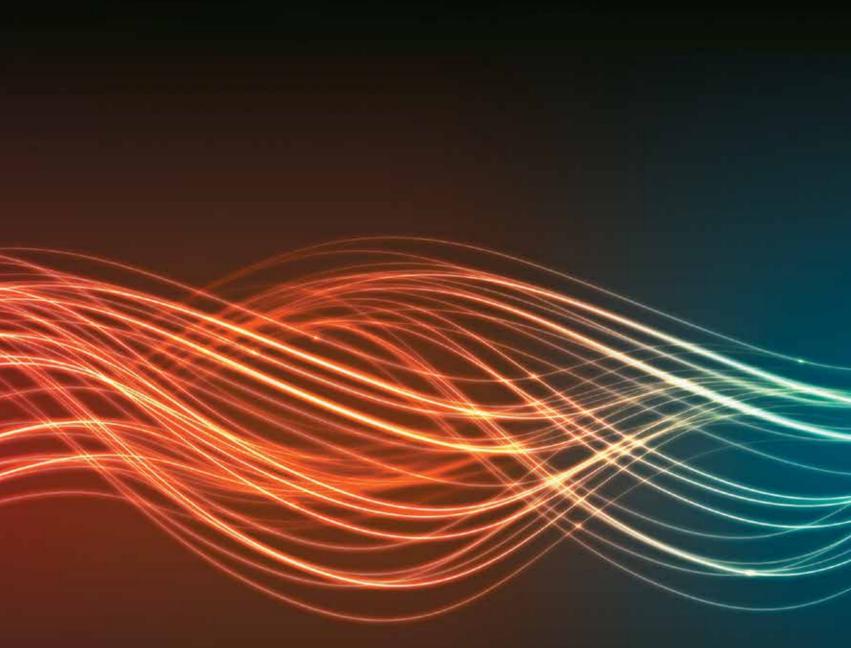




A generation ago telecommunications giants Telstra in Australia and Telecom New Zealand broke free of government ownership. As natural, private monopolies they made eye-popping profits and controlled the market. That didn't last. Eventually users had enough of high prices and indifferent service. Political pressure meant governments regulated, ushering in a new era of competition and, in the process, squeezing their margins. Now telcos face new challenges from technological change, global over-the-top operators and a new era of market intervention. bill bonnett asks where is the telco business going?



he writing was on the wall when, in May 2010, Paul Reynolds, Telecom NZ's CEO at the time, stood in front of journalists and analysts to explain the company's third quarter financial performance. The result was better than expected yet it triggered a slide that saw just a few weeks' later Telecom NZ shares hit an all-time low.

Even relatively good financial news was not enough to overcome the gloomy long-term forecast. In the presentation Reynolds showed two graphs. One showed a gentle, but persistent, decline in Telecom NZ's legacy fixed line business.

Reynolds' second graph showed growing telecommunications services. The bad news was that these new revenue sources, mainly broadband and mobile, were in hotly contested markets where Telecom NZ has to fight for customers.

While modern telecommunications margins remain respectable by economy-wide standards, they are pitiful compared to the rivers of gold telcos made from a network that was installed and paid for by taxpayers years ago.

Put simply, even with a fast rampup of new business and a slowly declining old business, most telcos cannot find new revenue fast enough to replace lost revenues.

# new challenges

Four years on, telcos still struggle with the same problem. Old-school public switched telephone networks (PSTNs) are in terminal decline as

customers switch to mobile networks and voice over IP (VoIP).

If anything the challenges have multiplied. In 2010 the broadband market – one of the brighter replacement technologies – still had plenty of headroom. Taryn Hamilton is general manager of Slingshot, part of CallPlus New Zealand's third largest telco and a hungry, lean newcomer snapping at Telecom NZ's heels. Hamilton says market conditions have changed again: "PSTN is declining, but broadband is still increasing. That said; it's near saturation."

And then there is government intervention. For the past decade or so governments around the world have moved to deal with what economists call "market failure". In most cases this has meant

"apple's ios and android have been neatti customers and telecommunications

opening up telecommunications networks to competition and regulations to help things work more smoothly.

In Australia and New Zealand that government intervention has included funding the creation of new, fast, wholesale fibre networks that will, eventually, replace copper networks. They are taking different paths, but the big picture is similar. Australia's government-controlled NBN Co has the job of connecting the whole country to fibre and other fast network technologies. In New Zealand there are two projects. The Ultrafast Broadband (UFB) network - being built and run by private companies - will run fibre to the premises for the 75 percent of the population living in urban areas. A separate Rural Broadband Initiative (RBI) will use fixed wireless and fibre improving broadband speeds in less densely populated areas.

Paul Budde, Australian-based managing director of independent telecommunications research and analysis group BuddeCom says the regulatory approach taken by Australian and New Zealand governments is sophisticated by international standards. He says: "They recognised the importance of the wider digital economy and the pivotal role telcos play. So instead of just interfering to solve problems, they have a holistic view." He says governments in northern Europe, China and Singapore take a similar approach.

Budde says regulation in both countries has seen a move to 'structural separation'. In the past telcos were vertically integrated. The company that sold phones also ran the network infrastructure and provided services. Because building a network is prohibitively expensive, that effectively made true competition almost impossible. In practice structural separation means stripping out the physical network once owned by Telstra or Telecom NZ. putting the assets into a separate company, then opening it up on the same terms to all-comers.

### over the top

In the last decade or so a new threat emerged to telco profits: the emergence of the so-called overthe-top (OTT) providers. Budde says companies like Telecom NZ can't compete with companies like Google, Amazon or Apple providing value-added services that go over the networks. He says: "They have an enormous cost advantage that telcos can't

Telecommunications Users Association of New Zealand (TUANZ) CEO Paul Brislen says Apple's iOS and Android have been neatly inserted between telcos and their customers and that's just one reason why the old telecommunications business model is "dead": "It's just that the telcos haven't realised that yet. The customers are voting with their feet - or more accurately with their wallets'

John Stanton, CEO of the Communications Alliance - which acts on behalf of Australia's telecommunications industry - says there's a big fight for ownership of the customers and the threat is real. "If you look at a typical iPhone you might see 20 icons, only one of those refers to services provided by the carrier. OTT means telcos have to provide capacity for services that they don't earn revenue from." Stanton thinks telcos still have an opportunity with apps to deliver relevant services that integrate with customer's lifestyles. In September last year the Australian Centre for Broadband Innovation released an "apptrepreneur's" guide to next-generation broadband networks which outlines the opportunities

that exist for apps to connect businesses and consumers once great bandwidth becomes bidirectional.

# reinventing the telco

Telcos are no longer vertically integrated but monopolies still exist in the industry. Slinashot's Hamilton says: "Monopoly still largely exists at the access layer with Chorus owning the copper network, albeit with regulated pricing." In Australia NBN Co is the regulated access layer monopoly.

While Telstra's investment in New Zealand infrastructure (now sold to Vodafone) means Chorus is no longer a national monopoly, Brislen says Telecom and Vodafone still account for about 90 percent of the New Zealand telecommunications market. And their combined market share means they are still able to cause trouble he says.

According to Budde Telstra is further along the post-vertical integration path than Telecom NZ. He says this is mainly because of scale; "New Zealand is a smaller market. There's less room for competition and investing in new areas is Telecom NZ finds itself clinaina more to the old business model. Budde says Telecom NZ will take much longer to transform.

There are still opportunities for telcos to grow. Budde thinks the best prospects are the growth of machine-to-machine (M2M) communications along with investments in data centres and cloud computing. He says telcos need to move fast in these areas as a number of IT companies are already marking out the turf.

In New Zealand, Telecom NZ's Gen-i division recently paid almost \$NZ100 million to buy Revera, a data centre business that among other things supplies all-of-government cloud services. Meanwhile in Australia Budde says Telstra has earmarked \$A800 million for cloud investments.

John Stanton agrees that M2M holds a lot of potential for telcos. Telstra forecasts that today's 50 million connections between Australians and their devices will rise to 240 million by 2020. "It requires communications, but low bandwidth which means it is cheap to do," says Stanton. That means carriers won't be able to get high margins from M2M business: "When a sensor costs only



### Hiwishara lives on, for now

By international standards Telecom NZ has done better than many telcos when it comes to defending legacy fixed revenues. TUANZ CEO Paul Brislen says this is down to the TSO or telecommunications service obligations. This is a set of rules laid down by Government when Telecom NZ was privatised in 1990. Among other matters there was the Kiwi Share agreement that Telecom had to provide unmetered local calls.

Brislen says this has proved popular with consumers who often wrongly refer to the 'free local calls'. They are not free, because the quid pro quo for unmetered calls is a high monthly line rental. However, this has meant that New Zealanders are more inclined to make local voice calls on Telecom NZ's fixed line service than using mobiles.

That most telcos have been forced to offer 'naked' broadband services (the data connection without the home phone) is an indication, however, of how the demand for services is moving from traditional copper connections to data and mobile.

a few cents, no-one will want to pay dollars for each communication. On the other hand, telcos will be able to make it up with the sheer volume of business. There will be billions of devices worldwide, each of them regularly sending and receiving data," Stanton explains. And he says M2M services don't require expensive face-to-face customer services. If telcos can find ways of integrating M2M technology into consumer lifestyles – along with services – it could be lucrative he suggests. In New Zealand Vodafone, which is recognised as a global leader in M2M technology and services by Gartner and Analysys Mason, has just announced it has already passed one million M2M connections.

Budde says one option for telcos is to find new value-added services. Telstra is investing in emerging technologies through the establishment of its own venture capital fund Muru-D. The company has produced a three minute video (worth a watch for budding entrepreneurs) to introduce the future it foresees. The video represents a series of technologies, many of which are already in production or prototype, to demonstrate what Telstra believes life will be like in seven years' time. At Telecom NZ that job has been delegated to Telecom Digital Ventures. Rod Snodgrass, who heads the unit describes his role as "disruptive". TDV is behind the low-cost Skinny mobile brand and the equally low-cost Big Pipe ISP

operation. It added value to Telecom NZ's mobile business with a nationwide wi-fi hotspot network and formed Qrious a big data business.

Collectively these units only account for a tiny fraction — possibly less than one percent — of Telecom NZ's revenue. TDV is dwarfed by the huge cashflow from voice calling and mobile, yet Telecom NZ expects them to become significant over time.

#### the telco of the future

What will telecommunications companies look like a decade from now? TUANZ's Brislen says they will look more like electricity and power companies. "They won't be front of mind. They'll have to get rid of large marketing departments and sales teams. They won't need or be able to afford fancy downtown offices."

Telecom NZ's Skinny mobile phone operation, which has a low-cost structure, could be the template. "Skinny is slick, lean and virtual. As a model it has huge potential," says Brislen. He says another possible model is what happened in the UK when the Tesco supermarket chain entered the phone business.

Brislen says people won't have a relationship with their telcos but with the services they use on the networks such as Netflix, WhatsApp, Hulu and so on. "The market will move away from thinking about telcos or ISPs."

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## dumb pipes

So does this mean telcos are doomed to become dumb pipes? Brislen thinks there is nothing they can do to stop this trend. However, while the pipes may be dumb, they need to be good. He says the winners are going to be the telcos with the best pipes.

Slingshot's Hamilton echoes the point about quality. "ISPs that can deliver their customers the best quality access to the most popular OTT services will be in most demand, he says. However he thinks the pipes don't always have to be dumb. When it comes to acquiring and retaining new customers, value-added services will become significantly more important. He also thinks telcos need to get better at delivering a blend of services and that video services are set to continue expanding at an exponential rate.

Paul Budde, managing director,

BuddeCom's Budde also sees the dumb pipe model as inevitable - at least for some parts of the future telco business. He says telcos had an opportunity to avoid this, but: "They missed the boat. When it first appeared they thought the internet was a fad. They never saw what would happen"

Budde says the market will change but he can't see most telcos changing fast enough to play a significantly different role from today. "I see no indication they will move into different fields. Instead it will be just about the pipes and that means fibre, 4G and eventually 5G. They might also want to focus on providing them relegated to just being utility operators rather than market innovators." In New Zealand, the forced separation of Telecom to create the Chorus wholesale network business has accelerated this movement, although the dynamic is quite different with Chorus also claiming the largest chunk of the UFB. In Australia, the NBN is effectively providing the structural separation for Telstra, as connections will be forced to migrate off Telstra's copper as the NBN's fibre network is rolled out.

Budde says most telcos still have a very strong, in some cases dominant, market position when it comes to infrastructure but that's not necessarily going to help. The total amount of money people pay for telecommunication services remains steady, but telcos get an ever-smaller slice of that money: "Instead of spending it with telcos they are buying apps and services from elsewhere."

Like Brislen, Budde thinks telcos will disappear from view, at least for consumers. He also says the services - those dumb pipes - will be pushed further and further into the background. "Eventually telecommunications network charges will be a small percentage of the cost input for other services."

Budde also sees a wave of industry consolidation. He says this process has already happened in the USA where mergers have

brought the market down to two, three or four large organisations.

### the diversity option

The Communications Alliance's Stanton savs in recent years the core battleground between Australian telcos has been around customer service and retention. The companies have been working on delivering a better customer experience. To illustrate this he talks about the way they now provide customers with plenty of warning so they are less likely to experience 'bill

He sees this focus on customer service as setting a future course for telcos as they move to having a less specialist relationship with on a broad range of fronts with a diverse range of services. They will sell power, insurance and financial services as they broaden the utility aspect of their business and leverage their customer relationships."

Stanton says this process is already well underway. Australian telcos first moved into financial services because they were nervous about banks and other finance companies moving in the opposite direction. He also says telcos are active in providing content, for example, customers can already buy Foxtel through Telstra and Telecom NZ has just launched internet

### new directions

One thing is clear; telecommunication is changing at a rapid pace and that change will continue. We may not see a huge change over the next five years, today's biggest players are likely to be 2020's biggest players, but they will look different and their product mix will change. In some cases their names will change. Telecom NZ has announced it will rebrand as Spark, the name change in part reflecting the fact the company will be about more than just providing a telecommunications service in the future. 7