Weekend Herald
Business

The wireless wave rolls in

The hype around hotspots has become superheated and sales of laptops are soaring. But meanwhile, Telecom is heading in the opposite direction, investing $1.4 billion in its fixed-line network. Technology editor **Peter Nowak** asks if Telecom is setting itself up to be bowled over

WIRELESS is the way of the future, proclaimed Intel chief executive Paul Otellini at his company's convention in San Francisco last month. To illustrate the point, he projected a map of the city, circa 2003, on to the screen overhead. A few red dots were superimposed on it to illustrate the number of wireless broadband internet hotspots in existence shortly after Intel launched its wi-fi technology that year. Then, to the amazed gasps of the crowd, Otellini updated the map to show today's hotspots — it was covered in red.

"A few years ago, wi-fi was nowhere. It's pretty fair to say that nowadays, wi-fi is ubiquitous," Otellini said. "We certainly created a new industry. More importantly, we created the new normal."

That "new normal" was the unlocking of demand for wireless, high-speed connectivity to the internet and wi-fi is now as necessary in a computer as a CD/DVD drive or USB port.

Intel is thus pushing the next step in that demand — WiMax or "wi-fi on steroids" as the company describes it. It's a technology surrounded by hype and questions, but it's also potentially a major market shaker — when one of the most powerful men in technology makes such a bold proclamation, it would be foolish not to sit up and listen.

So if wireless is indeed the future, where does that leave the wired? In New Zealand, such questions inevitably lead to Telecom.

The company last month announced a rather large intention to put all its eggs in one basket — a $1.4 billion plan to upgrade its fixed-line network, through which it offers phone and internet services. Clearly for Telecom, the future is still wired.

But is the company setting itself up to be bowled over by the wireless wave? At what point will it be too late change course? Or will all the hype fizzle, leaving wired to rule?

In its basic definition, WiMax provides high-speed broadband internet access over a wireless connection using microwave frequency. Whereas wi-fi transmitters have a top range of 100m or so, WiMax transmitters will stretch that up to 50km, which is effective not only in delivering broadband to homes, but also in creating large wireless hotspots in places such as airports and small towns.

Theoretically, WiMax will boast a shared data range of 50 to 70 megabits per second, which is enough to provide hundreds or even thousands of homes with high-speed access. Much like cellphone transmitters, WiMax emitters sit atop towers or buildings, but unlike many present wireless internet services, they don't require line-of-sight and can thus get around difficult geographies.

WiMax, when its final standard is decided in late 2006, will distinguish itself from other wireless offerings by being inter-operable, which means users will be able to roam between providers' networks around the country or even the world. That differs from proprietary networks, such as the one operated by Woosh Wireless, which can't offer roaming.

Most importantly for internet providers and customers, however, is that a WiMax network would be much cheaper to set up than a fixed network — which makes it appealing for companies looking to take on Telecom, particularly in areas where its lines don't reach.

"It's an order of magnitude cheaper," said Stacy Smith, Intel's chief information officer. "It's going to be quite a bit less expensive to hook people up to a WiMax base station than it is to dig up the streets and run fibre to the home."

Costs associated with setting up a WiMax network include licensing radio frequency, which several experts peg as relatively cheap and plentiful in New Zealand — relevant chunks were auctioned off last year for as little as $150,000.

Base stations are also necessary. Intel estimates that one transmitter could offer up to 90 users internet access at two megabits per second or about eight times faster than most entry-level broadband plans in New Zealand. However, at their price range of between $30,000 and $100,000, the stations are too expensive.

But once the standard is established, competition is expected to take off and prices will plummet. One estimate sees the price of stations halving in the next 18 to 24 months.

The other big cost is receivers, which, for today's end user, comes in the form of a modem. Woosh charges customers $100 for a wireless modem. WiMax, however, will eliminate this cost as Intel starts building receiving chips into laptops, beginning in late 2006. Given that 80 per cent of today's laptops have built-in wi-fi capability, it won't be too long before embedded WiMax receivers are ubiquitous and external modems unnecessary.

So with the costs of delivering coming down, that leaves providers to ponder the possibilities.

In New Zealand, BCL and NZ Wireless have plans to begin WiMax testing in the next few months. For BCL, it's a case of figuring out how to apply it.

"We're in that stage of understanding the opportunity and the fit within the New Zealand telecommunications landscape," said Matt Bostwick, group communications manager for THL, parent of BCL.

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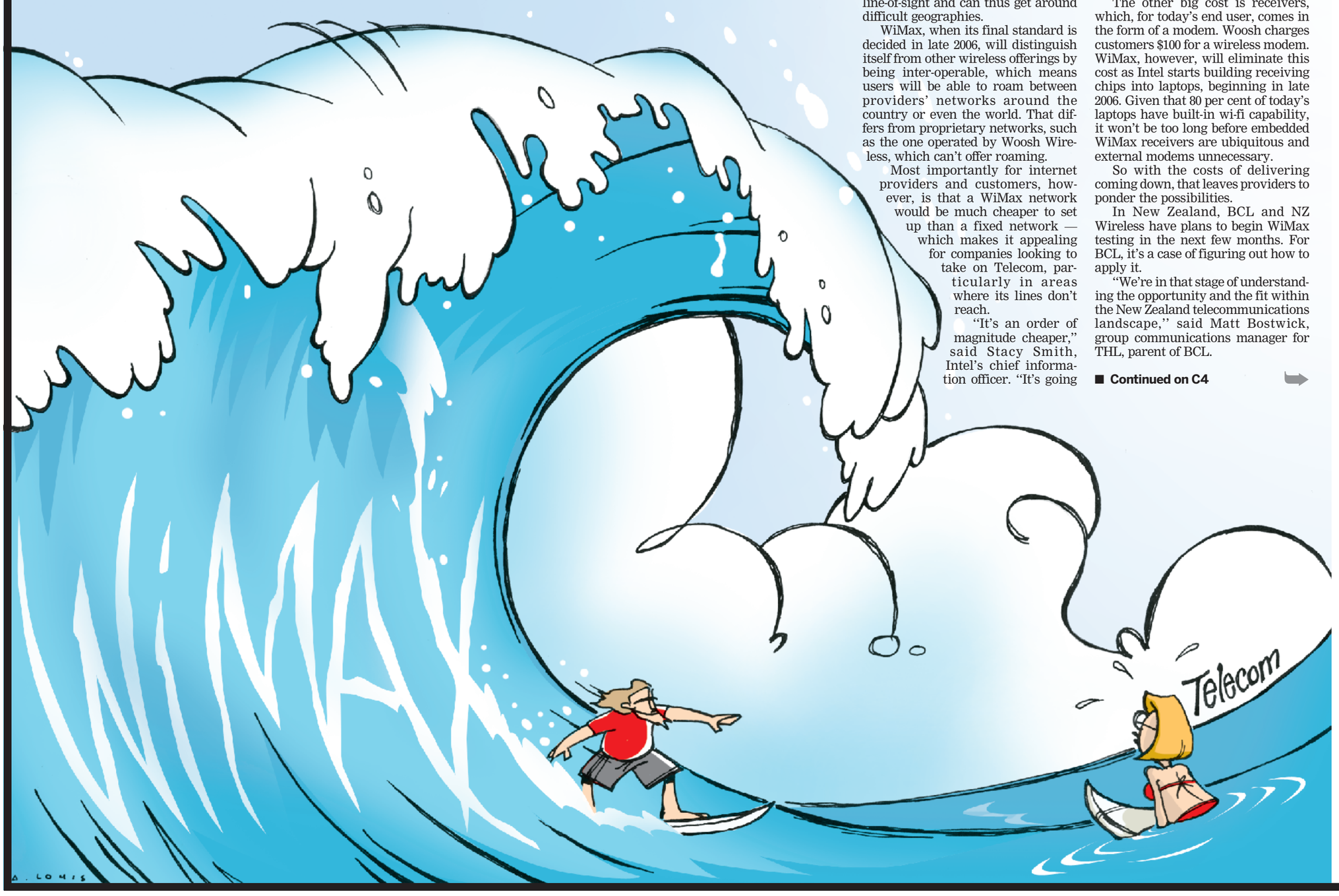

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MARKETS

NZSX-50	3434.88	+19.19 ▲
S&P/ASX 200	4553.10	+39.20 ▲
Dow Jones	10,558.75	+13.85 ▲
FTSE-100	5383.50	+36.10 ▲

NZ DOLLAR

	NZ$ close	Previous
$ Aust	0.9190	0.9187 ▲
$ US	0.7076	0.7063 ▲
¥ Yen	78.10	78.08 ▲
€ Euro	0.5745	0.5777 ▼
£ Pound	0.3898	0.3885 ▲

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