



# Sheets of the world

Heading off on a journey? Wellington-based Geographx can virtually take you there. By **Bette Flagler**

ROGER SMITH ADMITS to breaking some rules. A few, says the founder of Wellington-based mapping company Geographx, were even broken on purpose.

Take the company's newest publication, *The Geographic Atlas of New Zealand*. "We wanted to produce a book of maps where images jump off the page," says Smith. So instead of using a legend and codes to identify things like forests and mountains, Geographx developed software to make maps emphasising terrain — making forests look like forests and mountains look like mountains. Then it broke the usual text labelling rules and presented the 23,000 place names legibly, but not conspicuously. And it also chose not to include pages of essays about demographics and geology. People can find that information on the internet, says Smith.

"There's been a revolution in map making in the last ten to 25 years," says Smith. Thanks

to satellites, radars and laser scanning, modern map makers have more and better data available. Modern imaging software also makes that data easy to manipulate, says Smith.

But for Smith one of the most important changes occurred in 1999 when the Department of Lands and Survey removed the copyright fee on its data sets for anyone involved in mapping. Says Smith: "When the Crown copyright fee came off we asked ourselves 'how can we add value to that data?'"

One of the ways was by combining data from other sources (like rainfall and soil type) with the contour lines from the topographical maps and creating 3D digital elevation models of the country, which were then translated into maps. Being 3D, shadows appear where they naturally would, making mountains in the atlas look as they would if you flew over them.

At a time when other small map makers

were finding their niche in satellite navigation systems and web-based mapping, Geographx found its making custom maps that have a strong focus on the shape of land.

Five years old and with just 3.5 full-time equivalent employees, the company not only produces wall maps and atlases, but detailed topographical and custom maps (many for tourism and aviation clients), and the 3D weather maps on TV3. The company also provides the shaded relief for many road maps. Its one retail product, 3D New Zealand scenery software for Microsoft Flight Simulators, is used by gamers, pilots and flight training programmes.

And it gets to make some pretty cool virtual reality adventure maps, too: Geographx takes Southern Traverse competitors on a virtual flight over the race course prior to the start of the race. That's the time it has to be careful not to break any rules. Or crash into any virtual mountains.