



## AUTOMATION PROJECT TAKING SHAPE

It will be a world leader and it will be New Zealanders who did it. The automated system for survey and titles information is now well into its design phase, and its ultimate users have had their first glimpse of a prototype.

Clients, Land Information NZ staff and third party suppliers have got their first look at the possible shape of the system on computer screens at the Wellington project office of Price Waterhouse, which was chosen to work with our business experts providing project management and technical expertise to assist in the design of the new systems.

Project manager Luke Gooley says that so far, people have liked what they've seen. "We'll be updating the prototype every 2-3 weeks as the design phase continues," he says. Consultation and technical review panels, including end users and representatives from Land Information NZ regions will be evaluating the progress of the design project. The project is programmed to finish by December.

The prototype that has been unveiled allows users to see how it will be possible to search for specific survey plans or certificates of title using criteria as specific as the legal description or as general as the place name. Survey mark identifiers can also be used as a search descriptor.

Once located, a simple "tree" structure is used to guide the user through the array of information attached to any land parcel. For example, with a simple point and click, users will be able to browse through information on owners, easements, historical data and of course the plan or title itself.

The prototype allows the various "pages" of information to be stacked on the screen or displayed as two windows of information, much the same as you would do with paper records.

Luke Gooley says the design is allowing for future access through either Land Information NZ offices or directly through the internet. "There are some technical issues to deal with on the internet, relating to band widths and volumes of information," he says. "However, we don't see any serious obstacles to clients eventually being able to download survey or titles information directly to their own PCs. As the project team is designing it, the system will deliver text, images and spatial information in digital form. That will mean a huge improvement in client service."

Land Information NZ is funding the project design phase while Cabinet considers the business case for the "build" and conversion phases. (See "Business case refined" on page 2)

For further information contact: Terry Jackson, Deputy Programme Manager, Land Information New Zealand. Ph (04) 471-6895. Email [tjackson@linz.govt.nz](mailto:tjackson@linz.govt.nz)

## NEWS FROM THE REGIONS

### PI THE NAME OF THE GAME

For Land Information New Zealand's regional offices, Process Integration, or PI, has been the all-consuming project in recent weeks.

Integrating services for survey and land titles at a common counter is a deceptively simple concept, but behind the scenes it has been a massive re-engineering project for the department. Tonnes of paper have been shifted, staff retrained and front offices re-designed.

It is with some satisfaction that General Manager Regional Services, Carolina Gartner, reports that the internal restructuring required to support PI has been carried out on time and under budget.

So far, PI has been carried out in Auckland, Hamilton, New Plymouth, Wellington, Gisborne and Napier. The march southwards continues with Christchurch, Nelson, Blenheim and Hokitika set to follow by the end of September. The Invercargill and Dunedin offices will introduce PI by 20 October. With such a major change there have been inevitable teething difficulties, but these are being quickly worked through.

Service Delivery managers have been appointed in each of the five regional offices of Land Information NZ as part of the PI programme. Their role is to ensure the timely delivery of survey and title services and to manage the setup of Help Desks.

The Help Desks are a vital cog in the Process Integration machine, Carolina says. "They are being staffed by quality assurance people – customer services and technical officers, who are geared up to deal with quite complex technical matters."

For customers at regional offices, the Service Delivery manager is the key point of contact. They are:

|               |                 |
|---------------|-----------------|
| Auckland:     | Bruce Devonport |
| Hamilton:     | Kevin Knight    |
| Wellington:   | Stephen Hall    |
| Christchurch: | Lindsay Meehan  |
| Dunedin:      | Lindsay Smith   |

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Carolina says the quality of front line services being delivered to clients is being monitored independently within the department. "This ensures proper lines of accountability and protects the client's interests."

An important aspect of Process Integration is the taking of greater responsibility by professional clients for the quality and accuracy of the documents and plans they present. This has been well received by clients, who can see the benefits in reducing delays caused by poorly presented material.

Positive spinoffs from Process Integration have included:

- Standardising of practices and interpretations across the country.
- The ability to carry out plan processing and new title processing in parallel, thus saving time.

Contact for further information: Carolina Gartner, General Manager Regional Services, Land Information New Zealand. Ph (04) 474-3518. Email [cgartner@linz.govt.nz](mailto:cgartner@linz.govt.nz)



Clients visiting the Wellington Regional office of Land Information NZ are enjoying the benefits of a single counter for both survey and title enquiries.

## BUSINESS CASE REFINED

While the survey and titles automation project proceeds apace, work is continuing on the business case for government funding of the build and conversion phases.

An initial case was presented to Treasury earlier this year, and is now being refined to ensure that the costs and benefits are robust. A decision by Cabinet is expected in early November.

Deputy Programme Manager, Terry Jackson, says as well as the significant internal benefits to the Department from automation, the benefits of automation to external clients such as surveyors and lawyers are fundamental to the case for funding of the project.

"Significant effort has been expended in quantifying the external benefits that accrue to our key stakeholders from the automation programme. As well as users such as lawyers, surveyors and the real estate industry, we expect financial benefits to flow through to other users of digital land information, such as utility companies and territorial local authorities," Terry says.

"In addition to making a "Stop/Go" decision on automation, the Government will consider various options for funding the project."

For further information contact: Terry Jackson, Deputy Programme Manager, Land Information New Zealand. Ph (04) 471-6895. Email [tjackson@linz.govt.nz](mailto:tjackson@linz.govt.nz)

Like Antarctica, the seabed is very much the last frontier for human exploration of the earth's surface. There is much to discover, not only about the shape of the seabed, but also about its mineral and biological resources.

New Zealand has automatic sovereignty over the seabed within its 200 nautical mile exclusive economic zone (EEZ), but our continental shelf extends far beyond the EEZ in places. In these international waters, sovereignty over the seabed is undefined.

New Zealand is seizing a once-only opportunity to extend its territorial claim over extra seabed. In 2004, the United Nations will begin accepting submissions from nations for claims over seabed territory in international waters. New Zealand's claim is due to be heard in 2006.

While this may sound a long way off, it gives us less than 10 years to carry out the huge research project needed to support our claim.

The task of co-ordinating this effort has fallen to Land Information NZ. Ruth Baldwin of the Land Information NZ Topo/Hydro office is one of the project team.

"We're beginning with a desktop study to evaluate existing data and see what extra work will be needed to support our claim," she explains. "We're commissioning this work from the National Institute of Water and Atmospheric Research (NIWA) and the Institute of Geological and Nuclear Sciences (IGNS).

"Once the desktop study is complete, we can identify future survey work requirements. The seabed surveys will present big challenges. While some areas are quite well understood, there are large gaps in our knowledge, especially in the Southern Ocean."

Ruth says New Zealand has worked closely with the Australian Geological Survey Organisation, using the deep penetration seismic vessel "Rig Seismic" in initial survey work. There is also potential to commission seabed survey work from visiting ships.

"We'll be looking not only at the shape of the seabed, but also researching its geological makeup. Because there is a tectonic plate boundary running through our region, there will be special challenges in interpreting the criteria set down by the UN to define the nation's legal continental shelf," she says.

While there are no plans to exploit seabed resources at this stage, future needs and technological developments could change this. In the meantime, a great deal of research is needed to assess and gather information to formulate New Zealand's claim to the UN.

For further information contact: Ruth Baldwin, Topography/Hydrography, Land Information New Zealand. Ph (04) 471-6898 or (04) 460-0540. Email [rbaldwin@linz.govt.nz](mailto:rbaldwin@linz.govt.nz)



While “Land” is an integral part of our name, the responsibilities of Land Information New Zealand go well beyond our shorelines. Purchasing marine survey services is part of our core business.

New Zealand has strong maritime traditions, and a glance at any geopolitical map soon shows why. Our 200 nautical mile Exclusive Economic Zone is the fourth-largest of any in the world, but even that expanse of ocean is dwarfed by our area of maritime responsibility. Stretching from Kiribati on the equator to the frozen shores of Antarctica, it extends over a massive 18 million square kilometres of ocean.

Mapping the sea – its composition and movement, its ecosystems and the shape of its floor – has traditionally centred on the needs of maritime safety and defence. But beyond the safety of shipping and national security, there are many other social and economic interests in the sea. These include:

- the fishing industry - commercial, recreational and traditional
- mineral and energy industries
- tourism
- conservation
- telecommunications
- scientific research
- meteorology
- civil defence
- Treaty of Waitangi issues
- New Zealand’s territorial claims over the seabed (see “Putting our claim on the shelf”).

Because there is such a wide variety of interests in the marine environment working in quite narrow fields, there have been inevitable gaps and duplications in the information gathered by various agencies. (The Royal New Zealand Navy has been the main marine mapping agency to date.)

In addition to this somewhat piecemeal approach of the past, there have been giant strides recently in the technology of marine surveying. Satellites can take readings at increasing depths, while ship-borne depth sounders can now read overlapping “swathes” of depth information rather than taking readings along single parallel lines. The net result will be an explosion in the volume of data available.

When it was formed in July 1996, Land Information New Zealand was given the task of purchasing the Crown’s core hydrographic and bathymetric services. A project team has been working over the past nine months to develop a New Zealand Hydrographic and Bathymetric Information Strategy.

The goals of the strategy, approved by Cabinet on 4 September, provide a blueprint for moulding a New Zealand Maritime Survey Information System from existing data. It also provides a model for the way hydrographic and bathymetric services will be purchased in future.

Although the Navy will remain a primary provider, the task of gathering, processing and presenting seabed information will become increasingly contestable. In addition to the Navy, accredited service providers will be drawn from Crown Research Institutes (CRIs) and a variety of inshore survey companies.

Land Information New Zealand will retain a central role in setting standards for the capture, maintenance and production of seabed information, the accreditation of suppliers and purchase of services.

Now that Cabinet has approved the strategy – amongst the first in the world – the next step will be the making of a business case to Government for funding the development of an integrated marine survey information system.

Contact for further information: Robin Pickering, Principal Adviser Topography/Hydrography, Land Information New Zealand. Ph (04) 471-6897. Email [rpickering@linz.govt.nz](mailto:rpickering@linz.govt.nz)

**The Royal NZ Navy’s new hydrographic survey vessel HMNZS *RESOLUTION*, which will play a key role in the gathering of seabed information in the waters around New Zealand, prior to its refit for survey duty.**

The five-yearly task of re-setting New Zealand’s general and Maori electoral boundaries is set to go digital for the first time later this year.

Manager Cadastral Information for Land Information NZ, Doug Crowe, says that as recently as 10 years ago the complex process of defining electoral boundaries was completely manual. Since then, computers have started to play a role using purpose-designed software.

“The hard work used to be done with a combination of paper maps and calculators,” he says. “This time the commissioners will be looking at the new boundaries on laptops. The only hard copy will be an overview map.”

The Representation Commission, which includes representatives from the Government and Opposition, the Government Statistician, Chief Electoral Officer, Chief Executive of Te Puni Kokiri, the Surveyor General, the Chairperson of the Local Government Commission and a District Court Judge as Chairperson, is responsible for the re-setting of electoral boundaries. The process is defined by statute, and is carried out in synchrony with the five-yearly New Zealand Census cycle.

The Surveyor General will receive the 1996 Census figures from Statistics New Zealand in October and will have a provisional set of boundaries ready for the Commission by late January next year. The new electoral boundaries will be finalised about six months later, after a period of public consultation, in plenty of time for the next scheduled election in 1999.

The five-yearly cycle for changing boundaries was interrupted in 1995 with the introduction of MMP and the need to define new boundaries for the 60 new general seats and five new Maori seats. These boundaries were defined using the 1991 Census figures.

Doug Crowe says the software being used to help redefine our electoral boundaries is essentially “off the shelf” with some minor modifications to tailor it to the needs of the task.

“We’re giving the new system a thorough dry run before it’s implemented, by using it in-house to prepare the Surveyor General’s provisional boundaries. We will also be familiarising the members of the Representation Commission with it before they start their work.”

For further information contact: Doug Crowe, Manager Cadastral Information, Land Information New Zealand. Ph (04) 460-0180. Email [dcrowe@linz.govt.nz](mailto:dcrowe@linz.govt.nz)



**Electoral System Specialist, Jill Webster, trials the Electoral Boundary Redistricting System in preparation for the Representation Commission exercise.**

As any good landowner will tell you, it's not much use keeping weeds and pests under control if the guy next door doesn't do his bit. The neglected property can act as a reservoir for unwanted plants and animals, and nature has no respect for boundaries drawn on maps.

It is with this principle in mind – and the requirements of the Biosecurity Act – that Land Information New Zealand has the task of weed and pest control on the unalienated Crown Land under its jurisdiction. Not that Land Information NZ staff are literally out there peppering the countryside with shotgun pellets and herbicide spray – but the department does co-ordinate a control programme.

Peter Bollmann is Manager Crown Property Administration. He says land occupiers are required under the Biosecurity Act to manage weeds and pests, as dictated by regional councils' pest management strategies. While the Crown is not technically bound by the Act, there is a strong moral obligation, Peter says.

“With Crown lease land, the obligation is on the leaseholder to keep their weeds and pests under control. However there is no occupier for much Crown land such as river and lakebeds, and so the obligation falls back on the Crown to be a good neighbour.

“We are appointing a Biosecurity Co-ordinator to assess the requirements of regional pest management strategies and adjoining property occupiers. It is really important to work closely with our neighbours to make the control programmes more effective. The co-ordinator will prioritise requirements and will contract out weed and pest control services to professional suppliers accordingly.”

One could be forgiven for thinking of rabbits as the major target given the current publicity on rabbit calicivirus disease. Although they are included on the pest control hit list, it is actually weeds such as gorse and broom, together with lakeweeds, that absorb most of the department's efforts.

The Rotorua lakes, and Lakes Wanaka and Dunstan in the South Island are plagued by weeds, including the ubiquitous water net. Control programmes for these, and the land-based weeds such as gorse, broom and nasella tussock, have to comply with health and safety requirements and obtain all the necessary resource consents. This can make effective pest and weed control a challenge, Peter says.

“What we do is ultimately driven by the regional pest management strategies,” he says. “Our job is to ensure that the Crown acts as a responsible landowner.”

Contact for further information: Peter Bollmann, Manager Crown Property Administration, Land Information New Zealand. Ph (04) 460-0550. Email [pbollmann@linz.govt.nz](mailto:pbollmann@linz.govt.nz)

**Dealing with the weed problem in Lake Wanaka is one of the weed control tasks to be prioritised by the Land Information NZ Biosecurity co-ordinator.**



**PROCESS INTEGRATION EXPLAINED**

Process Integration at each Land Information New Zealand office is bringing together survey and titles to a “one-stop-shop” service at a single counter. To find out how Process Integration will benefit you as a client, and to examine the new system in detail, you need travel no further than your desktop. Visit our internet site on <http://www.linz.govt.nz> where you'll find two new publications explaining Process Integration.

**NOW ON THE NET**

If you prefer to absorb your information straight off the screen, or if you can't remember where you filed your last copy of Landscan, then check us out on the internet. You'll find Landscan along with many other Land Information NZ publications at: <http://www.linz.govt.nz>

**GEODETTIC WORK CONTESTABLE**

Geodetic survey and maintenance work for Land Information NZ becomes fully contestable from July 1998. This marks the end of the two-year monopoly on geodetic work that was given to Terralink NZ Limited when the former Department of Survey and Land Information split into two separate organisations in 1996.

Individuals and firms wanting to tender for geodetic work from next year will first need to apply for accreditation with the Surveyor General to become accredited suppliers. Accreditation, which is for periods of two years, indicates that a supplier has the requisite skills and experience to carry out geodetic survey and maintenance work.

Survey work being contracted out next year includes network design, positional fix and processing of data. Maintenance work will include checking of works agency advice notices and maintenance of survey marks.

The surveyor accreditation proposal covering lodgement and examination of survey plans is a separate exercise, unrelated to accreditation as a supplier of geodetic services.

Contact for further information: Bob Adam, General Manager Survey System, Land Information New Zealand. Ph (04) 460-0150. Email [Badam@linz.govt.nz](mailto:Badam@linz.govt.nz)

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