

Technology



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Syl Search success

Wellington software company Syl Semantics has announced the government is using its search engine. The Ministry of Business, Innovation and Employment's Science Innovation group began using Syl Search in July. Chief information officer Steve Pyne said Syl Search was better than traditional search engines as it better understood the context of words making it more suited for finding highly technical, scientific language.

China loves PowerbyProxi

PowerbyProxi is claiming much interest in its wireless-based battery system at the China Hi-Tech Fair. The University of Auckland spin-off company has developed a system where it can power up rechargeable batteries while they remain in the device using a wireless-based charging device. PowerbyProxi executive chairman Greg Cross said the device should reduce the amount of waste batteries. "Our technology has just featured on China TV, which has an audience of 1.3 billion," he said.

ICT must 'fly flag'



Amy Adams

ICT Minister Amy Adams has said the New Zealand tech sector must do more to "fly its flag." At an event in Wellington last week staged by recruiter Absolute IT, Ms Adams also acknowledged recruitment industry frustration at government procurement processes and immigration policies. Absolute IT director Grant Burley agreed the country must do more to sell ICT as a career and he was encouraged by government efforts. "It was heartening to hear the minister's strong mandate of support at all levels. She has a clear grasp of the challenges the industry faces and is open to listening and working with the industry to address them," Mr Burley said.

Telecom reaches for the cloud

Telecom NZ has adopted the cloud-based Microsoft Office 365 suite, claiming it is the largest public cloud adoption in New Zealand. Telecom staff have access to all Office products, including Exchange for email, Lync for videoconferencing, Sharepoint for collaboration and document sharing, plus Word and Excel. Telecom CTO David Havercroft said the unified platform should deliver the telco savings and efficiencies.

"The current shift to cloud computing presents enormous opportunities for businesses."

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Mapping a better future

Darren Greenwood

From helping design the new Christchurch to saving tigers in the jungle, GIS technology has many uses.

Geographic information systems (GIS) is an information system designed to capture, store, manipulate, analyse, manage and present all geographical data in the simplest terms.

It merges mapmaking with statistical analysis to let us view, understand, question, interpret and visualise data in many ways that reveal relationship, patterns and trends in the form of maps, globes, reports and charts.

Matt Lythe, GIS sales manager for Eagle technology, said GIS was being used to design, plan and change the world, most notably with infrastructure planning, asset management and getting data to and from the field and citizen.

Since it was first developed more than 50 years ago in Canada, to help manage forests, GIS has evolved through old mainframe to PC technology to cloud-based technology, allowing it to be used remotely and from handheld devices.

In New Zealand, GIS is used by more than 500 organisations, with 70% using a system called ArcGIS, from US company ESRI.

"Key sectors are local government, defence and intelligence, central government, energy, engineering, research, forestry, public safety with business applications wide ranging from asset management, city planning, logging, courier operations, scientific modeling, pest eradication, data capture, operational awareness and more," Mr Lythe said.

"A key function is that it allows disparate systems to be combined to give a better picture of the world – so that organisations might use GIS to bring data from their customer relationship management system, their asset and finance systems together and thus enable them to see patterns of relationships which would otherwise not be possible," he said.

A recent development is "location analytics," which expands the traditional uses of GIS to include social, geographical and emotional indicators to help organisations better predict trends. ABI research says this market alone will grow to \$US9 billion by 2016.

In the early days, said ESRI director of global business solutions Simon Thompson, GIS technology was about collecting information so local governments realized that, if they understood the roads, they could understand how the houses were connected to them, how the sewers operated, how the rivers might flood, and so on.

More recently, business has begun adopting GIS, with Starbucks using it to look at housing settlement combined with spending patterns to determine the location of new outlets.

Earlier this month, ESRI staged its Asia-Pacific end user conference, featuring more than 200 New Zealand

Building a better Auckland



across Auckland, showing metro centres, town centres and neighbourhoods and modeling the rules that could apply in the unitary plan, affecting issues like height, density and coverage.

"It is helpful as a design tool to see how effective the rules would be, to test those rules," chief planning officer Roger Blakeley said.

People will be able to see how the future city might look, allowing for better informed residents when they give the council their feedback next year.

"We have always had maps but nothing like the power of GIS. GIS has been a powerful tool in mapping out all the city. It would have been very hard to do it without GIS," Mr Blakeley said.

This includes 3D modeling for a city centre masterplan.

"This also models what changes might look in the central city. They (council staff) were able to do a virtual flyover of the city, looking at different plans. GIS is straightforward and an essential part of doing business now," he said.

Hamilton City Council said 90% of its business involved property and land and GIS took information from disparate sources and allowed it to be viewed on a map basis. The council's use of GIS was in its infancy but its use would be "bigger and bigger," chief information officer Eion Hall said.

Hamilton uses ESRI for a Mapping Viewer system detailing property information and the location of people in its cemeteries. It plans to implement other web maps for the public to access from its website.

"We will (also) look at ways to provide better access data for field staff and we will continue to develop map and created spatial content for the city's assets and infrastructure," Mr Hall said.



ROGER BLAKELEY: GIS "helpful design tool"

and Asia-Pacific organisations who are using GIS to solve real world problems.

"The purpose was to share learnings, connect with others, get a view on the emerging technology," Mr Lythe said.

Presentations included Auckland Council chief planning officer Roger Blakeley, who explained how GIS would help make Auckland the "world's most livable city." Richard Rowell from Transpower explained how GIS helps the company monitor the electricity power grid.

Other uses include engineers Downer EDI using GIS to plan the roll-out of the ultra fast fibre network. Engineers Tonkin & Taylor also used GIS to manage earthquake inspections in Christchurch and exchange this information with other agencies.

Cloud provides flexibility for engineering

Engineering company Aurecon uses cloud-based GIS for "self contained" projects. These include its work for Christchurch City Council assessing properties in the Port Hills, along with giving information on the hazards and geotechnical features of the area.

Aurecon also uses cloud-based GIS for work with a council in Australia to help with a public consultation project.

Back in New Zealand, it will also be working with Auckland Council to help it plan rail transport.

"Aurecon is a very big, global company and we have quite a complex architecture for our IT system but the cloud allows us to be really flexible. We can get new projects off the ground within 24 hours," geospatial consultant Keri Niven said.

Aurecon also use cloud "on demand" GIS for engineering and construction projects. The *New Zealand Herald* has also used GIS to produce infographics on crime and property values.

At the ESRI conference, company founder, US billionaire Jack Dangermond also spoke of GIS being used to map and plan energy use in New York, help locate pirates off east Africa, and plan responses to natural disasters like floods and fires.

"GIS condenses down all the data and our information and our knowledge and our science into a kind of language that we can easily understand. Maps help us integrate our knowledge but they also help us apply our knowledge," Mr Dangermond said.

And by maps telling stories, they helped make better decisions, he said.