Māori GIS Conference Programme

22 & 23 September

2010

GNS | Avalon | Lower Hutt

Na to rourou,

Na taku rourou

Ka ora ai te iwi

Tihei mauri ora

E nga Iwi, e nga mana, e nga maunga whakahi kei waenganui i a koutou, huri noa,

Tena koutou katoa

Ki nga mate o te wa haere oti atu ki tua o Paerau

Ki a koutou katoa te whakaminenga kua tau mai, nau mai, piki mai, kake mai.

Nei ra te mihi maihoa ake kia koutou katoa i runga i nga ahuatanga o te wa.

Mauria mai ou whakaaro rangatira tena pea ka mohio whanuitia te katoa.

Pai Marire

The Maori GIS komiti would like to formally welcome you to the Maori GIS conference.

With your basket and my basket the people will thrive

It is the intention of this conference to link the dots to look at sharing information and to gain an appreciation of what Maori GIS projects are out there.

GIS is a highly skilled area that is attracting more Maori practitioners annually. Last years conference in Otautahi was attended by more than one hundred people interested in developing this technology. Presentations ranged from heritage mapping to environment mapping and monitoring to government

projects.

GIS captures, stores, analyses, manages, and presents data that are linked to location. In the simplest terms, GIS is the merging of cartography and database technology

This is an area that *Realises Maori Potential* in a practical sense and can assist Maori to determine and identify the economic potential of their land resource. This technology is being used now in the Treaty settlements area to identify sites of cultural significance, Iwi/hapu boundaries and land utilisation opportunities among other things.

As Maori we have a special affinity with our whenua. GIS provides us with a tool to apply kaitiakitanga in a contemporary context while maintaining an authentic Maori perspective.

To our kaikorero thank you for taking the timeTO share your korero and knowledge with us.

To all our sponsors thank you for making the conference happen.

And a special thank you to GNS for their hosting of the conference as well as providing technical support.

No reira e te iwi

Ma te whakaatu, ka mohio

By showing the way you will be informed

Ma te mohio, ka Marama

By being informed you will be enlightened

Ma te marama, ka matau

By being enlightened you will gain knowledge

Ma te matau, ka ora.

And through knowledge you will thrive

CONFERENCE PROGRAMME – DAY ONE

DAY ONE WEDNESDAY 22 SEPTEMBER 2010	**08.00 am**		**REGISTRATION OPEN**
	09.00 am	MIHI WHAKATAU	
		OPENING REMARKS	**A PIONEER'S PERSPECTIVE OF MAORI GIS** | BARRY SOUTAR
			HOUSEKEEPING
	10.00 am	**Kapu ti**	
		TE WAHANGA TUATAHI	***FACILITATOR | MOKA APITI***
	10.40 am	Whakaaturanga 1	**CULTURAL HERITAGE MAPPING** | TE RUNANGA O NGAI TAHU | TAKEREI NORTON
	11.00 am	Whakaaturanga 2	**GIS MAPPING OF MAORI HERITAGE SITES** | DES KAHOTEA
	11.20 am	Whakaaturanga 3	**NGATI WHATUA UPDATE, SYMBOLOGY** | NGATI WHATUA KI ORAKEI | BERNADETTE TE PAPA
	11.40 am	Whakaaturanga 4	**HEALTH MONITORING IN THE MOTUEKA CATCHMENT 2006 – 2010** | DEAN WALKER
	12.00 pm	PANEL	DISCUSSION
	12.20 pm	**LUNCH | TINA**	
		TE WAHANGA TUARUA	***FACILITATOR | ROLAND POMANA***
	1.00 pm	Whakaaturanga 5	**WHAI TAKE - ERASING THE SURVEY LINES** | TE MARU O RANGIWEWEHI | GINA MOHI
	1.20 pm	Whakaaturanga 6	**GIS IN ACTION** | DES HEKE
	1.40 pm	Whakaaturanga 7	**TE ROHE POTAE LAND ALIENATION 1840-2010** | CRAIG INNES (OBO TUTAHANGA DOUGLAS)
	2.00 pm	Whakaaturanga 8	**GIS, HEALTH AND SCHOOLS** | TE WANANGA O AOTEAROA
	2.20 pm	Panel	DISCUSSION
	2.40 pm	**Kapu ti**	
		TE WAHANGA TUATORU	***FACILITATOR | HUIA PACEY***
	3.00 pm	Whakaaturanga 9	**TPK GIS UPDATE |** TE PUNI KOKIRI | GREG DUNCUM
	3.20 pm	Whakaaturanga 10	**MAORI LAND COURT GIS PROJECT** | MAORI LAND COURT | TRACEY TANGIHAERE
	3.40 pm	Whakaaturanga 11	**MAORI DEVELOPMENT GIS PROJECT PLANNING, TOOLS, TIPS, RESOURCES AND TEMPLATES** | EAGLE TECHNOLOGY | DUANE WILKINS
	4.00 pm	PANEL	DISCUSSION
	4.15 pm	Whakaaturanga 12	**EARTH DATA FOR GIS,** AND AN EXTRA SPECIAL ANNOUNCEMENT | GNS | MARK POWNALL
			HOUSEKEEPING & THURSDAY PANUI.
	5.00 pm	**SOCIAL EVENT**	**HAPPY HOUR | GNS VENUE**

DAY ONE WEDNESDAY 22 SEPTEMBER 2010

Conference Programme – Day Two

DAY TWO THURSDAY 23 SEPTEMBER 2010

	TE WAHANGA TUAWHA	***FACILITATOR | GINA MOHI***
8.30 am	Whakaaturanga 13	**LINZ DATA AND NZ GEOSPATIAL STRATEGY WORK AND TREATY PLACE NAME REDRESS** | LINZ | COLLEEN MANU, MARY SUE SEVERN, MAXINE BLUETT
9.00 am	Whakaaturanga 14	**MAPPING STANDARDS FOR THE EMMISSIONS TRADING SCHEME** | MAF | PAT HAWINKELS
9.20 am	Whakaaturanga 15	**GIS IN SCHOOLS** | EAGLE TECHNOLOGY | CLAIRE THURLOW
9.40 am	Whakaaturanga 16	**TBA** | SPATIAL INDUSTRIES BUSINESS ASSOCIATION | MIKE POWNALL
10.00 am	Panel	DISCUSSION
10.25 am	**Kapu ti**	
	TE WAHANGA TUARIMA	***FACILITATOR | GINA MOHI***
10.40 am	Whakaaturanga 17	**UTILISING NZHPT POUHERE TAONGA RESOURCES FOR MAORI GIS PROJECTS** | HISTORIC PLACES TRUST | TIRA POUHERE TAONGA
11.00 am	Whakaaturanga 18	**60,000 RECORDS AND COUNTING: THE CREATION OF THE NEW ZEALAND'S ARCHAEOLOGICAL ASSOCIATION'S ARCHSITE GIS DATABASE** NZAA | SIMON BICKLER
11.20 am	Whakaaturanga 19	**WORKING SMARTER, NOT HARDER!** | NGA WHENUA RAHUI | ROLAND POMANA
11.40 am	Whakaaturanga 20	**MAORI LAND AND ENVIRONMENTAL STATISTICS USING GIS, and A WEB BASED MAORI LAND VISUALISATION TOOL** | LANDCARE | GARTH HARMSWORTH / CHRIS MCDOWALL
12.10 pm	Panel	Discussion
12.25 pm	**LUNCH | TINA**	
	TE WAHANGA TUAONO	***FACILITATOR | TONY ELSON***
1.00 pm	Whakaaturanga 21	**MAPPING AND MANAGING LAND ASSETS AS PART OF SETTLEMENT PROCESSES** | BECA | AVESHNY MASSEY
1.20 pm	Whakaaturanga 22	**TERRAVIEW PLATINUM** | TERRALINK INTERNATIONAL | BEN DUNSHEATH
1.40 pm	Whakaaturanga 23	**PAST, PRESENT, AND POTENTIAL** | SKM | AJ WEIR
2.00 pm	Whakaaturanga 24	**KOTAHI TE WHAKAARO** | BOFFA MISKELL | GARRY CHRISTOFFERSEN
2.20 pm	Panel	DISCUSSION
2.40 pm	**Kapu ti**	
	TE WAHANGA TUAWHITU	**FACILITATORS: ROLAND POMANA, GINA MOHI, MOKA APITI**
3.00 pm	**FORUM**	
4.15 pm	Closing Speaker	Te Komiti GIS
4.30 pm		Conference Close

DAY TWO THURSDAY 23 SEPTEMBER 2010

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PRESENTER BIOGRAPHIES AND PRESENTATION ABSTRACTS

WEDNESDAY 22ND SEPTEMBER 2010

OPENING SPEAKER | BARRY SOUTAR

2005 National Body for Life winner, 6th belt National School of Maori Martial Arts, Contributor to the book Nga Tamatoa, Dad to five great kids – 3 to 17yrs, Director Aotearoa Credit Union, Director of Maori Consultancy Piata Ltd, Former part-owner Critchlow Ltd, GM Ngai Tai ki Tamaki, Leader Porou Ariki kapa-haka to Matatini, Married to Kristen Kohere, MBA(Hons) 1983, Ngāti Porou, Ngāti Awa, also Ngāti Kahungunu, Ngāi Tai, Trustee Te Taurahere o Ngati Porou Auckland

Barry Soutar will describe the "The Maui Nation", a notion of a traditional GIS. Leaping from the ancient to the modern, he will describe the status of GIS in 1996 when the first Maori GIS conference was ever held. Fourteen years later, he will ask what changes have added benefit for Maori development from within the industry, through technology advances and government practice? His personal view of the space will challenge government over treaty rights. He believes GIS is an important tool in removing Crown actions which have prejudiced Maori. He brings a wide range of experiences to support his perspective.

Whakaaturanga 1 | TAKEREI NORTON, TE RŪNANGA O NGĀI TAHU.

Takerei has whakapapa links to Te Tau Ihu and several Ngāi Tahu hapū but primarily Ngāti Kuri of Kaikōura and Ngāti Irakehu from Banks Peninsula. After completing a Bachelor Degree in Parks, Recreation and Tourism Management from Lincoln University, and a Diploma in Māori Studies from Christchurch Polytechnic, Takerei began working for Te Rūnanga o Ngāi Tahu. Takerei is now a Senior Environmental Advisor for Toitū Te Whenua (The Environmental Arm of Te Rūnanga o Ngāi Tahu) protecting areas of historical and cultural significance to Ngāi Tahu Whānui, and has recently completed a Postgraduate Diploma in Parks and Recreation Management.

Cultural Heritage Mapping: Since 2006 Takerei has been leading a project mapping areas of cultural and historical significance to Ngāi Tahu Whānui on the Ngāi Tahu Geographical Information System (GIS). This presentation shows how Toitū Te Whenua and the local Papatipu Rūnaka has used some of the information over the last 12 months to protect our cultural, historical and environmental values under the current environmental legislation and framework.

Whakaaturanga 2 | DES KAHOTEA,

Dr Des Kahotea hails from Tauranga Moana and affiliated to the three iwi of Ngati Pukenga, Ngati Ranginui and Ngaiterangi.Currently working as a heritage consultant and expert and advocates the primacy of Maori heritage in RMA.

GIS Mapping of Maori Heritage Sites: As a Maori archaeologist Des has been an advocate for the use of GIS mapping of heritage sites by GPS survey, whether pa sites, kainga or waahi tapu, for the accuracy of site mapping, location and cultural detail. A GIS mapping project of Mangatawa Pa was recently undertaken for the Mangatawa Papamoa Blocks Incorporation who are exploring a tourism venture. Objectives and issues will be presented and discussed.

Whakaaturanga 3 | BERNADETTE TE PAPA, NGATI WHATUA KI ORAKEI

Ngati Whatua update

Whakaaturanga 4 | Dean Walker

Dean is Ngati Pakeha and works for Kawatiri Resource Management as a resource management advisor and project manager. I have built a GIS for Tiakina te Taiao (an iwi resource management entity in Te Tau Ihu) including mapping of their cultural sites and have run various research projects for them. I have also worked for Tainui Taranaki ki te Tonga on their sites of significance project as a GIS specialist as part of their Treaty of Waitangi Claims".

Cultural Health Monitoring in the Motueka Catchment 2006 – 2010: This is an update of last year's presentation. While last year I talked about the mechanics of the project most sites had only been visited 1 or 2 times so it was difficult to give results in the way of trends, etc. Now the same sites have been visited 3 or 4 times the picture is becoming more clear.

Whakaaturanga 5 | GINA MOHI, TE MARU O RANGIWEWEHI

Gina has been actively involved in a the affairs of Ngati Rangiwewehi since 2003, particularly in the area of Resource Management Planning and Sustainable Land Development, and in recent years has been instrumental in the development of the Ngati Rangiwewehi Environmental Unit, including the recent in-house Geographical Information Systems and Mapping Services.

Whai Take - Erasing The Survey Lines: Whai Take primarily relates to landmarks of territory identification for which Kaitiakitanga responsibilities and Mana Whenua were held by a particular Iwi/Hapu and which were directly associated to whakapapa principles These were often recorded and acknowledge through waiata (Carter, 2003). In present times, Iwi/Hapu identity is clouded by the interface of our own unique tikanga, kawa and ture with perceptions from western colonial influences. As a result, perceptions of who we are as tangata whenua are often defined by introduced realities that have resulted in us viewing our identity through a distorted lens.

Ngāti Rangiwewehi is an Iwi from the confederated tribes of Te Arawa, Ngā Pumanawa e Waru o Te Arawa. By combining their traditional, historical, and contemporary research, and incorporating digital technology, Ngati Rangiwewehi has engaged in a project that that identifies their identity as tangata whenua based on how their forbearers related to their lands of interest, and places of significance; and compare and contrast notions of boundaries and mana whenua between our Rangiwewehitanga and Pākehā notions of law and land tenure.

Whakaaturanga 6 | DES HEKE KAIAWHA

Ngai Te Rangi, Ngati Ranginui, Ngati Porou, Ngati Rangiwewehi, Ngati Raukawa. Des has been with Maori Land and Environmental Consultancy Papatuanuku Services for 5 years and has a B P, R & T Mgmt, B.Soc Sci Hons and Building Student BOP Polytechnic. Des has Local Government Experience for 7 years. His GIS experience includes CFRT Mapping 2000, 2006, 2010 Ngati He.
Des will speak about key aspects of GIS Maori e.g. matauranga and Intellectual Property and then talk about how grass roots can build or enhance their own systems and give examples

Whakaaturanga 7 | CRAIG INNES, WAITANGI TRIBUNAL (ORIGINALLY TO BE PRESENTED BY TUTAHANGA DOUGLAS)

Craig Innes has worked as a researcher in the field of Treaty of Waitangi research since 2002. Since 2009 he has worked as an employee of the Waitangi Tribunal. He has authored or co-authored research reports for the Urewera, Wairarapa, Whanganui and Tongariro National Park inquiries. In addition he has assisted with

research for the East Coast and Northland inquiries. He has a Masters Degree in History from Massey University

Te Rohe Potae Land Alienation 1840-2010: The Rohe Potae Land Alienation research commission is a commission to collect and present basic information about the alienation of Maori land in the Tribunal's Te Rohe Potae inquiry district from 1840 to 2010. The project has collected data about the date of alienation, the names and sizes of blocks alienated and the type of alienation for over 3,800 Maori land transactions, including lands acquired by the government and by private interests, lands taken for public works, and lands 'Europeanised' under the provisions of the Maori Affairs Amendment Act of 1967. The report presents and analyses alienation data at the level of each individual block or group of aggregated blocks, as well as for the inquiry district as a whole. It includes basic statistical analysis showing patterns of when and where alienations occurred, and by whom the lands were acquired. It also quantifies and maps data relating to current Maori land.

Whakaaturanga 8 | TE WANANGA O AOTEAROA

Maria Paenga - Project Lead M.I.T.E. (Maori into Tertiary Education).
Susan Jones - GIS Consultant, Spatial Logic Ltd.
Michelle McGrath - Data Analyst M.I.T.E. (Maori into Tertiary Education).

Te Whakaaturanga o nga Moemoea - GIS as a tool for displaying Maori Aspirations for Tertiary Educational Success: Maori have long been underrepresented in the Tertiary education sector (Ministry of Education,2008), as well as alienated historically from the data collation process that is afforded mainstream society in Aotearoa, New Zealand (Robson and Reid, 2001). Although gains have been made by the recent collation of ethnicity data across the education sector, Maori whanau and the wider public have yet to be provided with accurate, meaningful, easy to understand statistics about Secondary school (SS) and Tertiary Educational Organisational (TEO) performance in regards to Maori participation and successful completion.

The Maori into Tertiary Education (M.I.T.E.) project is a multi-partnership between the Tertiary Education Organisations (TEOs) Te Wananga o Aotearoa, Manukau Institute of Technology (MIT), Unitec Institute of Technology (Unitec) and the University of Auckland (UoA). The relationship was formed to develop a cohesive Auckland-wide strategy for Maori engagement in tertiary education. This project is a pro-active, Kaupapa Maori, collaborative approach to addressing tertiary education needs for Maori in the wider Tamaki Makaurau-Auckland region.

Geographical Information Systems (GIS) has been used to understand and present the current trends, and apparent inequities that exist in the Tamaki Makaurau, Auckland region in regards to Maori student participation and successful completion at Secondary School, and at Tertiary level. The hope is that when presented in GIS form, whanau Maori and the general public will be better informed as to who is best positioned to serve Maori across both sectors, as well as providing baseline measurements for future growth.

Whakaaturanga 9 | GREG DUNCUM (ON BEHALF OF PAUL LANGHAM), TE PUNI KOKIRI

Greg is our substitute speaker for Paul Langham who is unable to present this mahi. Greg has worked with Paul on some of the GIS mahi including developing and modifying the new site and maintaining some of the data.

Te Puni Kokiri GIS web site: Greg will demonstrate and talk us through the demonstration site that TPK has been developing to help realise the potential for Māori land.

Whakaaturanga 10 | TRACEY TANGIHAERE, DIRECTOR MAORI LAND COURT

Ngāti Porou, Te Whānau a Ruataupare, Ngāti Hunaara, Whānau Takimoana, Te Whānau a Tuwhakairiora; Ngāti Maniapoto, Ngāti Rora, Ngāti Apakura, Ngāti Pou

Tracey joined the Māori Land Court after three years with Tairawhiti Polytechnic as Acting Chief Executive and Deputy Chief Executive. She was also the Chief Executive of Te Runanga-o-Turanganui-a-Kiwa for six years. Tracey has a Bachelor of Management Studies (1st class Honours) majoring in Strategic Management and Human Resource Management. She is currently studying towards a Master of Management Studies. The National Director position was established to enable the Māori Land Court to develop strategic leadership. This strategic leadership has been developed through relationships with important private and public enterprises, required for sustainable Māori assets development.

Maori Land Court GIS project: Tracey will give a quick background to the existing Maori Land Online system and the reasons to apply a GIS system to that. Tracey will then describe the features of the new GIS system and a project update.

Whakaaturanga 11 | DUANE WILKINS, EAGLE TECHNOLOGY GROUP LTD

Duane is a GIS project manager and has successfully managed a variety of small to large projects, supporting Maori claimant groups prepare present and negotiate claims throughout the North Island. Recently he has managed GIS programmes for USAID helping to build and develop local GIS capacity in Iraq and Afghanistan. He has used participatory GIS based approaches, for rural and village development projects, covert field data capture, local, provincial and central government GIS. Duane is a keen advocate of PM4NGOs and is currently managing a wide variety of GIS projects for Eagle Technology Group Ltd in Wellington.

Maori Development GIS Project planning, tools, tips, resources and templates: This presentation hopes to plant ideas for Maori groups planning to use GIS for projects like asset and resource management, RMA applications, environmental and conservation research projects, rohe and tribal lands, and wahi tapu projects.

Tools, tips, resources and templates will be discussed that can be used to assist groups identify and define objectives and outcomes, plan and manage successful GIS projects.

Case study examples and experiences will be discussed help participants identify requirements, cultural considerations, information sources, access and ownership, technological & hardware needs, software options, concepts, budgetary requirements, reporting and resourcing needs for small to medium GIS projects.

Whakaaturanga 12 | GNS, MARK RATTENBURY

Mark originally hails from Auckland growing up under the last of the Three Kings (Te Tatua-o-Riukiuta). He attended University of Auckland completing a BSc and MSc (Hons) in Geology before moving south in 1983 to undertake a PhD at University of Otago researching rocks along the Alpine Fault on the West Coast. Mark worked for six years in Australia on geological mapping projects in Tasmania, Northern Territory and Western Australia and returned to New Zealand in 1993 as a specialist in GIS to start the QMAP geological mapping project. He now leads that project and has co-compiled four geological maps of the South Island. Mark will present: **Earth Data for GIS.**

PRESENTER BIOGRAPHIES AND PRESENTATION ABSTRACTS

THURSDAY 23RD SEPTEMBER 2010

Whakaaturanga 13 | LINZ DATA, NZ GEOSPATIAL STRATEGY WORK, TREATY PLACE NAME REDRESS

Colleen Manu, Team Manager - Data Quality Improvement Projects, Land Information New Zealand, Wellington. Ko Taranaki te maunga, ko Hangatahua te awa, ko Taranaki te iwi. No reira, tena koutou katoa. Colleen is currently managing 2 projects LINZ has established to improve the accuracy of the geodetic datasets (and therefore our geospatial information) including:

- Spatial Parcel Improvement - will improve the accuracy of the coordinates in the cadastre; and
- Parcel Linking Project - will aim to improve the maximum linking of land titles to survey parcels in Landonline.

Prior to this, Colleen was working in the LINZ Wellington Processing Centre managing the Southern team that was dedicated to processing Titles transactions in Landonline. Colleen will give conference participants an overview on some of the data products and services LINZ provides including accessibility and data improvement initiatives.

Mary Sue Severn, Director, Cooperative Research Centre for Spatial Information, New Zealand Geospatial Office. Mary Sue joined the Geospatial Office team in April this year, to launch the New Zealand node of the hugely successful Australian CRC for Spatial Information – known as CRCSI. CRCSI is a research and development programme funded by the Australian government and its participants to deliver national social and economic benefits and to build a stronger spatial industry. Participants come from government, private sector, academic and research organisations. There is clearly a strong desire for closer economic relations between New Zealand and Australia and LINZ could see the benefits to be gained for both countries through closer alignment of our respective spatial industries. LINZ became a CRCSI participant earlier this year as a key step in this process. Mary Sue will outline the work programme of the Geospatial Strategy and the goals of CRCSI in New Zealand. She will also extend an invitation to explore the opportunities available to the Maori community to get involved in CRCSI.

Maxine Bluett, Advisor - New Zealand Geographic Board. Ko Mataatua te waka, ko Ngāti Awa, Te Whanau ā Apanui, Ngāi te Rangi, Ngā Potiki, me Taranaki aku iwi, ko Te Whare o Toroa te marae, ko Wairaka te whare tīpuna. I tipu ake ahau i Whakatane. No reira, tena koutou katoa. Maxine has worked at LINZ as an Advisor for the New Zealand Geographic Board since February 2009. Her work covers a number of tasks with place names and a particular focus on place names as part of redress in Treaty Settlement claims. She has a Masters Degree in Indigenous Studies majoring in land issues and currently is in her first phase of a PhD titled Māori Nomenclature. Maxine will provide a brief view of the process involved in Treaty place name redress, including the New Zealand Geographic Boards principal functions and legislative responsibilities.

Whakaaturanga 14 | PAT HAWKINKELS, MAF

This presentation will focus on the Mapping Standards for the Emissions Trading Scheme

Whakaaturanga 15 | EAGLE TECHNOLOGY, CLAIRE THURLOW

Claire is the GIS Education and Training Manager at Eagle Technology based in Wellington. Claire has been involved in GIS for just over 10 years having started her career at GNS Science and moved on to serve the

community in several local government organisations she now facilitates learning in GIS and spatial awareness through her current role with Eagle Technology.

GIS in Schools: This presentation will focus on the "GIS in Schools" programme administered by Eagle Technology, concentrating on the unique opportunities that internet GIS technology can contribute to the education arena especially around student participation and in rural and less affluent schools.

Whakaaturanga 16 | SIBA (SPATIAL INDUSTRIES BUSINESS ASSOCIATION), MIKE POWNALL

Mike Pownall is the Secretary of SIBA and will present on their current work within the spatial industries sector

Whakaaturanga 17 | TIRA POUHERE TAONGA, HISTORIC PLACES TRUST

The Tira Pouhere Taonga is the Maori Heritage Team of NZ Historic Places Trust - Pouhere Taonga. HPT became a Crown Entity in 2004. The Tira Pouhere Taonga has 12 members covering the whole country and are based in the national and regional offices of HPT. The Tira reports to the Maori Heritage Council and the Chief Executive of HPT through the Kaihautu or National Maori Heritage Manager. The Maori Heritage Council is chaired by Sir Tumu Te Heuheu and has 4 members on the Trust Board of HPT. Te Kenehi Teira is the Kaihautu of HPT and is responsible for management of the Tira. Te Kenehi Teira is from the Ngati Raukawa of Kapiti and Waikato and also Ngati Kuia of the South Island. His presentation at the Maori GIS conference is supported by Tira members: Ellen Andersen of Ngati Raukawa of Kapiti who is based in Tauranga, Suzie Collins of Ngati Raukawa of Waikato and Ngati Hako who is based in Wellington, Dean Whiting of Te Whanau Apanui who is based in Wellington and Rei Kohere of Ngati Porou and Ngai Tahu who is based at East Cape. The presentation abstract provides an outline of the Maori Heritage services that the Tira provides to Whanau, Hapu and Iwi.

Utilising NZHPT Pouhere Taonga Resources for Maori GIS Projects: Te Tira o Pouhere Taonga, the Maori heritage team at New Zealand Historic Places is a dedicated team working on Maori heritage around Aotearoa New Zealand. This work includes Maori built heritage conservation, archaeology, wahi tapu registration, input to resource consent processes and support for whanau, hapu and iwi heritage projects including site identification. In undertaking heritage focussed GIS mapping projects, iwi, hapu and whanau should be aware of the scope of NZHPT's work, the potential for partnership projects, and the resources, records and information NZHPT has to offer. NZHPT is involved in key statutory processes that involve Maori heritage including the archaeological authority process, Crown Land Disposal Process and wahi tapu registration. NZHPT has also recently developed its own GIS inventory system called Pataka which enables staff to identify and record heritage information on a spatial system for the first time.

Whakaaturanga 18 | NZAA, SIMON BICKLER,

60,000 Records and Counting: The Creation of the New Zealand's Archaeological Association's ArchSite GIS Database: Simon will present on the new NZAA web site for NZAA records

Whakaaturanga 19 | NGA WHENUA RAHUI, ROLAND POMANA

Roland Pomana (Te Iwi O Rakaipaka) is a Business Analyst with Nga Whenua Rahui based in Gisborne. He has a been involved in GIS just going on ten years, starting his career within the forestry sector and then moving on work for the Department of Conservation before taking up his current role with Nga Whenua Rahui.

Working smarter, not harder! Roland will provide an overview of the fund and the work it carries out but will focus more on the issues the fund currently faces and its implementation of prioritisation tools and also the use of technology available to field staff.

Whakaaturanga 20 | MANAAKI WHENUA, LANDCARE RESEARCH

Garth Harmsworth, Manaaki Whenua, Landcare Research: Garth Harmsworth (Te Arawa, Ngāti Tūwharetoa, Ngati Raukawa) is a senior environmental scientist based in Palmerston North and has worked for Landcare Research since 1992. His career spans over 24 years in resource management, land resource assessment, national environmental databases, GIS applications, and indigenous research. Garth pioneered much of the Maori led research in Manaaki Whenua-Landcare Research Ltd., working on a wide range projects with Maori organisations throughout New Zealand, particularly in the areas of land use planning, ecosystem health, bio-physical and cultural indicators, restoring indigenous landscapes, climate change, sustainable iwi/hapū resource development, building Māori research capability, collaborative learning, and indigenous Māori knowledge and values. Major achievements and publications reflect an in-depth relationship and extensive networking during the last 24 years, work in at least 20 Māori research projects, and a large number of consultancies/working relationships/supply of information to staff in: iwi and hapū organisations; central and local government; non government organisations. Examples of Garth's research can be found at: http://www.landcareresearch.co.nz/research/sustainablesoc/social/indigenous_index.asp contact HarmsworthG@LandcareResearch.co.nz

Māori land and environmental statistics using GIS: Little work has been carried out in NZ to characterise and quantify Māori land, and understand its physical resource base, potential, and current issues. "Māori land" can have a wide variety of definitions. One is "Māori freehold land", all land registered in the Māori Land Court defined by Te Ture Whenua Māori Act 1993, and this definition is commonly used to determine the status of Māori land. GIS analyses of the Māori land information database MLIB (TPK 1998) have been carried out and we use the commonly quoted total area of 1.5 million ha (~6% of NZ) – TPK 1998 as a base figure. The MLIB is used to calculate areas of physical resource characteristics and environmental statistics for New Zealand. This provides an estimate of the land resource potential and present condition of Māori land at a national and regional level. Research from several projects have shown that we are still very unsure how much Māori land there is in New Zealand, where it is, what its detailed characteristics are, and what its potential is, and this has ramifications for setting effective policy, targeting resources, improving utilisation, and driving economic development and owner aspirations.

Chris McDowall, Manaaki Whenua, Landcare Research | A web based Māori land visualisation tool
There are few online tools that support Māori land use planning and decision-making. We will demonstrate a web-based prototype visualisation tool for accessing environmental data from Manaaki Whenua for Māori land blocks throughout New Zealand. We have developed a demonstration website that enables people to search, interrogate and summarise environmental land resource data for every land parcel in Te Puni Kokiri's Māori Land Information database (MLIB). Each Māori land block has its own webpage describing its location, placenames, land area, features, and land resources (e.g. land capability, land potential, soils, vegetative cover, current land use) through charts, maps, summary statistics and tables. The methods underlying this system suggest a path forward for integrating Māori land information with other databases that sit in a variety of agencies across New Zealand. This demonstration will show how the tool can be used to access environmental data and summarise key physical characteristics to identify land potential for Māori land in New Zealand.

Whakaaturanga 21 | BECA, AVESHNY MASSEY

Beca is a professional services consultancy working throughout New Zealand in the areas of Civil Engineering, Project Management and Planning. The Beca GIS team is a team of 16 GIS professionals based in Auckland and Wellington working with a wide variety of national and local clients in the private and public sector.

Mapping and managing land assets as part of settlement processes: Beca works closely with the Office of Treaty Settlements to provide high quality cartography representing land areas and assets as part of settlement processes. During this presentation we will outline some of our experiences and learning's from this process and discuss some ideas for taking the wealth of information created in GIS beyond the settlement and into the ongoing management of these assets.

Whakaaturanga 22 | TERRALINK INTERNATIONAL CO, BEN DUNSHEATH

Ben Dunsheath, Terralink International Ben is a Business Development Manager with Terralink International. Ben has developed GIS solution offerings within Central and Local Government, Utility and Engineering sectors with a focus on GIS data capture, consultancy and data services. Ben holds a Bachelor with Honours Degree in Science and a Graduate Diploma in Information Systems from Victoria University.

Terraview Platinum: Terraview Platinum (TVP) is a powerful, yet cost effective "mini GIS" solution for Iwi. As TVP software is installed on your laptop, PC or network you don't need to rely on an internet connection, ideal for rural areas where Internet connectivity is limited. TVP has complete and accurate land and property information on over three million land parcels throughout New Zealand. TVP has a range of mapping tools and functionality which also allows users to import and export their own data sets. You can build your own layers to show the location of your assets and development plans and create, customise and save reports that can then be emailed, faxed or printed for hard copy presentation. Data for Terraview Platinum is drawn directly from Terralink's comprehensive land and property information database which provides data for some of the largest GIS users in New Zealand.

Whakaaturanga 23 | SKM, AJ WEIR

AJ Weir has been with SKM for four years as a GIS Consultant to public and private organizations including NZ Defence, NZTA and MfE. AJ also consults with Iwi regarding historical mapping to support their Waitangi Tribunal negotiations. She is skilled in geographical analysis and map production along with satellite imagery and aerial photography interpretation. AJ has tutored at a university level and is an advanced ArcGIS user. AJ has also spent periods of time overseas assisting with project delivery in some of SKM's international offices.

Past, Present, and Potential: AJ will share some key learnings about the collaborative journey between SKM and iwi to capture, map and display Sites of Significance and other areas of cultural importance.

Whakaaturanga 24 | GARRY CHRISTOFFERSEN, BOFFA MISKELL

Garry Christoffersen: Garry has been working in the GIS industry for over 15 years, and during this time has worked for Local Government and his own company. In the last four years he has worked for Boffa Miskell Limited, an environmental consultancy company, of which he was recently made a Principal. He has also been chairman of the ESRI user group for two years. During his career, Garry has worked on a diverse range of site specific, local and national projects, including strategies, asset management, data conversion and mapping. He has worked with a number of iwi and hapu on Maori GIS projects including strategic mapping, significant sites and GIS implementations.

Kotahi te Whakaaro: Geographic Information Systems have been in use in New Zealand since the early 1990's, with forestry companies, Central and Local Government being the early adopters of the technology. It could be argued that it is early days in the development and use of GIS in a Maori context. Now is the prime opportunity to learn from the experiences of those who have gone before us, to build on their successes, improve where they could have done better, and to have a vision for the future yet conceived. This presentation will discuss these ideas, and challenge those present to contribute to what could be collectively the best GIS in the world ■