Impacts and Considerations for Indigenous Populations using Open Source

Karaitiana Taiuru

http://www.Taiuru.Maori.nz
@ktaiuru
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This presentation was first presented by Karaitiana Taiuru to the Open Source/Open Society 2015 conference (Indigenous break out session) in Wellington on April 17 2015.

Notes from the presentation will be published separately.

Original source http://www.taiuru.maori.nz
About Me

- Ngai Tahu, Ngati Kahungunu, Ngati Toa
- From Christchurch
- Past 20 years in ICT and Web with a focus on Maori, Indigenous and Asia Pacific issues

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Introduction

- An holistic description and comparison of Maori Culture and Society (Te Ao Maori) and Open Source Culture (Te Ao Tino Rangatiratanga).
- I will conclude each page with a benefit to Maori and other Indigenous Peoples.
- The aim is to enlighten both the Open Source Community and Indigenous Peoples about each other.
My intention...

- Open Source community will be able to see how Indigenous Peoples think and therefore be able to offer better solutions.
- Indigenous Peoples will better understand the need for Open Source technologies.
Whakapapa/Knowledge
Genealogy/ Whakapapa (1)

- Everything in the Maori world has whakapapa including all natural things, buildings, carvings, jewelry, people and places.
- Whakapapa meant supreme knowledge of the natural environment and how to appease the relevant gods, read the stars.
Genealogy/ Whakapapa (2)

- Open Source has whakapapa in manuals, licenses.
- Open Source is respectful to Maori as Maori can learn and become tohunga in Open Source.
- Gods or developers?
- Prayers/karakia Online forums, Manuals.
Geneology/ Whakapapa (3)

- All Maori Iwi now face an issue of recording genealogies in a cultural sensitive matter
- IP must fully remain with Iwi
- Systems must be culturally sensitive
- Indigenous view that images and names have spiritual connections.


**Tino Rangatiratanga / Open Source**

- 1. (noun) self-determination, sovereignty, autonomy, self-government, domination, rule, control, power. ([http://www.maoridictionary.co.nz](http://www.maoridictionary.co.nz))
- I have coined this term for Open Source.
**Internet - Ipurangi**

- Internet is equivalent to the whole world.
- Maori understood there were other parts of the world such as Polynesia but they resided in Aotearoa/New Zealand.
Internet from Southern Cross Cable

- This is equivalent to Aotearoa/New Zealand
- Further defined by...
Network Providers/iwi

- Network Providers are the same as Iwi.
- Iwi are large groups of related families who reside in the same geographic region.
Networks/Hapu

- Corporate/Education/Organisation and personal networks are the same as traditional Maori hapu.
- A Maori hapu is a sub group of an Iwi that comprises of more closely related families in the same geographic region.
Web sites/Whanau

- Web sites are the same as whanau
- Whanau is a Maori family of blood connections whom share the same DNA and tangata are the people.
Computers / Rorohiko

- Computers are the people.
- Systems and apps are the body parts that make the people
- Systems and apps need whakapapa and appropriate names.
Firewall and AntiVirus / Pa

- A pa is a fortified village that protected all members of a family, hapu and Iwi who sought safety.
- Often more than one and there were traps and decoys to protect the pa.
Social media and crowd sourcing /Marae

- A marae is where Iwi, hapu, whanau and tangata met to discuss various topics, catch up with friends and to generally create a large social gathering.
- Maori culture are accustomed to crowd sourcing and open planning
Mobile phone/ Waea Pukoro

- Traditional Maori musical instrument called a Purerehua created sounds in the wind and was used for communication.
Tohunga/Learned Experts

- Every Maori community had Tohunga who were recognised experts in various parts of society such as: Celestial, gardens, spiritual world, medicine and education. Open Source communities have developers and software creators.
Open Source and Proprietary from an Indigenous view
Commercial and Proprietary software and systems

Could be referred to as colonial.
Proprietary systems and software

- International conglomerates take Intellectual Property that has remained within traditional Indigenous knowledge for centuries.
- Maori can not understand the environment
- Help and information are not readily available.
- A user pays for the right to access their own information
Te reo Maori
The Maori language
Te Reo Maori/Maori Language

- About 100,000 newly created ICT words since 1997
- Linux distro was the first system to have majority localised into te reo Maori.
- Translators and experts do not want to share and give away their IP to corporate thus resulting in a lack of new terminology being created.
Newly created ICT terminology

- Often come with licenses and personal pressure not to share.
- Some translators are paid and others are not.
- New words created in isolation create confusion.
- Ensure you have a language expert such as Ian Cormack.
Localization Projects

- Historically failed to be successful due to lack of translators.
- 2015 there is a lack of communication between Indigenous Peoples and Open Source community.
- There are te reo sources for may projects
Security
Indigenous lead security

- Indigenous for Indigenous can benefit all.
- Perhaps not important for non Indigenous Peoples.
Maori Diceware Password Generation

- Use a Creative Commons licensed publicly available te reo Maori word list of 250,000 words.
- Striped down to meet diceware phrases
- *Intention is for an offline javascript html page to generate high entropy diceware passwords using Maori words.*
- *Premise: 10 ( or more ) Maori words randomly generated from 12,585 word list is \( \log_2( \frac{12585^{10}}{2} ) = 135.19 \) bits.*
Pareto Security

Designed as a broadbased PHP security fixer class for CMS such as Drupal, Wordpress, Joomla, osCommerce and other content management systems.

Written in PHP 5

This class can filter requests to recognise malicious values and either call a 403 access denied (default), or optionally add the offending IP address to the banned list in the root htaccess file of a website.
Nga Patai/Questions

1) What does OS mean to Maori communities - Matauranga Maori/Maori Knowledge? (Intellectual property/access)
2) How can OS provide an opportunity better connect and engage with Maori/disengaged communities
3) What could OS do to open up transparency and decision making in Maori communities?
4) What are the current developments taking place in the Maori World that may be of interest to the OS community?