

Ph.D. Candidate

**Mele Estella Tupou Rakai**

Graduate Academic Unit

**Geodesy & Geomatics Engineering**

#####

**Monday, December 20, 2004**

**10:00 a.m.**

**ADI Studio (Room HC 25)  
Head Hall**

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**Examining Board**

Dr. Sue Nichols (Geodesy & Geomatics Eng.)  
Dr. David Coleman (Geodesy & Geomatics Eng.)  
Dr. Ian Methven (Centre for Property Studies)  
Dr. Melanie Wiber (Anthropology)

Supervisor  
  
  
Chairperson

**External Examiner:**

Dr. Jim Riddell  
Dept. of Anthropology  
University of Wisconsin

**The Oral Examination will be chaired by:**

Dr. Gwendolyn Davies, Dean of Graduate Studies &  
Associate Vice-President (Research)

**BIOGRAPHY**

**Universities attended:**

University of Otago (1984) B. Surveying  
University of Melbourne (1994) M. Surveying Science  
University of New Brunswick (1996-2004) PhD candidate

**Publications:**

Mao, L. and Rakai, M. (2004). *Towards Operational Land Information Systems: Lessons learnt from Canada and China*, **Proceedings of the Commonwealth Association of Surveying and Land Economy (CASLE) Conference**, Chelmsford, Essex, UK.

Rakai, M. and Nichols, S. (2003). *Land Tenure Options for the Mi'kmaq of Mainland Nova Scotia*, **Research report submitted to the Confederacy of Mainland Mi'kmaq**, Nova Scotia, June 2003, 20 pp.

Rakai, M. and Nichols, S. (2002). *International comparisons of Aboriginal tenure systems*, **Research report submitted to the Confederacy of Mainland Mi'kmaq**, Nova Scotia, November 2002, 20 pp.

Rakai, M. and Nichols, S. (2002). *Existing Aboriginal land tenure systems in Canada*, **Research report submitted to the Confederacy of Mainland Mi'kmaq**, Nova Scotia, October 2002, 20 pp.

Rakai, M. and Nichols, S. (2001). *Traditional and Current Mikmaq tenure arrangements and issues*, **Research report submitted to the Confederacy of Mainland Mi'kmaq**, Nova Scotia, Aug 2001, 20 pp.

Nichols, S. and Rakai, M. (2001). *Land Reform Canadian Style: An Overview of Aboriginal Rights and Land Claims Settlements*. **Land Reform Bulletin**, Issue 2001/1, FAO, Rome.

Nichols, S. and Rakai, M. (1999). *Land Acquisition Options for the Mainland Mikmaq of Nova Scotia*, **Report prepared for the Confederacy of Mainland Mikmaq**, Nova Scotia, May 1999, 20 pp.

Rakai, M. (1998). *Using GIS and Traditional Ecological Knowledge for Native Land Claims*, **Commission Paper, Land Tenure Centre**, University of Wisconsin, Madison.

Rakai, Mele Estella T. (1997). *Agrarian reform and rural development strategies in the Pacific*, **Proceedings of FAO Rural Development International Workshop**, 9-13 April 1996, Gödöllő, Hungary. Rome. Published by Rural Development Division, FAO, Rome, p. 129-144)

Rakai, M. (1996). *The Fiji Land Information System – its past, present and future*

**A NEUTRAL FRAMEWORK FOR MODELLING AND ANALYSING  
ABORIGINAL LAND TENURE SYSTEMS  
A Study for the Mi'kmaq of Mainland Nova Scotia**

**Abstract**

Land tenure and land administration are culture-laden areas, as can be seen in Canada, where Aboriginal land tenure and land administration systems are challenging the conventional theory of property rights and western models of land administration. There is a need to better understand land tenure if land administration, which is concerned with implementing land tenure policies, is to be re-designed and improved upon.

This thesis is concerned with developing a framework to guide the analysis, modelling, design and implementation of land tenure reforms for Aboriginal communities. A problem highlighted by the cross-cultural land tenure literature is the inherently biased emphasis of current land administrations towards eurocentric concepts of land and land tenure. The primary objective of this research is to help alleviate this inequitable eurocentric bias by developing an ethnocentrically neutral analytical framework for analysing and designing proposed reforms of Aboriginal land tenure and land administration systems from the Aboriginal community's perspective. The major conclusion of this research is that the research objective can be achieved by developing a neutral framework that incorporates the cultural worldviews and aspirations of the community; and rigorously analyses, models and compares the land tenure systems of the Aboriginal group.

The development of the ethnocentrically neutral framework is based on integrating concepts and approaches from anthropology, geomatics engineering and soft systems engineering. The neutral framework entails first using comparative design criteria of worldviews, values, concepts, goals and institutions of members of a community, to conduct an initial cultural analysis of the land tenure situation. This allows the historic and prevailing conditions and issues affecting the Aboriginal land tenure systems to be described and analysed from the cultural perspective of the subject Aboriginal group. Conceptual logical models are then developed for problematic issues identified in the initial cultural analysis, to enable comparisons to be made between each developed conceptual model and its relevant existing land tenure system or subsystem. The comparisons are then evaluated to identify desirable and feasible reforms that are required to be made to the existing land tenure system of the subject community.

The neutral framework is tested by applying it to the Mi'kmaq of mainland Nova Scotia, an Aboriginal community in eastern Canada. Comparisons are also made with the Nisga'a and the Lheidli T'enneh communities in western Canada.