

Alternative Map Representations: The Adaption of GIS to Suit the Mapping Needs of Indigenous Communities

Teresa C. Crowley

Department of Geomatics, University of Melbourne, Parkville, Victoria, Australia, 3010

Fax: +61+3-9347-2916 Email: tcrowley@sli.unimelb.edu.au

Gary J. Hunter

Department of Geomatics, University of Melbourne, Parkville, Victoria, Australia, 3010

Fax: +61+3-9347-2916 Email: garyh@unimelb.edu.au

Compared to westerners, indigenous communities have a unique way of expressing their relationship to land. Westerners refer to the place where they live as 'home' and view land as a commodity. On the other hand, indigenous communities refer to that place as 'country', 'life source' or 'spirit centre' and land remains central to their culture, often underlying the network of their social organization. Frequently, indigenous populations hold intrinsic spiritual connections to land while still possessing distinctly defined proprietary rights over it. Often they simply do not use the words *property* or *ownership*. Land is regarded three dimensionally with traditional rights and responsibilities in place of western ownership concepts. Although diverse in origin and language, indigenous communities often hold relatively similar philosophies on land stewardship, creation, community responsibility and common property.

When westerners map land, they use spatially defined boundaries, scales, projections, datums and cadastral systems. However, when indigenous communities map land, they may in fact sing or tell stories, paint, carve totem poles, use body tattoos, dance, make music or create stone carvings to define their society and its relationship to land. Their maps are thematic with no scale, north point, projection or legend and they use generalization to great effect. In the eyes of a western cartographer, they may not even appear to be maps, but rather nice paintings, stories or unfamiliar songs. Yet indigenous people have been mapping their lands with such success that their descendants are still able to use this information to navigate vast distances across their country thousands of years later.

Increasingly, indigenous communities are now gaining self governing rights - often under a western system of government and they find their customary lands defined in a manner that is foreign to their traditional mapping systems. The systems that are available to these indigenous communities to map and manage their land are defined by western concepts of mapping and property. This paper seeks to identify the needs of indigenous communities when attempting to adapt western information systems to suit their complex cultural needs.