

MacEachren, A.M., 2001. New Directions in Geovisualization: Designing natural geoinformation access and analysis tools to support group work, **invited keynote presentation**, GeoCart'2001: Visualising New Zealand in the New Data Environment, Wairakei Resort, 30 April - 2 May 2001.

Abstract: Advances in telecommunications have made it possible to exchange data, images, and other information in real time and among locations across the globe, thus making collaborative work at a distance practical. Advances in computing are supporting real-time interaction with very large databases, through complex manipulable visual displays, and these advances are beginning to enable natural interaction through multiple modalities. Still, most tools that are intended to support geospatial information access, analysis, and decision making continue to be designed for use by individuals (rather than groups), directing (rather than interacting with) the system. This presentation will address the challenges involved in extending geovisualization (and geoinformation technologies generally) to support collaborative work by groups of individuals. The emphasis will be on development of an integrated cognitive-semiotic approach to collaborative geovisualization, and to "geocollaboration" more generally.