

Tools for the Rationalisation & Management of Data Collection – The Semantic Reef.

Myers¹, Trina, Ian Atkinson¹, Ron Johnstone².

1. James Cook University, Townsville Qld 4811 Australia..

2. Geography, Planning & Environmental Management. University of Queensland, St Lucia, Qld 4072

Corresponding author trina.myers@jcu.edu.au

The Semantic Reef project is an eco-informatics application that aims to combine multiple environmental datasets to test ecological hypotheses and to derive information about environmental systems. The intention is to develop an automated data processing, problem-solving and knowledge discovery system that will assist in developing our understanding and management of coral reef ecosystems.

Remote environmental monitoring (including sensor networks) is being widely developed and used for collecting real-time data across widely distributed locations. As the volume of raw data increases, it is envisaged that bottlenecks will develop in the data analysis phases, where current data processing procedures still involve manual manipulation that will soon become unfeasible to manage. Research communities, such as the Semantic Web and Knowledge Representation fields, aim to address this “data deluge”, through the development of the automated data synthesis technologies and use-case implementations such as described here.