

# **The nature and evolution of intra and inter group working relationships: a preliminary study**

Louise Young  
Associate Professor  
University of Technology, Sydney

Timothy Bock  
Lecturer  
University of Sydney

## Abstract

The IMP group has developed considerable interest in the way networks evolve through time. Work to date has been single and multiple case study method, inference of evolution with cross sectional data and simulation.

This study adopts a different methodology of survey-style time series data. A study was undertaken of five created networks each containing between three and six groups with membership of four to eight individuals (marketing students) per group. The five networks were completing five different market research projects for industry clients with the groups at various stages of the project competing (for selection of the best research proposal and final report to be sent to the client and for selection of methodology/instrumentation to be used for data collection) and collaborating (in information sharing, data collection and in some instances in analysis).

Data were collected at fortnightly intervals over the life of the projects. Each fortnight, group member charted their interactions with others and their satisfaction with all other members of their and group and members of the network with whom they were working. Summary data of the perceptions of the projects and group and network dynamics were also collected.

The paper presents preliminary results from the study, providing a first comparison of the networks, the groups and how they evolved. A form of neural network known as the self-organizing map is used to explore the extent to which an individual's performance influences the overall performance of a group and the network (e.g., how does the initial poor performance of one or more group members influence the performance of a group).

Results are compared to the pre-existing frameworks of relationship evolution.