

Analyzing the Dynamics of Community Formation using Brokering Activities

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Abstract

Understanding structures and processes of virtual communication networks can help to improve knowledge sharing and collaboration in a corporate setting. A widespread research method in that domain is Social Network Analysis. However, SNA only considers a summarized picture of the final structures of virtual community networks. It does not focus the understanding of the actors' underlying dynamic processes of structural evolution.

To overcome these shortcomings, we propose a methodology of dynamic network analysis based on small time windows and animations of network evolution.

Based on that method we introduce the measure Brokering Activity to identify persons which have actively contributed to community formation. In a study of corporate e-mail traffic, we compare this dynamic measure with current measures to show that it uncovers important networking agents, previously ignored. By plotting Brokering Activity over time, further insights about the dynamics of networking can be achieved.