Content-based Multiscale Social Network Visualization

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ABSTRACT

Social networks become larger and more complex when elements in social networks are no longer abstract topological nodes and links, and become social entities containing rich social attributes and reflect diverse social relationships. How to help people better understand a large social network with context information that offers insight into social relationships among social actors and social groups? This paper proposes a content-based visualization technique to display social networks as multiscale network structures, which are built on hierarchical clusters of social network components (e.g., nodes and links) and provide users with aggregated descriptions on cluster contents. This content-based multiscale visualization approach allows users to interact with social networks at different levels of detail and gain cross-scale understandings of social networks. Results from a case study of analyzing a corporate expertise network with our prototype system, ScaleNetVis, indicate this content-based multiscale approach can help users obtain more insight into social relationships of social networks and provide new ways to analyze social networks.

Author Keywords

Social network, visualization, multiscale views