Deriving Taxonomies from Automatic Analysis of Group Membership Structure in Large Social Networks.

Marc Egger, Kai Fischbach, Peter Gloor, Andre Lang, Mark Sprenger

Seminar für Wirtschaftsinformatik und Informationsmanagement Universität Köln, Pohligstraße 1, 50969 Köln

We develop a method to create taxonomies in large social networks solely based on users group membership information. We illustrate our technique using an example of the Flickr photo sharing network. This photo sharing community is a social network that enables users to collectively store digital pictures, interact and form groups of interest. Based on our earlier research of success indicators for individual actors on the Flickr Community, we extend the focus to groups of interest. Introducing the metric "Group-Connectivity" we perform a community segmentation. We then develop a method to automatically create taxonomies without the need for folksonomies or pre-existing ontologies.

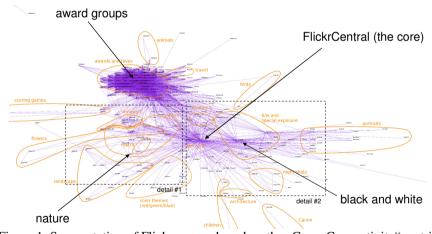


Figure 1: Segmentation of Flickr groups based on the "GroupConnectivity" metric



Figure 2: Taxonomy of Flickr groups (example)