

Networks of tag co-occurrence in collaborative tagging systems

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Collaborative tagging systems are attracting the attention of researchers in complex systems because they expose interesting interactions between web users and the information they process, as well as interactions among the users themselves. We give an overview of web-based collaborative tagging and describe the underlying network structure, a triadic hypergraph collaboratively build by users with no central coordination. The tag co-occurrence network, in particular, contains information on the emergent semantics of the system: we analyze a large-scale snapshot of a popular system, describe some properties of the tag co-occurrence network, and show how they can be used to detect non-social behavior and to infer semantic relations among tags.