

Multiagent Systems for the Social Competition Among Website Ratings

Matthias Nickles

Department of Informatics, Technical University of Munich
80290 München, Germany, nickles@cs.tum.edu

www7.in.tum.de/gruppen/kikog/projects/socionics/construct-s.htm

Summary

The self-description of websites and their hyper links referring to other sites usually reflect solely the requirements, opinions and preferences of the respective site owners, there is no explicit relation to the information, service and product offers of competing sites, and the assessment of the site by other users is unknown as well. To provide a “socially enhanced” solution for this problem, our project works towards open multiagent systems which (in contrast to usual filtering-oriented recommender systems) generate multi-dimensional, semantic website ratings which explicitly weigh and combine the possibly conflicting opinions of interacting rating agents which compete in the assertion of their individual ratings against others. These rating agents act as representatives of web surfers, interest communities, other web sites, private or public organizations, and represent their individual ratings in an open discussion forum which is attached to the rated web site. This forum is continuously observed by a rating instance which computes semantically rich, social weighted *general ratings* (of different abstraction levels) from the individual ratings as they show themselves in the agents communications. In contrast to the results of simple majority voting based recommender systems, a general rating makes social structures (like opinions, norms and roles) which emerge from communications *explicit* instead of filtering them regarding a certain user profile. In addition to the presentation of general ratings to the web surfer, these ratings can also be queried by external information agents (like web spiders) and by the rating agents themselves to improve their rating capabilities.

The described approach is based on the technical concept of the so-called *Social System Mirror* (SSM) component, which derives and models the social structures of a multiagent system and makes them visible both to the agents and to the application users. This concept is developed by the *ConStruct* project, which makes use of sociological theories to construct architectures for large adaptive multiagent systems (“artificial societies”) modelled after human society. Take a look at our website for more information and related project publications.

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