

Review collaboration networks

Jacob Sparre Andersen

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Abstract

We look at how the network of information exchange organises itself in a collaborative review system. Different dynamical models are considered. Their relative efficiencies are evaluated experimentally, and we attempt to construct a measure which corresponds to the experimental results.

1 Introduction

This paper considers the dynamics of information exchange in collaborative review systems such as that described in [1]. A review collaboration network can be described as a directed graph, where each node consists of an independent reviewer and a review correlator, and each link identifies a possible transfer of reviews. The review correlator is used to filter reviews and select content for the reviewers consideration. The reviewer's primary task is really to enjoy the selected content, but for our purpose in this paper the reviewer has opinions about content and distributes reviews describing these opinions.

To work efficiently, collaborative review systems need to exchange information among a large number of independent actors. This information exchange is imposed some limitations:

- Every actor does not know every other actor. – The network of actors is not fully connected. [TODO: Reference to papers describing typical acquaintance networks.]
- Review correlators can only work on a limited number of different kinds of reviews. – We can only expect a subset of the arriving reviews to be taken into consideration by each review correlator. The remaining traffic is wasted.

views to improve generalisation

- There is only a limited bandwidth along each link in the network.

2 Review distribution strategies

The two simplest strategies for distributing information in a review collaboration network are:

- Forward all reviews: The Usenet way of doing things.

- Forward own reviews: The e-mail way of doing things.

Forwarding all reviews works around the limitation that every actor does not know every other actor, at the expense of bandwidth. If we assume that the traffic volume is comparable to that on Usenet, then this solution can eat a significant fraction of the bandwidth on a typical private internet connection.

References

- [1] Jacob Sparre Andersen. Collaborative personalised TV programming. 2006.