A reputation based recommendation system over trusted nodes (iTrust)

Abstract:
Many interactions between users of networks rely on the establishment of Trust. This trust-establishment process involves an initial application of filters (automated) followed by a user-decision (manual). Our proposal extends from four primary filters of trust to a 'trust-by-trust' recommendation model, for categorizing nodes. We propose a recommendation system which works on expanding the user’s trusted nodes list, by means of factoring strength of recommendations made by already-trusted nodes. We explore different approaches for recommending nodes in social networking in MANETs on the basis of trusted nodes of each node in trust list of user. These approaches differ in method of trust information dissemination of a new node to user node by user’s trusted node and final trust score calculation of the new node. We argue pros and cons of each approach in terms of their design and implementation in MANETs. On the basis of these arguments and performance we narrow down to two approaches which can be used to make recommendations.