

Towards Increased Utility of and Satisfaction with Group Recommender Systems

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Abstract. Research on group recommender systems (GRS) has yielded innovative concepts for suggesting services or products to groups of users as well as for bringing users with similar tastes together. We have developed such concepts for group recommender systems and a platform in the domain of movie recommendations for groups. In this workshop we argue that putting a stronger focus on the evolution of the group negotiation process as well as social psychological concepts in the respective decision phase can increase the usability of GRS.

Keywords: Group Recommender Systems; Group Negotiation Process; Social Psychology.

1 Introduction

Since the early 2000s recommender systems actively take groups into account as a large amount of recommended items (such as movies, music, restaurants) are consumed in groups rather than by individual users [5, 8]. Group recommender systems (GRS) cover all individual users' tastes as a union in given recommendations and aim at considering the special challenges of a group's nature [7]. Accordingly, GRSs provide communication and mediation support to its users [8], especially awareness information within the group. A detailed overview on GRS concepts and systems can be found in [2].

In general, the GRS literature offers great concepts and systems for generating and presenting recommendations to groups. Approaches aim at including all group members towards satisfying decisions. However, we think that new, more sophisticated approaches can lead to a higher utility of and a greater satisfaction with group recommender systems. Moreover, GRS also should strive for a balance between pro-actively supporting users and reducing their effort while at the same time not limiting their freedom.

Subsequently, we briefly outline relevant parts of our research on GRS as well as introduce two areas that we think are valuable to focus on in further GRS research.

2 Glances at Some of Our Research on GRS

Our research on GRS has focused on recommendations in the domain of movies. We developed the AGRemo (Ad-hoc Group Recommendations Mobile) [1] process model and a mobile client implementation.

AGRemo allows users to receive shared movie recommendations and to actively participate in the process of decision-making in three phases: Preparation (i.e., group finding and preference specification), Decision (i.e., negotiation on given recommendation), and Action (i.e., watching the chosen movie and rating it afterwards).

The mobile application guides the group through the process and provides valuable background information on movies that are relevant to the group. It uses our collaborative-filtering based group recommender platform [3].

In a user study we gained insights on the importance of guidance through the recommendation process as well as on users' negotiation behaviour (e.g., they tend to explicitly exclude items that they do not want to watch together).

In a literature study on social psychological concepts [4], we matched core concepts to well-established factors influencing satisfaction in groups to inform the design of group recommender process models. We distilled the three most relevant social psychological concepts: group identification, group norms, and social roles.

3 Towards Utility and Satisfaction

For the workshop on Group Recommender Systems: Concepts, Technology, Evaluation (GroupRS) at the 21th Conference on User Modelling, Adaptation and Personalization – UMAP 2013 we suggest a stronger focus on the evolution of the group negotiation process as well as on social psychological concepts in the respective decision phase.

GRS should leverage on the collected interaction data of individual users and groups of users. From our empirical studies of group negotiations we found that the negotiation history of a group can provide important input for the current group discussion. The history can contain vital information on items from previous sessions that have been reserved by the group and also of items that have been excluded previously. Users models should include this information, which then leads to more adequate recommendations.

GRS need to base their concepts on socio-psychological findings on behaviour in groups, especially during group negotiations. Socio-psychological concepts are typically very complex and not easy to integrate into GRS. Still, some have been successfully integrated into GRS (e.g., the concept of social influence [6]). We identified three core concepts—group identification, group norms, and social roles—that need to be additionally integrated into GRS. Their integration creates new challenges for developing algorithms to generate recommendations, for modelling user interaction with the system, and for evaluating the usability of GRS.

4 Conclusions

In this position paper, we suggested a stronger focus on the group evolution and social psychology and we are looking forward to discuss these preliminary ideas at the workshop. This can increase users' confidence in the GRS, which allows on the one hand to facilitate negotiations as well as on the other hand to stimulate users with unprecedented recommendations.

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