

Секция «Вычислительная математика и кибернетика»

Reputation and Trust in Online Social Networks with Location-Awareness

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Internet offers many opportunities for virtual social interactions, which can be very useful, informative, fun and profitable. Indeed, the popularity of Online Social Networks (OSN) is growing in many areas of life (personal communications, information sharing, real-time collaborative work, recommendations, online dating, business, education, government, politics, forensics, data mining, science etc).

Moreover, Location-Awareness (LA) can be added to OSN (e.g Facebook Places, Foursquare etc) in order to enable additional social dynamics. For example, user-submitted location data can allow OSN to connect and coordinate users with local people, places or events that match their interests.

However, with the benefits from using OSN and LA in Internet, new problems, risks and undesirable consequences arise (privacy, security, overhead from incoming information, unnecessary openness, discomfort, low quality of service etc).

Information security systems, access control and privacy policies are supposed to solve the problem to some extent. However, they were neither developed for targeting “the open world of strangers“, nor include reputation and trust metrics as explicit fine-grained parameters.

Reputation and Trust (RnT) are known to be efficient mechanisms of social control in real life. It would be smart to use RnT in order to make online decisions more informative, safer and more secure. Some amount of research in online RnT systems has been already done by scientists [1, 2]. But from our perspective, the existent theoretical results and RnT systems have the following disadvantages: they are a) not intelligent enough; b) not made specifically for OSN; c) not taking into account LA.

The goal for this research work is to investigate the opportunities for designing more intelligent RnT systems, which could be integrated into OSN with LA. To achieve this, we are developing the following results [3]: RnT metrics, rules, policy representation, reasoning approach, system architecture, and use-case scenarios.

Литература

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