ABSTRACT

With the advent of online shopping, the *trust* and *reputation* system plays a significant role in *decision* making between the buyers and the sellers. The basic idea is to rate other parties or product, e.g. if a person buys an item, then the buyer gives a rating about the seller or the product. These ratings are of big help in decision making by new buyers to buy or not to buy from a particular seller. Reputation systems are successfully used in online commercial applications like bizrate[1], eBay[2], amazon[3] etc. The purpose of this project is to provide an overview of the existing reputation systems used by online shopping websites and to analyse these systems with respect to *privacy*. The use of cryptographic techniques to protect and preserve privacy of the raters and to protect the authenticity of the ratings as well as the reputation score, thus, calculated are exploited in the project. A new and a better privacy preserving reputation system is proposed and presented with simulation results to claim superiority of privacy preserving over non privacy preserving under probable presence of different types of adversaries, *viz.*, honest, fear of retaliation, collusion and unpredictable type of raters as well as honest, dishonest and semi-honest sellers who tries to rig the system with calculated moves.

Keywords: trust, reputation, decision, privacy.

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[1]http://www.bizrate.com/
[2]http://www.ebay.com/
[3]http://www.amazon.com/