Trust-free Systems - A New Research and Design Direction to Handle Trust Issues in P2P Systems: The Case of Bitcoin

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Martina Greiner
University of Nebraska at Omaha
mgreiner@unomaha.edu

Hui Wang
Radford University
hwang26@radford.edu

Abstract

Trust has always been important in electronic commerce. Prior research in MIS has mainly focused on trust-building mechanisms and insurance against opportunistic behavior. We suggest a "trust-free system" approach, which addresses trust issues by eliminating the need for trust. Using Bitcoin, a decentralized electronic cash system, we illustrate how a system can solve trust issues by becoming "trust-free" through design. We discuss the design features of this approach, and explore research questions for generalizing the design to other information systems. The idea of a trust-free system opens a new way of thinking about trust issues in information systems. We believe that there is an untapped potential for new ideas and research on how to design and evaluate information systems.

Keywords

Trust-free system, Bitcoin, trust