A Conceptual Trust Model for Managing E-Commerce Environment

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Abstract

E-commerce helps businesses to increase production flexibility by ensuring timely availability of components from suppliers. However, of paramount concern is the issue of trust. Some
trust models such as Pretty Good Privacy (PGP) and Public Key Infrastructure based on X.509 (PKIX) are based on the notion of delegation whereby one entity gives some of its authority to other entities. The problems with these models are: leaked public-key certificate, false owner's identity and how to manage the details about certificate. This study presents a flexible trust model based on human interactions. It involves dynamic evolution of trust between entities which is independent of the usage of certificates from trusted third parties. We describe trust in three folds: the default, initial and final trust. A prototype of this model was implemented using ASP.NET and C#. The result shows that while initial trust bestowed on a consumer is unstable and unpredictable, final trust of a consumer is partially stable and therefore fulfils integrity, competence and benevolence.

**Keywords:** E-Commerce, Trust, Integrity, Open Distributed environment, Trust Management.

Full Text:

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ISSN: 2006-5523