

Trust Management for SOA based Social WoT System

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Abstract— In recent past, the Internet of Things (IoT) has revolutionized the world. Web of Things (WoT) is a paradigm which comes under the umbrella of IoT. This paradigm is the result of communication solutions through web technologies resultantly ensuring interoperability among heterogeneous things. Such connectivity of things has many advantages, however, the quality of services provided by these things needs to be reputed and trustworthy. In this paper, a trust evaluation method using a genetic algorithm for a SOA-based Social WoT system has been proposed. The trustworthiness of each service is calculated by considering indirect and direct trust. Direct trust is based on the experience of service consumer whereas indirect trust considers the opinions of friends and community of the service seeker. By considering direct and indirect trust, the system minimizes the biasedness. The information related to trustworthiness is distributed hence ensuring that it can be accessed and used by any node. By effectively managing both types of trust through the proposed system, service seekers can select trustworthy and reputed service.

Keywords— IoT, SOA, SWoT, Trust, WoT.

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