Trust Management in Context-Aware and Service-Oriented Architectures (Invited Talk)

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Extended Abstract

In service-oriented architectures, services are the basic building blocks to dynamically compose complex business process across multiple administrative domains. The main goal is to support companies in the outsourcing of services to service providers that best suit their business needs, and dynamically reassign the services to other providers when changes in the business are necessary. The dynamic re-assignment of service providers in an open service market will only be successful if appropriate trust management mechanisms are put in place to provide guarantees that the desired service requirements are fulfilled. In context-aware and service-oriented architectures, there are additional trust requirements, because this type of service-oriented architecture makes use of privacy sensitive end-users' information collected from sensors and information providers surrounding the end users' physical space.

In this talk, I will report on trust and policy management issues in pervasive and service-oriented architectures. I will briefly discuss the social and legal requirements, describe the trust and policy management challenges we have identified, and introduce our trust and policy management approach to support end-users and service consumers in this service scenario. I will also comment on the ongoing research in the area of trustworthy enforcement and management of policies using the support provided by the Trusted Computing Platform.

Keywords: Context, trust, policy, management, privacy, pervasive systems, service-oriented architectures.