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Web Service for Knowledge Management in E-Marketplaces

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ABSTRACT

A common strategic initiative of organizations engaged in electronic business (e-business) is the development of synergistic relations with collaborating value-chain partners to deliver their value proposition to customers. This requires the transparent flow of problem specific knowledge to partner organizations over highly integrated information systems. Transparent exchange of information and knowledge across collaborating organizations requires technological foundations for integrating business processes using software architectures built upon industry standards. The unambiguously interpretable flow of knowledge to inform online business processes is a challenging task with significant competitive benefits for organizations that take technical initiative. Infomediary organizations can serve the e-business need for exchange of knowledge and information through value-added knowledge services to participating firms in the value chain through intelligent software systems integrated with the Web Services Architecture. We define knowledge services as the "exchange of problem domain-specific knowledge to inform decision activities of specific e-business processes, facilitated by an infomediary using intelligent software systems and the Web Services Architecture." This research presents a knowledge services framework, founded on the Web Services Architecture, to enable the transparent exchange of knowledge between intelligent software systems that manage processes of organizations engaged in e-business in the knowledge-based economy. The objective is to enable informed and knowledge-based discovery of business partners from among the multitude online, and to support knowledge-rich e-business processes that cut across the value chain and deliver the value proposition to the customer.

Keywords: Web service, knowledge management, intelligent agent, ontology, electronic marketplace.