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SEMANTIC WEB FOR e-COMMERCE



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ABSTRACT

The importance of Web services has been recognized and widely accepted by industry and academic research. This paper describes an ongoing research project involving the implementation of e-Commerce services on the Semantic Web. Semantic web has emerged as a web of next generation providing has various opportunities to enhance the over all performance of current web. SW technology provides foundation to enable exchange of knowledge and information to co-ordinate business processes. It can automatically compose web services through automatic discovery, selection & execution of web services. This research paper is highlighting an introduction to Semantic Web, e-Commerce as well as semantic web based e-Commerce. Also highlights on the lifecycle of a business-to-business e-Commerce interaction and discuss case of ebSemantics for Austira's e-commerce.

Keyword- e-Commerce, Semantic Web, ontologies, Life cycle, ebSemantics, OWL-S etc.

I. Introduction to Semantic Web

The semantic web initiative was started by Sir Tim Berners Lee who is the famous inventor of the World Wide Web and today's director of the World Wide Web Consortium W3C, the planet's leading standardization and development organization for Internet technologies. The Semantic web is a vision of new architecture for the World Wide Web, characterized by the association of machine-accessible formal semantics with more traditional web content. The semantic web's original motivations were to increase automation in processing Web-based information and to improve the interoperability of web-based information systems.

The Semantic Web is a Web that includes documents, or portions of documents, describing explicit relationships between things and containing semantic information intended for automated processing by our machines. The Semantic Web provides a common framework that allows data to be shared and reused across application, enterprise, and community bound-

aries. Though Semantic Web is not very old, a lot of work has been done diversely in its field. The work of semantic web ranges from distributed information systems to artificial intelligence. The need of Semantic Web strongly arises in the area of e-Commerce and e-governance. Various tools have been developed over the years for Semantic Web like to improve the process of search, searching of images, building ontologies etc.

II. Semantic Web Evolution

To be accurate, the Semantic Web is an extension of today's Web rather than an entirely new one. Championed by the father of the World Wide Web, Tim Berners-Lee.

There is enormous data on the web that is neither interrelated nor has a meaning attached to it. There is no common framework that allows data to be shared and reused across application, enterprise, and community boundaries. In order to solve this problem Semantic Web is introduced in late nineties.