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Abstract

'Traditional' Web Service technology like SOAP, WSDL in conjunction with UDDI are making their way into the mainstream distributed computing on an industrial scale. These traditional Web Service technologies are based on XML and use the Internet at the underlying world-wide communication and network infrastructure. With this Web Service technology come two fundamental problems that are encountered when implementing large scale distributed applications. First, they are based on the tight client/server paradigm where there is an assumption of clients invoking known services provided by servers. Second, since the traditional Web Service technology are based on XML, they are syntactic in their nature. As the interface data types and messages are XML based, their semantics can be guessed at best, involving human interpretation, with the fundamental problem of misinterpretation and misunderstanding.

This presentation will address both deficiencies and introduces a Semantic Web Service model that overcomes these limitations. A background discussion will analyze the traditional Web Service technologies. The outcome of this discussion will be contrasted with the integration requirements of cooperative and autonomous large scale distributed applications on the Internet scale. Finally, a Semantic Web Service model is introduced that proposal a solution to the limitations and overcome them while using traditional web service technology as a basis.