웹 서비스 분석기의 디자인과 구현

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Design and Implementation of Public Web Services Analyzer

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요 약

Web services (WS) present a new promising software technology, which provides application-to-application interaction. They are built on the top of existing web protocols and based on open XML standards. Web services are described using WSDL, and the UDDI is a integration directory provide a registry of Web Services descriptions. WSDL provides information of Web Services but it is getting more and more important to know more than those provided by WSDL. From WSDL we can not get the information like usage of WS, performance of WS, complexity of WS, usability of WS with other web service. In this paper, we proposed a new method for Web Services so called Public Web Services Analyzer (PWSA). This technique is based on analyzing various public UDDI registries in order to get various kinds of statistics of web services. Those statistics will be used by both web services developers and consumers for finding them suitable services for their needs. PWSA guarantees that it can provide enough information to find right web services for both Web Services Consumers and Web Service Developers.

1.　Introduction

Web services (WS) standards and technologies are expected to contribute in suppressing the cost and complexity of application integration within an enterprise and across enterprise boundaries. As the deployment of Web services increases in complex business application integration and collaborative business process scenarios, the analysis of Web Services is essential for the successful deployment of Web services. Currently, web services developers or consumers do not have pertinent means to access the information on the status or the quality of web services. Many proposals have been made to analyze and test the usage status of web services. However, most proposals are based on the analysis of WSDL files describing web services. Current WSDL does not contain sufficient information for a web services developer or web services consumer. For Instance, from standard WSDL description file for a web service, we can only know the inputs, outputs, the types of the inputs and outputs, the order of the types of the inputs and outputs, the order of the

inputs and outputs, and how the web service should be invoked [2]. More advanced information such as web services characteristics can not be obtained from just using WSDL file. Web Services characteristics include availability of WS, response time of WS, location of WS, complexity of WS, message size of WS, popularity of WS and usage of WS [1]. Another problem is that today there is no means to compare services of different web services. Comparing web services is important in two aspects. First, comparing services is a pre step to find best service among multiple candidate services. Second, more importantly, comparing different web services is useful when service developers are needed to find a web service that is useable with other web services. Suppose that we are given web services like car rental, ticket servicing and hotel reservation web services. Then developers can understand whether they can be one universal web service so called composite web services. To address above problems, we propose a new tool named Public Web Services