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## RESEARCH ARTICLE

### CONTRACT DESIGN TECHNIQUES FOR ENTERPRISE WEB SERVICES

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#### ABSTRACT

The paper presents a collection of design techniques for building enterprise web services. By applying the techniques to web services development but not only the development increases reusability and productivity, but also the web services improve ability and compatibility. Enterprise web services require high grade of competency in designing web service contracts and A contract of web service formalizes an agreement between web service provider and consumer, in the forms of WSDLs, service schemas and policies. Contract - first method provides great potential of directly dealing with the contracts, a number of articles have been published regarding designing WS and XML schemas, however it is still risk for developers to find cookbooks or guidelines concentrated on designing web service contracts with contract-first method. To fill the gap, a set of web service techniques are introduced and deployed in practice, incorporating some best practices scattered in the web services community. These techniques cover to the most of the key aspects of web service, including consolidating service schemas in line with business entities, constructing coarse-grained namespaces, applying versioning over WSDLs and service schemas, and writing fine-grained filters with contracts.

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## INTRODUCTION

One of the main challenges in discovering Web Services Language (WSDL) is the fact that service registries do not provide enough query elements for clients to access the proper service queries that can meet their needs. However, discovering relevant Web services could not be achieved by using simple keyword-based search techniques are particularly as Web services proliferate. In order to differentiating Web services from each other using keyword matching techniques is impractical since little textual information is often provided in this web service discovery interfaces. In addition, discovery of Web service is no longer data attached to service registries as service portals and Web based search engines have become major sources for Web service.

## LITERATURE REVIEW

### Message passing using a internet protocol

S. Dustdar and W. Schreiner prescribed by its definition, A web service is a software system identified by the URL, whose

public interfaces and bindings are defined and described using XML. Its definition can be discovered to other software systems. These systems may then interact with the web service in a manner prescribed by its definition as using XML-based messages conveyed by internet protocols. This definition has been published by the world wide web consortium (W3C) and in this Web Services Architecture document (Booth et al., 2004). The web service model consists of three entities are the service provider, the service registry and the service consumer. Other models, such as a peer-to-peer structure.

### Contract first design techniques for building enterprise web services

Contract-first design and development is not something new. It was formally introduced by Bertrand Meyer as a part of Eiffel Programming Language design and has appeared in various technical publications since 1986. Therefore, understanding to contracts from an old-school tool and technology perspective might be helpful to grasp why it's useful. Although computers are today can do a lot of things from simple arithmetic to controlling the satellites orbiting our earth and the fundamental idea of an input-output machine hasn't changed since adding machines invented in 20th century. Consequently, software

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engineers still write functions that take some input and perform some work and output something. These functions are then used to other places. A contract of a function defines the expectations and this commitments of that function. In other words, input parameters to a function can be thought as its expectations and the return values can be considered to the commitment. Users of the function only need to know about exchanging SOAP messages. Modeling these message contracts is the second step of contract-first development. Defining a message contract has two aspects the contract to use it. Typically, services interact with their clients by. First, we should define the structure of the SOAP body. For that we use XSD to do this and also we can use data contracts that we defined earlier. The other aspect of the message contract is defining the structure of soap headers.

## MATERIALS AND METHODS

### Modules

Service registries are designed to provides a global framework for describing Web services, discovering businesses and their related to the Web service, and integrating Web services through the Web. Therefore, service registries should be allow the service providers to publish their Web service in an efficient manner while also allowing clients to find relevant Web service is an easy manner. However, the adoption rate of service registries is slow due to a wide variety of reasons. One of the main challenge in discovering Web services is the fact that service registries do not provide enough query elements for the client to articulate proper service queries that can meet their needs. However, discovering relevant Web service could not be achieved and that using simple keyword-based search techniques particularly as Web services proliferate. in this differentiating Web services from each other using keyword matching techniques is impractical since little textual information is often provided in this web service discovery interfaces. In addition, discovery of Web service is no longer attached to service registries as service portals and Web based search engines have become major sources for Web service discovery. Clients who are looking for relevant Web service will have to devote hours searching through potential service resource independently. What is the desirable to have a service broker that is capable of collecting Web service information from the heterogeneous environments (including service registries, search engines, and service portals) and providing a central access point for client to articulate their search queries in an efficient manner. Based on the above we conclude that is a need to establish the Web Service Broker (WSB) that potentially can be used to the discovery of Web services and fits a proper Web service architecture. In this work, we make the following contributions:

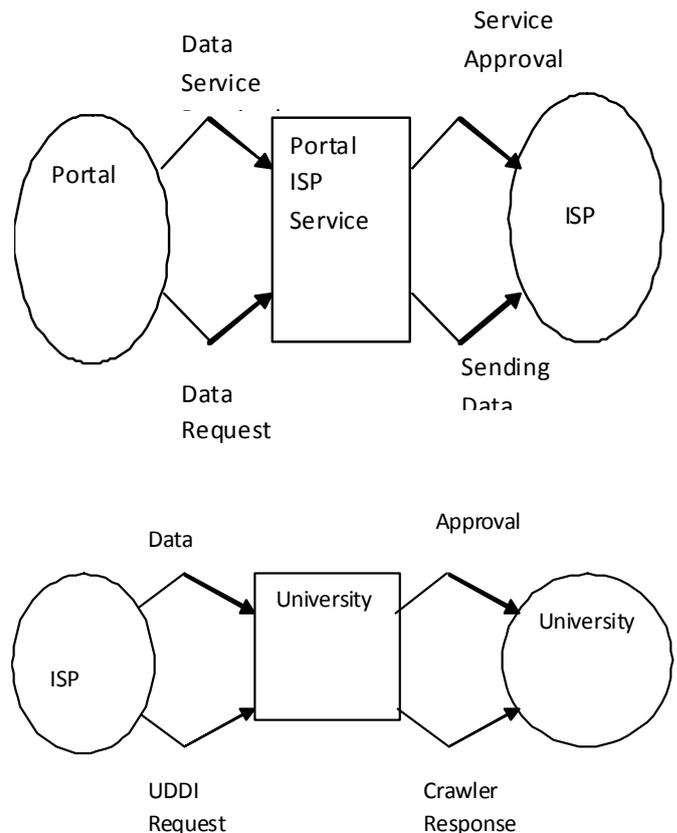
### This system has following main modules

- Client Service
- Enterprise Service Manager
  - Requesting Service
  - Data Calling Server

- Data Server
- Web Service Attendant
- Web crawler Engine
  - Service Identification
  - Service Replacement/Data Retain
- Data Repository
  - Academic Data Management

### Dataflow diagram

#### Level : 0



### Existing system

In existing system the data will be shared between servers by providing the parameter value from the client side to the requesting server page. After introducing the web services it will be used as a gateway for the data sharing but not used efficiently for the data sharing between servers.

Every requester will directly request the data to the main server there will not be a middleware for doing this. If the requester needs the same data the requester will again submit the request the main server. This will create a problem when the requester increases in numbers the service provider acquire problem some times the main server will be dead to response the requesters.

## Proposed system

Proposed system is being developed using ASP.NET as frontend and SQL SERVER as Backend. Now a day the Internet has become a powerful source of knowledge. Since net plays vital role in human life, automation of learning process is also essential. The Internet is a global network of networks that use a specific set of protocols.

## Conclusion

This System is a user-friendly one, which makes the product, testing, and defect details of the system in different forms of reports. The Developed system is Flexible and Robusted. The newly developed system consumes less processing time and productivity is increased.

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