

E-Vocher on Transportation: A Real Time Multifaceted Web Oriented Service

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Abstract---In the real world web services plays a major role in user's daily activities. The web services exist and are used for distinct domains. Transportation has an increasing demand now a day in man's life. Activities related to transportation are provided to user independently which is becoming a hectic task for the user. So this paper describes how to integrate independent activities of transportation using web services. This reduces the search time of user and provides an easy way of finding the services in transportation.

I. INTRODUCTION

Transportation decisions effects many aspects of human life. There are many support activities for transportation which are provided online (using Internet) independently. These activities include ticket booking, availability of seats, finding information and routes between two stations, cancellation of tickets. Accessing these activities becomes a tough task for the user. Integrating these activities using web service simplifies the complexity for user. Any service that is accessible across the Internet which is independent of language and machine is web service. The main use of web service is to provide good opportunities for the developers to build their own applications in which they are preferable. This also include security feature more as the communication for the request and response is done using the abstract language XML. Web service is a loose coupling and dynamic binding between the services in recent years, service-oriented computing has been regarded as a novel way to develop applications and web services are usually adopted as the building blocks .Web services are mainly used to improve performance of service oriented systems. Salient and interesting feature of web service is interoperability.

This paper provides a common interface to access the services of transportation namely railways and roadways. In general we find two different modules for accessing the services of railways and roadways that are worked independent of each other. The user can't identify which transportations are available for his destiny. one way is he has to visit both the independent modules namely railways and then search his request to find the activities namely finding the information about trains, availability of seats etc similarly in the same way he has to visit the module roadways and then search his request for his destiny. As result of this the user feels hectic in doing his job. This paper integrates these two independent modules into a single interface by providing a common page for his search criteria, according to his request it displays which mode of transportation is available. If both are available it will display both the modules namely roadways and railways

otherwise which module is available it will display. by doing this user can find easy way of taking decisions on which mode he is preferred to go and reduces the way of accessing the two independent modules to reach his destiny.

The activities provided by the common interface are

- (1) Providing an easy way of booking tickets
- (2) Finding information such as train availability, seat availability
- (3) Finding route
- (4) Cancellation

II. LITERATURE SURVEY

In the services are the building components of the service oriented computing. These are self-explanatory, self-describing and platform independent. The services are broadly classified into simple and composite services. Simple services are readily and deployable services to achieve the level of software quality. Composite service is joining of the existing services that provide access and functionality to the users. [1] [2]

The main aspects of the web service are service registering, service discovery, service selection and service composition. All these aspects play a crucial role in developing the service. Service selection states the platform for implementing the service. A service composition is purely based on service selection. [3]

The web service acts as a potential impact on the web. The key questions that arise are [4]

- 1) How the data can be easily accessed and it can be reused,
- 2) How the individual data can be represented from the multiple available services.
- 3) How to integrate multiple independent data sets into a single data sets

An "Intelligent Transportation Web Service (ITWS) that can be used by different web service clients, providers, or enterprises on request". The performance issues on data transmission and compression for ITWS. Two approaches that compress data before or after SOAP serialization are evaluated. The compression approach can reduce message size and transmission latency significantly, but there is an exchange among improvement effort and firmness performance. In our experiences, web services technology did reduce the complexity of system integration, but the performance degradation issues need be addressed.

A prototype to explain the feasibility of views was proposed by various technologies such as "JBuilder, XPath, and

XML.” An open problem that needs to be addressed in the case of multiple users, who belongs to the same composite service, but with different priorities and requirements, some of which could conflict the rest of the each other. A second problem is the “corrective strategies that need to be implemented in case user preferences are not dealt with properly, and the way these strategies affect the adaptability of the business process underlying a composition service”. Another problem is related to changes in user preferences and how much these changes affect first, the specification of a composite service and second the mechanisms for running views over a specification.

A view-based approach for providing the personalized Web services. Web services are subject to personalization when there is a need of providing user preferences during these Web services performance and outcomes delivery of this performance. To ensure that user choices are properly executed during Web services monitoring, a view has offered the opportunity of enlarging into the specification that composes Web services. As time advances, location changes, or constraint becomes satisfied, the deployment of a view over a specification progresses. Indeed, a view contains all the elements currently present within an ongoing composite service specification that are relevant to a particular context of user such as time and location.

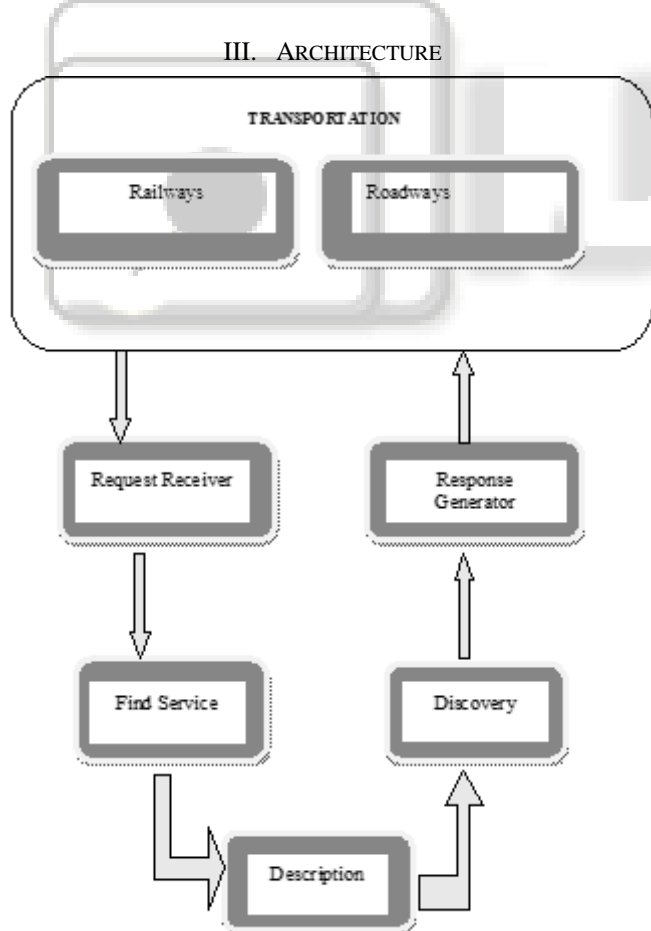


Fig. 1: Architecture of System

The above architecture resembles the service oriented point of architecture. This architecture is accumulated in the form of web service. According to the definition of web service, any service that is easily accessible across the Internet (or)

any service that is self-descriptive that is accomplished with some activities and can be accessible across the web. The parameters that are associated in this architecture are Request Receiver, Response Generator, Description and Discovery. The protocol implemented in this architecture is SOAP protocol.

The Request Receiver and Response Generator are the parameter that is associated with SOAP protocol. It is abbreviated as Simple Object Access Protocol. The protocol uses an Extensible Markup Language file for transmitting the information between the computers. This protocol initially supports XML-Remote Procedure Call that is implemented via HTTP protocol. The salient features of this protocol are messaging system and its platform and language independent.

The description addressed in this architecture is WSDL (Web Service Description Language). It plays a major role because it defines the specification of the service in the XML grammar. This functionality makes the service independent of the language, platform, and machine and makes it accessible across the internet. A WSDL file is having six elements and these are tabulated in the table shown below

DEFINITION	This element specifies the name of the web service that is providing.
TYPES	It provides all the data types that are used in the service.
MESSAGE	The protocol implements one-way messaging either request or response.
PORT TYPE	Combines multiple messages to form a complete round trip operation.
BINDING	How the service will be implemented on the wire.
SERVICE	Addresses for invoking the specified services.

Table. 1: Elements of WSDL file

The third and the last part of the architecture is discovering of the web service, this can be carried out by the UDDI (Universal Discovering Description And Integration). It is also a technical specification for demonstrating, finding and merging the services. It provides an opportunity for the major of the IT based companies to find and publish their developed services.

The data that is present in the UDDI represents in the form of pages. It mainly consists of three pages namely white yellow and green. The white page represents the information about the company such as name of the company, address and type of domain. The yellow page represents the information about the service or information about the company. The green page represents the information about the service such as service name, description of that service and its working principle.

IV. INTERNAL WORKING OF THE PROPOSED SYSTEM

The internal flow of the system is explained by the figure 2. The client interaction with the system begins by querying the travelling parameters to the service. According to the query entered, the parameters are sent to the service as arguments which are processed with updated database and the appropriate results are displayed as the available trains and bus. Now, user chooses the desired service (train or bus) and according to the user's choice the flow is changed to the

Train or Bus domain. In their respective domains later the availability of the service (#seats) and their details are displayed.

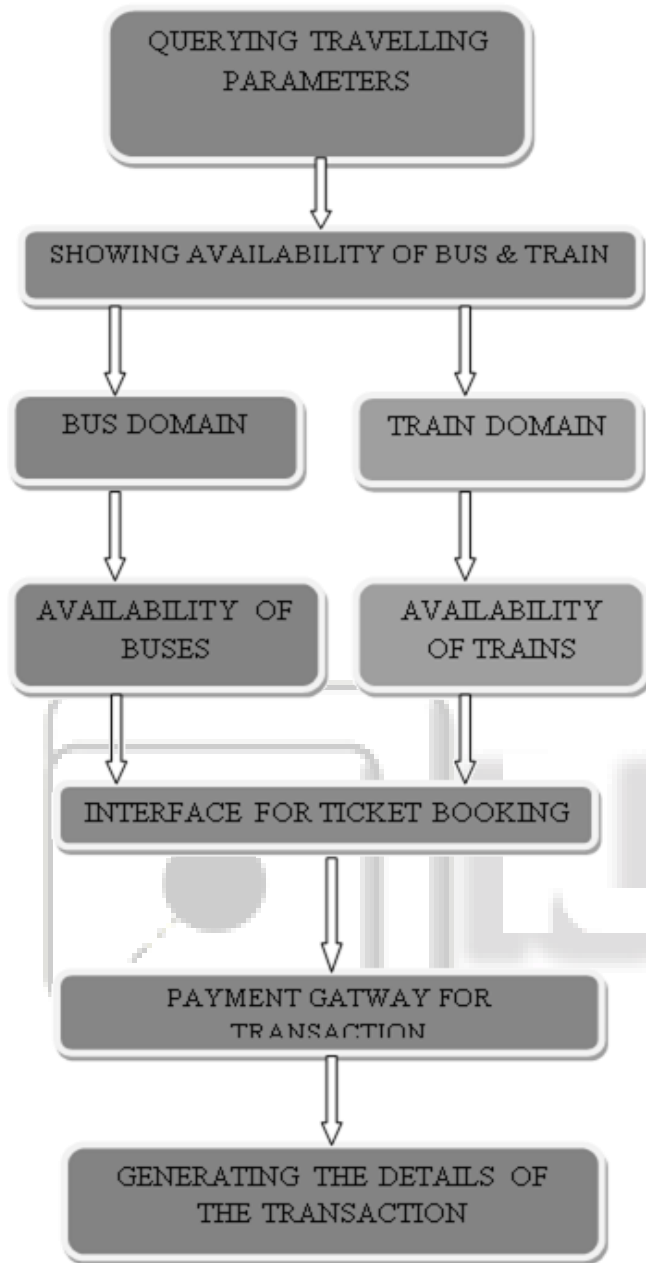


Fig. 2: Working of Proposed System

If the user selects for any reservation (ticket booking), the respective user credentials are verified .if the user is not authenticated he is prompted for authentication. User can be authenticated by registering to the domain and later logging in using those credentials. If the user is authenticated then the request is transferred to the banking domain where the banking service is activated. If the transaction is successful then the details of the transaction are given the user.

V. CONCLUSION

Web services play a crucial role on the internet for the user activities. Transportation is one of the major activities for the user. In the specified architecture provides a convenient and flexibility for the end user to search his queries for his

destination. It also states that easy to search which type of transportation mode is available according to the search criteria. As web service are platform machine and language independent there is no hardware and software related problems.

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- [4] Linked Social Service: Connecting Isolated Services into a Global Social Service Network Wuhui Chen¹, Incheon Paik¹, Patrick C.K. Hung^{1,2} ¹School of Computer Science and Engineering University of Aizu, Fukushima, Japan ² Business and Information Technology University of Ontario Institute of Technology (UOIT), Canada E-mail: chenwuhui21@gmail.com, paikic@u-aizu.ac.jp, patrick.hung@uoit.ca