Web Services Drive to Decision-Making and Data Consolidation

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By

Lai Kim Min

JABATAN HAL EHWAL AKADEMIK
(*Department of Academic Affairs*)
Universiti Utara Malaysia

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ABSTRAK

Dewasa ini, laman web dianggap sebagai medium untuk berkongsi maklumat di Internet. Kewujudan Perkhidmatan Web dapat membantu kebanyakan organisasi membuat aplikasi penggabungan melalui Internet. Justeru itu, Perkhidmatan Web berfungsi sebagai alat untuk mewujudkan komunikasi "*peer-to-peer*" antara dua entiti perniagaan dengan tujuan mengatasi kekangan "*middleware*". Penyelidikan ini bertujuan untuk mengkaji masalah pengagihan data bagi Kolej Informatics, iaitu sebuah kolej yang mempunyai cawangan yang banyak. Selain itu, Perkhidmatan Web (Prototaip Perkhidmatan Web) digunakan untuk membantu pihak pengurusan dalam proses pembuatan keputusan.

ABSTRACT

Nowadays, Web is considered as a common tool to share information on the Internet. With the advent of Web Services, many organizations used it as a medium to integrate inter-enterprise application across the Internet. Moreover, Web Services served as distributed apparatus for peer-to-peer communication between two business entities to overcome conventional middleware limitations. This research aims to study the data distribution problems of Informatics College (multi branch colleges). Apart from this, the purposes of the Web Services are used to formulate a consolidated and distributed solution (EIS and Mobile Web Services portal prototype) to assists managerial users to do decision-making.

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LIST OF ABBREVIATIONS

ADO	Active Data Object
ASP	Active Server Page
B2B	Business-to-Business
B2C	Business-to-Consumer
CASE	Computer-aided software engineering
CEO	Chief Executive Officer
CIO	Chief Information Officer
CORBA	Common Object Request Broker
CTO	Chief Technical Officer
DBMS	Database Management System
DCOM	Distributed Component Object Model
DMR	Daily Management Report
EDI	Electronic Data Interchange
EIS	Executive Information System
ER	Entity Relationship
EUCS	End User Computing Satisfaction
FTP	File Transfer Protocol
IBM	International Business Machines Corporation
IIS	Internet Information Service
J2EE	Java 2 Platform, Enterprise Edition
MMIT	Microsoft Mobile Internet Toolkit
MSDN	Microsoft Developer Network

LIST OF ABBREVIATIONS

OASIS	Organization for the Advancement of Structured Information Standards
OO	Object Oriented
OOM	Object Oriented Methodology
RMI	Remote Method Invocation
RPC	Remote Procedure Calls
SD	Standard Deviation
SDLC	System Development Life Cycle
SGML	Standard Generalized Markup Language
SOA	Service Oriented Architecture
SOAP	Simple Object Access Protocol
UDDI	Universal Description, Discovery, and Integration
UML	Unified Modeling Language
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
W3C	World Wide Web Consortium
WAP	Wireless Application Protocol
WS	Web Service
WSDL	Web Services Description Language
WS-I	Web Services Interoperability
WXS	W3C XML Schema
XML	Extensible Markup Language

CHAPTER 1

BACKGROUND OF STUDY

1.1 Introduction

Since many years ago, people have been struggled in data consolidation from different geographical locations. Data sharing cross multiple organizations has become a considerable concern in order to solve business transactional issues. Moreover, real time information was treated as critical success point for a company or organization in doing their right and accurate business decisions. However, data is always being segregated in many locations. In addition, numerous of organizations might use dissimilar type of software products and this will decrease the level of system co-operability dramatically.

In conjunction with this critical issue, software vendors had envisaged plentiful of techniques and approaches in order to solve data distribution problems. For instance snearkernet, File Transfer Protocol (FTP), remote invoking server scripts (Common Gateway Interface script), Electronic Data Interchange (EDI), Java Applet and third party middleware are the common techniques being used in data distribution. The most common way is to apply the conventional middleware to solve the application integration in different geographical locations. However, conventional middleware normally be controlled or hosted by third party company (privacy problems) and has

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