Chapter LVIII
Transformation of Business Processes of Export Companies to a Proposed Collaborative Environment with the Aid of Web Services and Mobile Technologies

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ABSTRACT

This chapter discusses the results of an action research project carried out at ImpexDocs in Sydney, Australia, by the lead author. The purpose of this action research was to investigate the business processes of companies involved in "EXPORTS" and to study how they collaborate with different service providers involved in exports from Australia. The report provides an insight in to understanding the applications of Collaborative Business Process Engineering (CBPE) in terms of improving the effectiveness and efficiency for all organizations involved in International Business, especially companies involved in exports and their associated service providers. The study demonstrates an understanding of the in-depth analyses of existing business processes, investigate the collaboration between the export companies system with other enterprises involved, investigate the existing channels of collaboration, investigate the common business processes threads through multiple application, investigate the applications that deal with external parties, and engineer collaborative processes across multiple organizations.

INTRODUCTION

This chapter outlines the key issues involved when the business processes and applications of the export companies integrate with those of associated service providers. A business process is a set of coordinated tasks and activities that guide the business in achieving its goals. Thus, a business process is an action taken in the course of conducting business. Whether manual or automated, all processes require input and generate output. Depending on the level of viewing and modeling, a process can be a single task or a complicated procedure made up of numerous phases, tasks and people - such as building a product (http://www.techweb.com/).

The technology of Web Services and mobile technologies (Emerging Technologies) have created the opportunities for businesses to integrate their applications and conduct business transactions irrespective of their technical platform and geographical boundaries. These advantages of Emerging Technologies (ET) adapted by organizations enable their business processes to interact on any platform by the aid of Web Services and at any location and time with the aid of Mobile Technologies. This chapter presents a collaborative business environment that enables integration of business processes across multiple organizations and applies it to an export organization. At the same, the proposed collaborative environment also has to face numerous challenges as such technical and methodological that needs to be studied and investigated as has been done in this chapter.

The chapter is classified in the following sections: a) abstract b) introduction c) literature on web services and mobile technologies d) literature of collaborative business e) description of the action research organization f) current collaborative environment g) proposed collaborative environment h) conclusions & future directions

WEB SERVICES AND MOBILE TECHNOLOGIES

The W3C (World Wide Web Consortium) has defined Web Services as a standard means of interoperating between different software applications, running on a variety of platforms and/or frameworks. Web Services can be understood through the Web services architec-ture that is, in fact, an *interoperability* architecture: it identifies those global elements of the global Web services network that are required in order to ensure interoperability between Web services (Booth, et al, 2004).

A Web Services (WS) is a delivery mechanism that can serve at the same time many different consumers on many multiple technological platforms. Web Services technology is an enabler to connect incompatible standalone systems to integrate a complex distributed system in a way that was not possible with previous technologies (Stacey & Unhelkar, 2004). WS are made up of the eXtensible Markup Langauge (XML), Web Services Description Language (WSDL) and the Universal Description and Discovery Integration (UDDI) stores both the technical information to build an application compatible with a Web services interface, as well as the information required to successfully bind to that interface at runtime. According to Unhelkar (2007), through the directory of the UDDI within the umbrella of WS, business can now register the services they are offering and allow the clients to search, locate and consume those services. The service properties within WS can be specified using a specific ontology (Leary & Salam & Singh, 2006)

Mobile technology has provided the organizations with a platform to access customers in special ways, reaching them through specific locations and otherwise providing a new value proposition (Unnithan, 2002). The correct application of mobile technologies into the business processes provides an opportunity for enterprises to gain advantages such as increased profits, satisfied customers and greater customer loyalty. These customer-related advantages will accrue only when the organization investigates its customer behaviour in the context of the mobile environment. Mobile Web Services (MWS) enable the creation of such environment. A MWS environment is capable of using Location Based Services and Global Positioning Services (GPS) which, as per Puustjarvi (2006) enable provision of location-specific services pertinent to their location.

The research has identified that such an extension is possible through the application of Web Services technologies. This statement also appears to be supported by Goethals and Vandenbulcke (2006), who mention that Web Services could be used for integrating system for collaboration even amongst unknown parties.

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