Chapter IX

Web Services and Their Impact in Creating a Paradigm Shift in the Process of Globalization

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Abstract

This chapter explores the impact of Web services in creating a paradigm shift in the way businesses strive to globalize. This fundamental shift in the paradigm of the globalization process occurs due to the fact that with Web services, it is not one single organization that starts dealing with its clients electronically but, rather, a number of organizations (a cluster) with common needs and complimentary services to offer that start dealing with each other electronically. Web services enable business applications to talk directly with each other without human intervention, resulting in rapid interactions among businesses at a global level. This opens up doors to the interesting phenomena of a group, or “cluster,” of businesses globalising simultaneously, as studied in this chapter.

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Introduction

Many information and communication technology (ICT) industry observers believe that web services technologies herald the next major wave in online computing and electronic business resulting in communication and integration of application services across varied technical chasms of operating systems, networks, databases, and security protocols. In fact increasing experience with web services indicates that they bring an altogether different dimension to the terms “e-business and globalization” (Unhelkar, 2003b). The impact of Internet and web services (WS) bring about a noticeable paradigm shift in terms of what is meant by a global business, how the business relates to other businesses, and how it manages its own internal processes that might themselves be geographically spread out. Most importantly, though, for this discussion is the manner in which an existing business transforms itself into such a global business – in other words the process of e-transformation or globalization. The Web has enabled businesses to explore hitherto unknown frontiers, a view also corroborated by Deshpande, Murugesan, and Hansen (2001), who correctly assert:

“With the advent of the World Wide Web, ‘computing’ has transcended the traditional computer science, information systems and software engineering in the sense that these three fields were strictly within the domain of a computing professional whereas the Web reaches the ‘world.’”

Web services ascend even this “traditional” understanding of the Web and make it imperative upon both technologists and business people to re-interpret the terms “Web” and “globalization.” This is so because web services enable business organizations to transcend the “enterprise divide” that exists both between and inside organizations. In fact web services appear to hold the key to erasing international computing boundaries and have left the door wide open to globalisation and automation of tasks (Unhelkar & Elliott, 2003).

This chapter discusses in detail the specific impact of web services on the nature of, as well as the approach to, electronic globalisation of businesses. It delves in detail as to how web services have brought about a change in the way a business globalizes itself. Electronic transformation of an individual business is relatively well understood and has been studied by various authors, including Lan and Khandelwal (2003). Furthermore, frameworks for such e-transformation exist and have been published by various thinkers and practitioners in this field (see Dowding, 2001; Ginige, Murugesan, & Kazanis, 2001). However all of these frameworks are currently focused on the transformation of a single organization. Web services provide the ability for a cluster or a group of organizations to e-
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