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Chapter VI

Towards a Framework for Managing the Business-to-Business e-Commerce Chain

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The rapid of growth in e-Commerce/e-Business provides new opportunities and challenges for next generation Internet and telecommunication service providers. The collective global e-Commerce activities are estimated to exceed $6 trillion dollars in 2004. However, a key element in successful e-Commerce/e-Business operation is the improved integration and management of the e-Business value chains (i.e., management of business-2-customer (B2C) and business-2-business (B2B) chains. Current e-Business managed solutions, where available, tend to concentrate on only single aspects of the e-Business integration, e.g., outsourced accounting management or virtual private network (VPN) services. This is analogous to first-generation telecommunication management systems which delivered stand-alone management applications for specific management concerns, e.g., performance management and configuration management. However, e-Business

organizations of the future will require a more holistic, integrated approach to e-Business management networks. Such e-Business services would support integrated management solutions (e.g., quality of service, accounting, service level agreement, negotiation and management, virtual private network mgmt., etc.) across the B2C and B2B value chain.

This paper proposes a management component framework to support the rapid and flexible construction of an e-Commerce management infrastructure. This management solution is based on a holistic management approach supporting seamless integration of network and application management services (i.e., vertical), as well as integrating management across distinct functional areas (i.e., horizontal). The chapter also presents an analysis of the business model for a provider of such B2B and B2C management and examines the requirements for such management services. It also identifies best practice and state-of-the-art research upon which this framework is based and describes how this research is being developed as part of a large EU telecommunications research project.

DRIVERS FOR INTEGRATED MANAGEMENT OF E-BUSINESS VALUE CHAINS

In the business-to-business value chain, providing "e" services means much more than building Web-front interfaces with fancy features to end customers. An e-Business value chain can be defined as commerce conducted between businesses over an Internet, extranet or intranet (i.e., IP networks). The rapid growth in e-Business is enormous. While organizations in different countries move online at their own pace, their collective e-Commerce activities are estimated by Forrester Research Inc. to reach $6.8 trillion dollars, or 8.6% of the global sales of goods and services, in 2004 (Sanders & Temkin, 2000).

A key aspect in successful e-Business operation is the integration and management of the e-Business value chains (i.e., management of business-to-business chains). Research has consistently identified that a crucial element of successful e-Business operation is the ease and flexibility of *integrating and managing* inter-business interaction. However, in ever-increasing competitive markets, organizations are focusing on their own key market competencies and seeking *outsource managed solutions* for non-core competencies.

Such e-Business requirements provide new opportunities and challenges for next generation Internet and telecommunication service providers. In order to support e-Businesses across their supply/value chains, these next generation Internet and telecommunication providers must offer dynamic managed communication as well as interorganizational application service management.

Thus, in much the same way as organizations have become reliant on third-party managed connectivity services, e-Businesses are beginning to seek managed e-Business networks where the e-Business value chain is managed and supported as an integrated service. Providers of such e-Business management services must