

## Chapter 7.10

# Portals and the Challenge of Simplifying Internet Business Use

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### ABSTRACT

The Internet promised a lot for enterprises from 1995. The Internet's ubiquity offered inter-company connectivity (previously provided to corporations by Electronic Data Interchange) for businesses of every size. The business-to-business (B2B) trading exchange concept emerged, 10,000 B2B exchanges were anticipated. Early Internet investment then struck an unexpected hurdle: the Internet didn't inherently support many of the key requirements for business transactions (such as reliability, confidentiality, integrity, authentication of parties). These requirements added to the cost and complexity of Internet investment. The dot.com stock market crash affected all Internet-related initiatives. But while the B2B exchanges disappeared, other initiatives more aligned to user needs and the Internet's architecture continued to grow. These included the enterprise portal, which

supports the traditional single-business-centred customer relationship model, in contrast to the business disruptive B2B exchange model.

### INTRODUCTION

Enterprise portals promise significant benefits for commercial customers in business-to-business relationships. However, there is a large body of experience in the B2B e-commerce field, both prior to the Internet's mass uptake in the early 1990s with Electronic Data Interchange (EDI), and with the B2B exchanges in the late 1990s. Should business expect similar difficulties with the enterprise portal? This article examines the question in three ways. First it looks at the EDI experience, and how the emergence of the Internet as the global data network in the mid-1990s influenced this. Second, it examines the key commercial short-

coming of the Internet, its lack of support for the requirements of commercial transactions. Third, it describes the B2B exchange experience, which effectively ended with the dot-com crash of 2000. It then examines the enterprise portal opportunity in the light of these experiences.

This article is written from the combined perspectives of a researcher and an industry practitioner.

## **BACKGROUND**

### **Early Business On-Line Opportunities**

The characteristics of electronic commerce have their origins in 19th century railroad developments. United States railroad companies used the telegraph to forward information about the contents of trains between stations (Zinn & Takac 1989).

In the 1960s, significant demand for networking and data storage emerged in major industries. Alongside technology developments, digitisation and the new opportunities of satellite communication laid the basis for a United States review of regulatory practice. A business agenda for corporate use of telecommunications independent of monopoly provider AT&T developed between the mid-1950s and 1970s, based on banks, insurance companies, retail chains, automobile manufacturers, oil companies, aerospace firms, and other corporations seeking to reorganise operation around networks (Schiller, 1999).

Early networking was based on ad hoc arrangements with providers, such as connections for distributed terminals to shared data processing services. Standardisation of network technology occurred both through vendors, such as IBM's 1970s SNA protocol, and standards bodies such as the International Organisation for Standards' Open Systems Interconnect (OSI) X.25 model.

Standardisation of the business messaging being carried by these networks developed significantly in the 1980s with Electronic Data Interchange (EDI). Unlike earlier data exchange systems, EDI provided a framework for the exchange of data between multiple organisations. With the need for inter-organisation cooperation for the purpose of trade, EDI dissemination involved an enthusiastic band of advocates who collaborated to have cross-industry standards developed. The Electronic Data Interchange campaigners by the late 1980s had created a large body of literature identified by Sokol (1989). EDI met three key requirements:

- **Common meaning:** For separate organisations to communicate information to each other required a standardised method for conveying order forms, invoices and the hundreds of other forms which make up commercial transactions.
- **Common infrastructure:** Organisations dealing with dozens or hundreds of other partners required value added networks (VANs) as switching points for EDI messages. While these provided reliable and guaranteed delivery of information, their cost per message was orders of magnitude higher than the later Internet data transmission costs.
- **Security:** The individual design of most EDI solutions assisted in providing security.

Despite the benefits for large corporations of significant cost reduction through EDI-enabled automation, benefits beyond them were limited. Interviews undertaken by this writer in 2003 on difficulties experienced extending EDI to automotive manufacturer parts suppliers found key inhibitors fell into two categories: the losses from spending on technology and access, which were seen as a cost of business rather than an investment in opportunity; and the difficulty of solving even

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