



Chapter IV

Electronic Data Interchange

What is Electronic Data Interchange?

Before the dawn of the computer age, intra- and inter-business activities, especially purchasing and selling of products and services, were paper-intensive. Paper documents such as purchase orders, invoices, shipping notices, and bills of lading needed to be prepared in multiple copies. These copies had to be approved, signed, preserved in files for a certain duration, forwarded to trading partners and processed in a myriad of ways. Purchasing and selling activities rippled through the entire organization and tied in manufacturing, logistics, accounting, finance and human resources, among other areas. The documents then multiplied exponentially. Additionally, these documents were organization-specific, meaning there were no standard formats. The lack of standard format resulted in extra processing time; incoming purchase orders needed to be converted into the organization's sales order. In the 1960s, giant corporations had to deal with a mountain of paperwork and employ armies of clerks to process those documents. The associated costs and their effect on the bottom line alarmed managers. The idea of electronic surrogates for these documents and Electronic Data Processing (EDP) began to look attractive. In the late 1960s, the idea of an electronic exchange of standardized

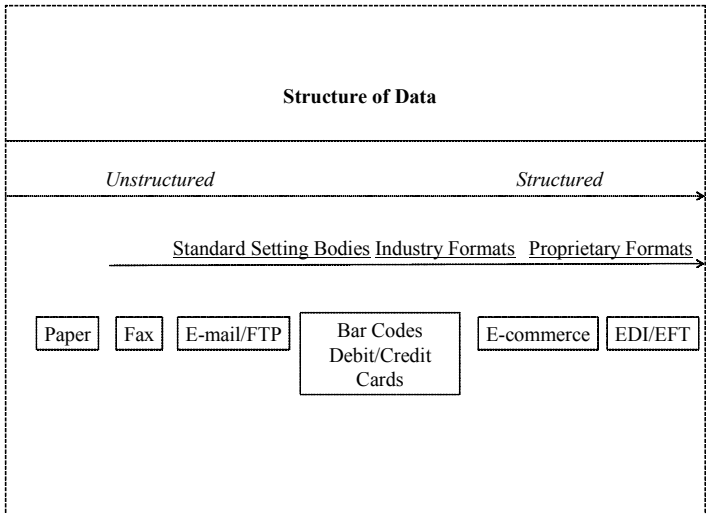
documents had taken a firm root in the transportation industry. The age of EDP has arrived and EDI was on the forefront of the wave and became more sophisticated over the next several decades.

EDI is easy to mistake for many electronic communication formats devised over the last decade. However, EDI has a distinct personality of its own. Formally, the definition of EDI (The Accredited Standards Committee Cases X12, www.x12.org) says:

“The movement of business data electronically between or within firms (including their agents or intermediaries) in a structured, computer-processable data format that permits data to be transferred without re-keying from a computer-supported business application in one location to computer-supported business application in another location.”

This definition highlights various unique features of EDI. Business data is transmitted electronically, does not need re-keying, can pass through networks and/or storage mediums, and does not need human intervention for flow, capture or processing. Data processing is generally done by business applications specifically designed to process the incoming data. The description so far matches with FTP, e-mail, fax or many other e-commerce applications. The key distinction between EDI and other forms of e-commerce is *structured format of data*. Paper documents, e-mail or fax do not have a specific, universally accepted data format. These forms of communication are handled using computers, manually or by a combination of both. In EDI, a need to minimize human intervention requires that data must be understood by the communicating computer systems. That means data must be pre-formatted and should be based on standards acceptable to the trading partners, and computers must be programmed to understand the incoming format of data.

Exhibit 1. EDI and other forms of communication



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