



Electronic Data Interchange (EDI)

EDI Overview:

Many companies large and small have come to the realization that electronically enabling the data interchange between all their supply chain partners is not only feasible but also highly cost effective. But despite the rapid growth of EDI or Electronic Data Interchange, it continues to remain a mystery to a significant number of companies who are suddenly told that they must use it in their day to day business.

RedTail Solutions, Inc has the goal to provide education and insight into the world of EDI to any perspective user of that technology. Although there is a technical aspect to EDI we are not going to delve into that area in this document. We promise to keep focused on the basic concepts of EDI so that you will come away with a general understanding of what EDI is and not left to ponder the meaning of the myriad of technical terms bandied about when discussions occur on this subject.

What is EDI?

The following may seem technical at first glance but it really isn't. When government organizations get involved in anything a plethora of acronyms seems to be generated from their efforts. These acronyms you will hear and read about over and over again so it's worthwhile that we explain their derivation when we start this discussion about what EDI is. So let's begin with a description of EDI standards.

Electronic Data Interchange is most simply defined as *the exchange of business data through computers between trading partners*. A more detailed description includes its origin and those confusing acronyms I previously mentioned. Electronic Data Interchange is a standard format for exchanging business data and documents (i.e. purchase orders, invoices, payments, shipping notices, and others). The standard is **ANSI X12** and it was developed by the Data Interchange Standards Association. ANSI X12 is either closely coordinated with or is being merged with an international standard named EDIFACT. ANSI X12 is a numbered set of commercial EDI transactions defined by the American National Standards Institute's Accredited Standards Committee named X12. These uniform rules for the interchange of business documents are defined for cross industry EDI use and are based upon the variable-length X12 standard. **EDIFACT** or Electronic Data Interchange For Administration, Commerce and Transport is the set of international EDI standards developed within the framework of the United Nations. The International Standards Organization (ISO) ratifies this EDI standard. An additional standard for EDI is emerging for the healthcare industry under the umbrella of HIPPA.

The **HIPPA** (Health Insurance Portability and Accountability Act) was signed into law on August 21, 1996. This law includes important new protections for millions of working Americans and their families who have preexisting medical conditions or might suffer discrimination in health coverage based on a factor that relates to an individual's health.

These new requirements protecting an individual's medical data are driving this new standard that will govern the communication of such data electronically.

The efficiency of these standards has now made them a condition for doing business in many industries, including automotive, distribution, education, government, grocery, health care, insurance, real estate, retail, transportation and warehousing. The exchange of standard business documents such as claim submission, customs manifest, delivery schedule message, invoice, purchase order, real estate title, shipping notice, student record, vessel content and more than five hundred additional documents has now become possible because of the standards developed and approved by the organizations mentioned above and embraced by industry in general. These standards define exactly what data can and must be transmitted within each of these documents with some of the data elements being mandatory and others being discretionary and defining the exact format they must follow in their construction and transmittal.

The use of EDI can not begin with just a few short preparations it first requires an agreement to do business in this manner between two trading partners. That agreement will include a number of things but most importantly which documents you will exchange. Once that agreement has been made than the preparations for the electronic exchange of those business documents can begin.

The beauty of the standards is that they do not limit the ability to use EDI to only those companies that have the same computer systems and communications methods. Instead, EDI bridges these differences that exist between companies and provides the ability to communicate with one another in a seamless and efficient manner.

Are there other ways to exchange documents besides the mail and EDI?

Yes there are and in an attempt to speed up the time it takes to send business documents through the mail many companies began faxing and/or emailing those documents to their trading partners. This greatly expedited the delivery time it normally took to receive those documents by mail. However, because a fax is just a picture (facsimile) of a document and email is an unstructured format of communication these methods of transport do not solve the requirement of having to manually enter the data from say a purchase order or invoice into a computer program such as an accounting or business system. Thus the transportation time was reduced but the labor required to manually enter the data into the business system so that the information could be utilized by the business, remained in place.

EDI changes all of this and eliminates the need for human intervention between the sending of the document from one business system to the receipt of that document by another business system. This happens because EDI transmits documents in a structured format, based on the use of transaction standards, which ensures that all participants use a common language. Thus if a purchase order is sent via EDI, the senders EDI software converts the document into one of the previously discussed standards and the recipients EDI software will take the data received and convert it into a “readable format” and import that data into the recipients business system. This is the manner in which EDI was intended to be used.

What kind of savings can be realized?

Your business may obtain a variety of cost reductions as a result of implementing EDI. These reductions can include both cost savings and cost avoidance. These points summarize just a few of the more general types of savings you can expect.

The reduction of overhead costs through the elimination of human handling in the following areas:

1. Mailroom sorting and circulation of documents
2. Clerical document preparation and data entry

Substantial cost savings can also result from the reduced error rates that normally occur in the manual data entry process. These savings include savings in labor costs normally used to search for errors, and in lowered expediting costs.

A reduction of inventory costs because of the shortening of the order processing and delivery cycles which generally result in lowering inventory levels. If a delivery cycle is 2 weeks for example than you most have at least 2 weeks of inventory in order to maintain your business. If your order cycle is now 2 days, than only 2 days worth of inventory is required. This is why many organizations implementing “Lean manufacturing” or Just-In-Time inventory philosophies utilize EDI as a vital component of those cost reduction programs.

The lowering of inventory levels has a corresponding effect on the reductions in carrying costs. Inventory costs in some businesses account for as much as 90 percent of total product cost, so even modest reductions in this area can result in dramatic savings.

A major impact on these wonderful cost savings we just defined is that many organizations, when deciding to begin their EDI trading, fail to consider the cost of acquiring the software, its ongoing maintenance, and the hardware and software infrastructure necessary to run it. These costs can in some cases wipe out all projected savings and even end up costing the organization more than the manual system previously used. For these reasons it’s smart to consider the use of **Internet-based EDI** and the outsourcing of the entire process to service providers who will serve as your *virtual EDI department*.

What is a Virtual EDI Provider?

A ***Virtual EDI Provider*** means having your own EDI communication capabilities without having to purchase, install and maintain expensive hardware and software. With a Virtual EDI Provider, you utilize their IT infrastructure and dedicated professionals as your own EDI department. However, you are still professionally represented via your own EDI ID (an identifier that differentiates one trading partner from another) and a knowledgeable team of professionals who provide every service your own EDI department would provide without the significant upfront investment in hardware, software and human resources necessary to setup the appropriate department internally. With the selection of the right Virtual EDI Provider you will also eliminate much of the consulting costs that surround typical internal EDI implementations, get up and running in a fraction of the time and you will also have a solution that is fully integrated with your back-end accounting/business system.

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