

# The Exchange of the Electronic Validity of Data in the Electronic Commerce

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## Summary

The increasing technology rate especially Information Technology has reduced the obstacles of commercial issues regarding time and place throughout the world. Having access to the internet has enabled people to do business, in other words, the electronic commerce and the electronic business have gained a prominent position in the developed countries. In the recent years, the developed countries have abandoned the traditional ways of the commerce based on the paper and the physical exchanges, and shifted toward the electronic commerce known as the commerce free of paper. The e-commerce has brought about saving time, expenses human resources, and enhanced the index of efficiency. In it, different methods of the exchange of data regarding the validity of information have been offered. This study has been intended to discuss the issue and its advantages.

### **Key words:**

*the electronic commerce; the security of data ;the time of process(the duration of process)*

*The electronic commerce is defined as the execution of the transactions and transferring the commercial information directly without the use of paper through the computers and telecommunication lines.*

In order to coordinate the computer links globally, some standards have been prepared and applied as the common language of commerce known as Edifact

The electronic commerce is comprised of

- The standard messages
- The software used to exchange the data electronically
- The network links or the network of links

### The General Characteristics of Electronic Commerce

- Globalizing the commerce
- Removing the spacial and temporal limitations
- Reducing the price of sources for the purpose of purchasing
- Increasing the percentage of sales
- Having easy access to the information
- Decreasing the cost of transactions
- Reducing the temporal cost

### The Advantages of the Electronic Commerce

- It removes the delay caused by the preparation of documents.
- It decreases the possibility of making mistakes.
- It leads to saving time, human resources, and office work.
- It reduces the cost of labor force.
- It facilitates the circulation of information.

The information to be exchanged between two parties is the most important of all whether the communication is of physical nature (a friendly conversation) or of commercial one.

In most cases, the people engaged in communication try to keep their communication secret and not to be heard and used by others. In fact, the information to be exchanged is regarded as the stock in trade (property) of the companies involved in the conversation and the property is of the same value and the physical property and it must be kept safe.

To execute the commercial activity, different factors must be taken into consideration; the safety is the most important of all. As the property is protected in the physical environment and must be kept safe, your information to be exchanged in the electronic environment must be kept safeguarded because it is widely subject to be stolen and revealed. When a company manages to enhance the security of information, it lowers the damages and threats, strengthening trust between the parties preventing its rivals, enemies, etc from accessing information.

The general cycle of the traditional commerce and electronic commerce consists of:

- 1) Marketing
- 2) Negotiating
- 3) Delivery
- 4) Payment
- 5) After sale service

The above-mentioned stages are quite obvious. Since the advent of the computer, it has been intended to have an access to the information present at the computers without limitations. The security of information was not an important issue then. And it was not intended to perform the commercial activities through the internet. The first and foremost aim of the internet is to have an easy access to the information without limitations which counteracts the commercial ideas. Nobody wants its information to be revealed. We don't even like the others to know about our income and our private life. This issue is of importance in the electronic commerce, so here we're faced with privacy.

Once a company sends its information to the other party through the internet, there is no control over the circulation of its information and it can't control the movement of the information through different ways, the information comes under heavy barrage under different hackers in a variety of ways. How do you make yourself satisfied to exchange the information while there is no management and control over it? It is intended to transfer the commercial information through the internet which the lack of safety makes its execution difficult and absence of security challenges the circulation of the commercial information.

The Security Parameters Required for the Electronic Commerce:

In order to provide security in the unsafe internet milieu, all the following parameters must be taken into consideration. If any of the parameters is breached, the network comes under attack.

- 1) Authentication
- 2) Authorization
- 3) Availability
- 4) Integrity
- 5) Confidentiality
- 6) Non-repudiation
- 7) Auditing

#### **Authentication**

Authentication is one of the first and foremost security services required for the execution of the electronic and commercial transaction. It is intended to authenticate the parties making a commercial transaction.

#### **Authorization**

When the people involved have been authenticated, their official permits are investigated. It is specified that to what kind of permit and how much information they have access. For instance, the authorization and permit of the

director of a company are different from those of the staff there. Each can do their jobs in the positions defined.

#### **Availability**

One of the most important advantages and requirements of the electronic commerce is availability.

#### **Integrity**

When the data are manipulated without informing the parties, they come under attack, so it is required to provide a particular service approving the validity of data.

#### **Non-Repudiation**

When one signs a document at the time X, they shouldn't repudiate it, in fact, they shouldn't reject the act.

#### **Confidentiality**

Those making a transaction aren't willing to make their data overt. Confidentiality is one of the most important services provided to bring about security in commerce. The information is revealed to special people.

#### **Auditing**

When you pay some money from your bank account to somebody else's bank account through the automatic teller machine, all the operations involved in the transaction must be registered, so it can be used as a reference or a third party. If the receiver declines the reception, we can refer to the registration known as database, in which it is clear that at a definite time (X) a certain amount of money (Z) has been paid from the account of Y to the account of W.

The transaction registration files are arranged in a way that can be referred to when any of the above-mentioned conditions is breached, or it is not accessible as required, the system of the electronic commerce or the network of the electronic commerce has come under attack.

EDI which is the abbreviated form of the electronic data interchange means the electronic exchange of data, being the sub-group of e-commerce; it is applied when one of the partners is actively involved in the wide range of the commercial transactions. The electronic data interchange is defined as the direct exchange of the commercial documents such as orders, bills, contracts, plans, transportation, and drafts from one machine to another in the different companies.

EDI itself doesn't bring about a new strategy or process but it reduces the duration of the process (from ordering the good to the delivery and final payment) in the course of action by transferring the information to be investigated without re-registering the information.

### The Information Interchange

The technology of the information interchange from computer to computer costs less than the paper document. According to the studies conducted in the U.S.A, the process of a paper and manual ordering costs about \$70 while it costs about \$1 through EDI. In all stages, EDI provides tools to delete the human errors, delay, and damage.

### 2) The difference between EDI and e-commerce.

The tools applied for e-commerce

The basic tools used in e-commerce are as follows:

- 1) Bar code: Every company can gain it by accepting the membership in the national center of numbering goods and services, so zip code is allotted to every company, which can be used for the determination of the number of the company's products and the product will be identified all over the world.
- 2) Electronic mails: Sending letters electronically has the following features:
  - It is guaranteed that the letter gets to the right destination.
  - It takes less than a few seconds to send the letter.
  - It will be easy to send the different letters with the same content to a variety of companies and people.

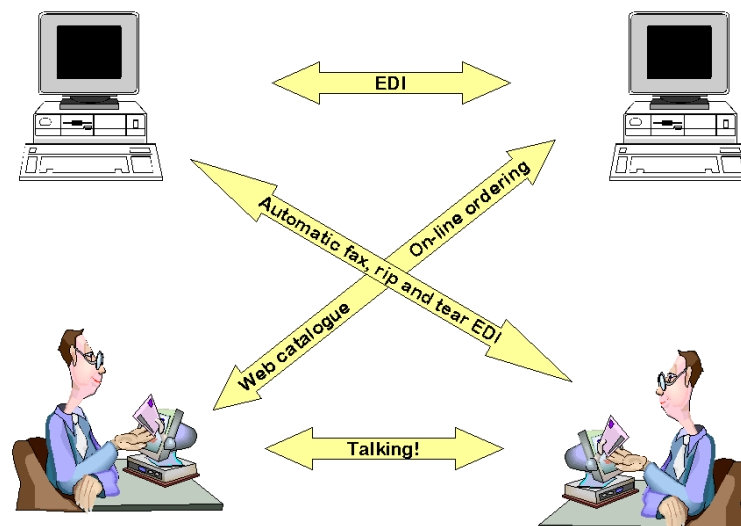
There are two ways of receiving the e-mail box: one can get an e-mail address with the help of internet servers in one's country, and the other is to get the free help from the servers of the international electronic mail like hotmail or yahoo.

Electronic banking is a tool which consists of performing all financial banking processes through the electronic data interchange, which facilitates serving customers and the banking operation more accurately. E-commerce is a newer expression and covers wider scope than EDI. E-commerce can be divided into 3 parts and EDI is one of its categories:

When a computer system sends the financial documents to another computer without interference, this part of e-commerce is called EDI.

Another category of e-commerce is formed when a person registers his order on his own computer or receives some information from the other party, for instance, online shopping for an air ticket through the internet. The internet e-commerce is usually listed.

And finally the last category of e-commerce is formed when a company wants to send some documents electronically or automatically to another company but the latter one isn't able to contact through EDI, so it prints the data received and enters them manually in its system instead of entering the information automatically and without human interference. This is called Rip in Read.



### 3) The Difference between EDI and E-mail

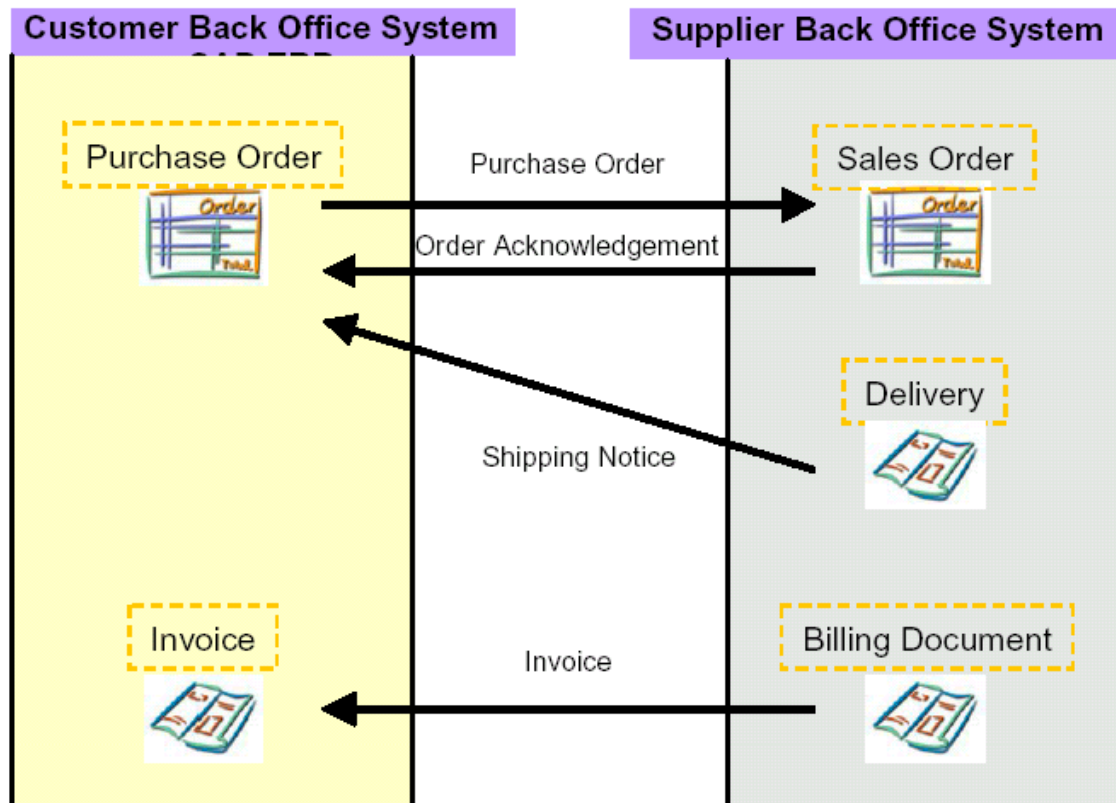
Although EDI is based on receiving and sending the standard message, it should be noted that EDI is quite distinct from e-mail due to its particular features.

EDI is used for the exchange of routine business documents. It is reasonable to use the standard format regarding the messages exchanged.

EDI translates the data into the standard format. The EDI messages can be processed by programs so that the false and imperfect data can't be allowed to deliver.

### 4) The Operation

To illustrate this matter, we briefly explain the way EDI is used.



When the purchaser arranges the purchase order on his computer system and then acknowledges it, the registered order is translated to the order document in EDI format by the translator. The above-mentioned document is sent to the seller safely through the internet or value-added network.

Many companies used the EDI network or value-added network as a third server to create a link with their partners. The value-added network is not only a network to create a link but also includes other services, among them are mail box and the communication services. In fact value-added network means providing more services not the added cost. The servers may provide the customers with more services based on their demands. For example some servers design and provide some programs with which the companies can execute new transactions or add a new trading partner to the system. In all stages of

exchange the security and the control of data are preserved by the application of password identification of user and encryption.

The system of purchaser and seller's EDI processes the order which is comprised of a particular type of EDI documents to be processed (like purchase order, invoice,). In fact the business document a company exchange with the other company can be sent through EDI. However, each EDI document must be send to the trading partner in a definite format . Most of the partners have an access to the implementation guide (kit) with the help of which they can read the document received.

The contents of the received document can be translated in to data formats which are used in the present internal system. This is called "mapping".

In EDI system which is considered as a subgroup of the electronic commerce the following facilities and requirements are needed:

- 1) A software to bring about communications, the mail box of EDI document , mapping and the translation of data .
- 2) The Internet links or value-added network or any other way of connection with all trading partners.
- 3) A hardware consisting of a server or pc .the communication devices.
- 4) The suitable and safe conditions. Control system and security display.
- 5) The possibility of making backup file for reliability.
- 6) The application of the software if it is necessary to integrate the EDI document with the internal information system of the company.
- 7) The mapping must be performed for each type of EDI document .The maps translates the encoded EDI records well and properly.

In general working the EDI standard necessitates not only the presence of the software and hardware but also the same standard to exchange the data .we hope they will be provided properly in future.

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