Introduction to E-Commerce

1-1 The history

Electronic commerce has existed for over 70 years, originating from the electronic transmission of messages during the (Berlin airlift) in 1948. See [1]

From this event, electronic data interchange (EDI) was the next stage of e-commerce development.

1-2 WHAT IS "ELECTRONIC COMMERCE"?

Trade can be defined as Commercial transaction involving the sale and purchase of goods; service(s); or information.

The other form of trade is "Electronic commerce", commonly known as E-commerce, it is trading in products or services using computer networks, such as the Internet or private network (previously).

E-commerce (electronic commerce or EC) involve buying and selling goods; services or transmitting funds or data over an electronic network, primarily the Internet. That mean business transactions take place via telecommunications networks, especially the Internet. Since transactions go through the Internet and the Web, the terms I-commerce (Internet commerce), i-commerce and even Web-commerce. Other terms that are used for on-line retail selling include *e-tailing*, *virtual-stores* or *cyber stores*. A collection of these virtual stores is sometimes gathered into a '*virtual mall*' or '*cybermall*'.

The terms E-commerce and E-business are often used interchangeably. The different terms that are used and to assess their origin and usage.

1- How Ecommerce works

summarize the process of commerce as listed below:

1. Sitting at computer, a customer tries to order a book online. Her/his web browser communicates back-and-forth over the Internet with a web server that manages the store's website.
2. The web server sends her order to the order manager. This is a central computer that sees orders through every stage of processing from submission to dispatch.
3. The order manager queries a database to find out whether what the customer wants is actually in stock.
4. If the item is not in stock, the stock database system can order new supplies from the wholesalers or manufacturers.
5. The stock database confirms whether the item is in stock or suggests an estimated delivery date when goods will be received from the manufacturer.
   Assuming the item is in stock, the order manager continues to process it.
6. Next order manager communicates with a merchant system (run by a credit-card processing firm or linked to a bank) to take payment using the customer's credit or debit card number.
7. The merchant system might make extra checks with the customer's bank computer database.
8. The bank computer confirms whether the customer has enough funds or not.
9. The merchant system authorizes the transaction to go ahead,
10. The order manager confirms that the transaction has been successfully processed and notifies the Web server.
11. The Web server shows the customer a Web page confirming that her order has been processed and the transaction is complete.
12. The order manager sends a request to the warehouse to dispatch the goods to the customer.
13. A truck from a dispatch firm collects the goods from the warehouse and delivers them.
14. Once the goods have been dispatched, the warehouse computer e-mails the customer to confirm that her goods are on their way.
15. The goods are delivered to the customer
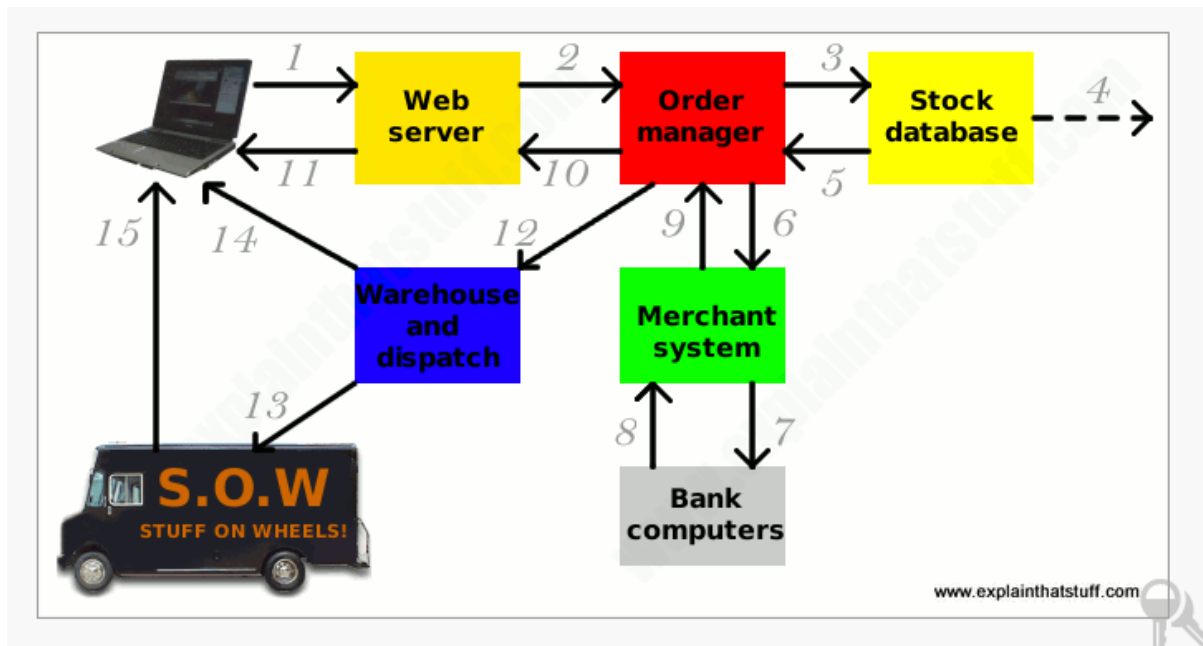
1-4 Electronic Data Interchange (EDI)

In the 1960s a cooperative effort جهد تعاوني between industry groups produced a first attempt at common electronic data formats,

(شكل متفق علية من البيانات الالكترونية مشترك)

The formats, however, were only for purchasing, transportation and finance data, and were used primarily for intra-industry transactions.

المعاملات بين الشركات صانع

The work began for International Electronic Data Interchange (EDI) standards not before 1970, which developed well into the early 1990s.

EDI can be defined as *"the electronic transfer of a standardized business transaction between a sender and receiver computer, over private network.*

Electronic Data Interchange (EDI) is the computer-to-computer exchange of business documents in a standard electronic format between business partners.

التبادل الالكتروني البيني للبيانات   EDI

By moving from a paper-based exchange of business document to one that is electronic, businesses enjoy major benefits such as reduced cost,

increased processing speed, reduced errors and improved relationships with business partners.

1-5 Computer-to-Computers

Computer-to-computer EDI replaces postal mail, fax and email. While email is also an electronic approach, the documents exchanged via email must still be handled by people rather than computers. Having people involved slows down the processing of the documents and also introduces errors. Instead, EDI documents can flow straight through to the appropriate application on the receiver's computer (e.g., the Order Management System) and processing can begin immediately. A typical manual process looks like this, with lots of paper and people involvement:
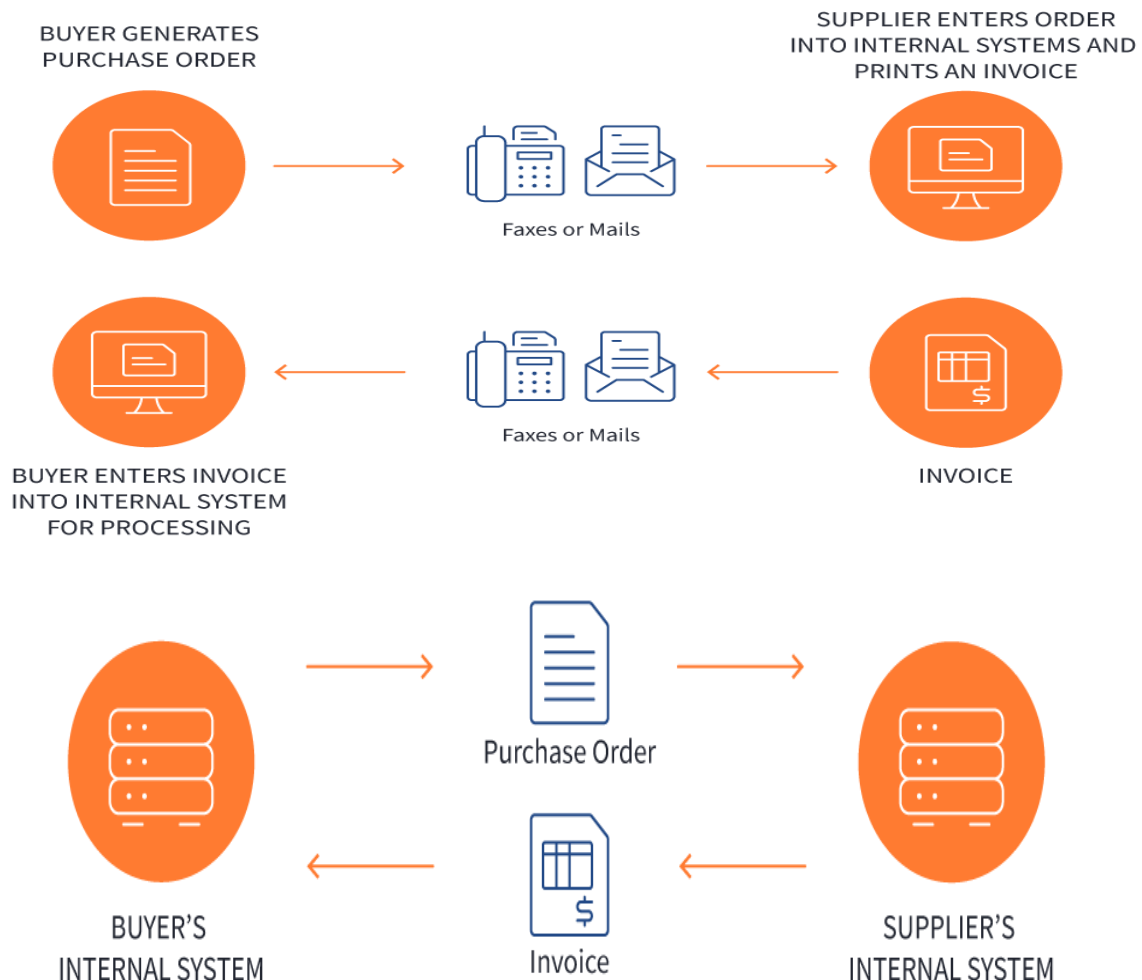
1-6 Business documents

These are any of the documents that are typically exchanged between businesses partners. The most common documents exchanged via EDI are purchase orders, invoices and advance ship notices. But there are many others such as bill of lading, customs documents, inventory documents, shipping status documents and payment documents

Following are few important documents used in EDI −

- Invoices
- Purchase orders
- Shipping Requests
- Acknowledgement
- Business Correspondence letters
- Financial information letters

1-7 Standard format

Because EDI documents must be processed by computers rather than humans, a standard format must be used so that the computer will be able to read and understand the documents. A standard format describes what each piece of information is and in what format (e.g., integer, decimal, mmddyy). Without a standard format, each company would send documents using its company-specific format, as an English-speaking person probably doesn't understand Japanese, the receiver's computer system doesn't understand the company-specific format of the sender's format.

There are several edi standards in use today, including ANSI, EDIFACT, TRADACOMS and ebXML. for each standard there are many different versions, e.g., ANSI 5010 or EDIFACT version D12, Release A. When two businesses decide to exchange EDI documents, they must agree on the specific EDI standard and version.

Businesses typically use an EDI translator – either as in-house software or via an EDI service provider to translate the EDI format so the data can be used by their internal applications and thus enable straight through processing of documents.

Both sides (business parities) would have to have the same application software and the data would be exchanged in an extremely rigorous format بنسق عالي الدقة وغير قابل للتغير. Transferred business documents can be internally between organization's various departments or externally with suppliers, customers or any subsidiaries etc.

الفقرة التالية مهمة

An EDI message contains a string of data elements; each element represents a singular fact such as a price; product model number; quantity and so forth, separated by delimiter. The entire string is called a data segment. One or more data segments framed by a header and trailer form a transaction set, which is the EDI unit of transmission (equivalent to a message).

The parties who exchange EDI transmissions are referred to as "Trading Partners".
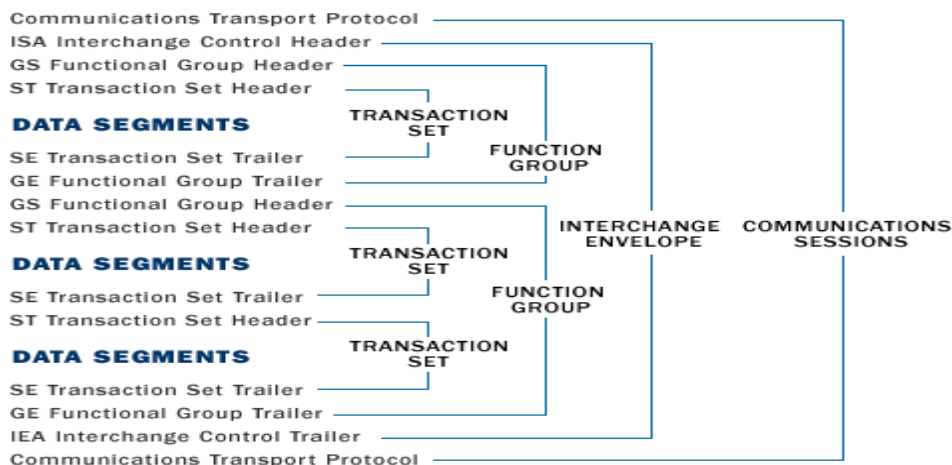
In sectors such as retail, automotive, defense and heavy manufacturing, EDI was developed to integrate information across larger parts of an organization from design stage to production line so manufacturers could share information with designers; producers; stakeholders and other partners.

1-8 Steps in an EDI System
Following are the steps in an EDI System.

A program generates the file which contains the processed document.

The document is converted into an agreed standard format.

The file contains the document is sending electronically on network.

The trading partner receives the file.

An acknowledgement document is generated and sent to the original organization.

1-9 Advantages of an EDI System
Following are the advantages of an EDI System.

- Reduction in data entry errors. − Chances of errors are much less being use of computer in data entry. Why?
- Shorter processing life cycle − As orders can be processed as soon as they are entered into the system which reduced the processing time of the transfer documents.
- Electronic form of data − It is quite easy to transfer or share data being in electronic format.
- Reduction in paperwork − As lot of paper documents are replaced with electronic documents.
- Cost Effective − As time, wages and materials is reduced, EDI proved to be highly cost effective.

Standard means of communication − EDI enforces standards on the content of data and its format which leads to clear communication.

1-10 The Internet effect to the Ecommerce and e-Business
Before the widespread commercial use of the Internet, *the EDI system was very expensive to run because of the high cost of the private networks. Thus, EDI was limited to cash-rich multinational corporations using their financial strength to pressure تضغط and persuade تحث smaller suppliers to implement EDI systems, often at a very high cost.* By 1996 no more than 50,000 companies in Europe and 44,000 in the USA were using EDI, representing less than 1 per cent of the total number of companies in each of the respective continents.

With the advent (مجيء) of the Internet, the term e-commerce began to include:

1. Electronic trading of physical goods and of intangibles الغير ملموسة such as information.
2. All the steps involved in trade, such as on-line marketing; ordering; payment; support and delivery.
3. The electronic provision of services such as after sales support or on-line legal advice.
4. Electronic support for collaboration between companies such as collaborative on-line design and engineering or virtual business consultancy teams. See [1]

Review Questions

Q: what is E-commerce

Q: what are the main formats for early attempt of e-commerce electronic data

Q: what EDI message contains

Q: define data segment

Q: whom was the main beneficiary of using electronic data

Q: Define EDI

Q: what each entity should have to achieve EDI

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