

# CAN302 W1

## Part I

### Commerce vs. Business

#### Commerce:

The exchange or buying and selling of commodities (商品) on a large scale involving transportation from place to place.

#### Business:

The activity of making, buying, or selling goods or providing services in exchange for money.

### Definition of e-Commerce

#### Electronic commerce (EC):

**Electronic** enabled commercial transactions between and among organizations and individuals.

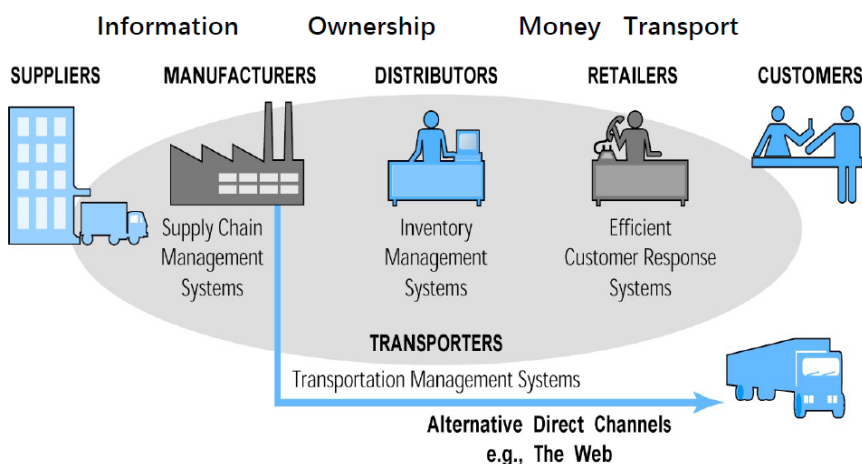
#### Internet commerce (Web commerce):

The process of buying, selling, or exchanging products, services, or information via **Internet**.

#### E-business:

It involves using information technologies in all aspects of the business.

## Typical processes of one commerce session



- Search for goods
- Put the order
- Pay the order
- Receive the goods
- Customer services

Broad definition: any process by computer (electronic) would be e-commerce.  
Narrow definition: the order process should be in e-format (如在网上下订单).

## E-payment

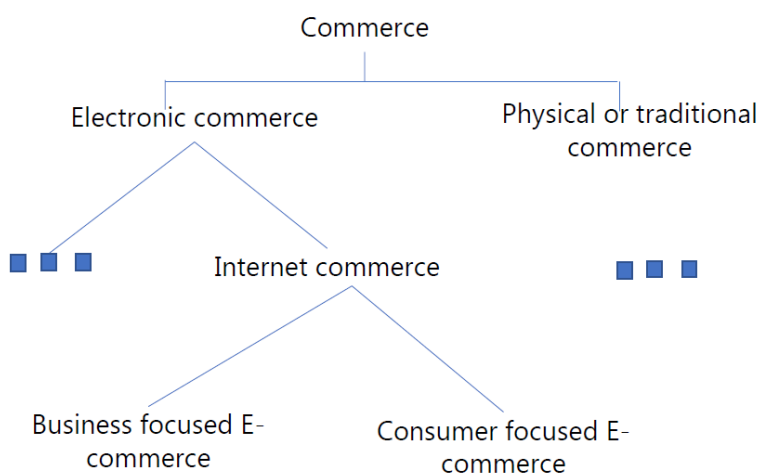
**Security** is always the No.1 issue.

EFT: electronic fund transfer (电子转账)

EDI: Electronic Data Interchange。

EDI is the intercompany communication of business documents in a standard format. The simple definition of EDI is a standard electronic format that replaces paper-based documents such as purchase orders or invoices (发票). EDI is an old but still mainstream technology in B2B (Business-to-Business, 企业与企业之间通过专用网络或Internet, 进行数据信息的交换、传递, 开展交易活动的商业模式)。

## Summary



Many terms on different point of view:

O2O (网上与网下相结合) M-B (移动电子商务) B2G (政府采购) SoLoMo (社交+本地化+移动)

Sharing Economy: P2P B2P



## Types of Ecommerce Models

- Business 2 Business
- Business 2 Customer
- Customer 2 Customer
- Customer 2 Business

P2P: peer-to-peer, 又称点对点网络借款

B2P: Business To Person, 企业对客户之间的营销关系, 一般通过电子商务广告公司来完成。

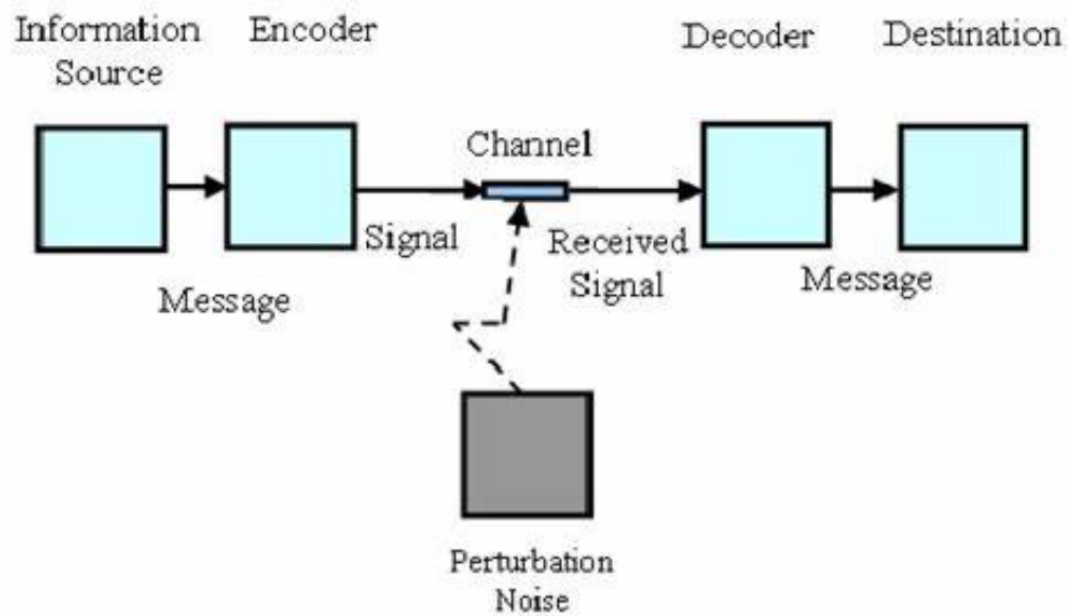
注意: 电子商务模型只有 4 个。

## 8 Features

<b>TABLE 2.6      EIGHT UNIQUE FEATURES OF E-COMMERCE TECHNOLOGY</b>	
<b>FEATURE</b>	<b>SELECTED IMPACTS ON BUSINESS ENVIRONMENT</b>
Ubiquity	Alters industry structure by creating new marketing channels and expanding size of overall market. Creates new efficiencies in industry operations and lowers costs of firms' sales operations. Enables new differentiation strategies.
Global reach	Changes industry structure by lowering barriers to entry, but greatly expands market at same time. Lowers cost of industry and firm operations through production and sales efficiencies. Enables competition on a global scale.
Universal standards	Changes industry structure by lowering barriers to entry and intensifying competition within an industry. Lowers costs of industry and firm operations by lowering computing and communications costs. Enables broad scope strategies.
Richness	Alters industry structure by reducing strength of powerful distribution channels. Changes industry and firm operations costs by reducing reliance on sales forces. Enhances post-sales support strategies.
Interactivity	Alters industry structure by reducing threat of substitutes through enhanced customization. Reduces industry and firm costs by reducing reliance on sales forces. Enables differentiation strategies.
Personalization/ Customization	Alters industry structure by reducing threats of substitutes, raising barriers to entry. Reduces value chain costs in industry and firms by lessening reliance on sales forces. Enables personalized marketing strategies.
Information density	Changes industry structure by weakening powerful sales channels, shifting bargaining power to consumers. Reduces industry and firm operations costs by lowering costs of obtaining, processing, and distributing information about suppliers and consumers.
Social technologies	Changes industry structure by shifting programming and editorial decisions to consumers. Creates substitute entertainment products. Energizes a large group of new suppliers.

## Part II

# What's a communication system?



## Three main modern network



- Narrow bandwidth (64kb/Chanel), **real-time**, point to point, dual-direction
- E1/T1, SDH..., <https://max.book118.com/html/2017/0112/82926960.shtml>

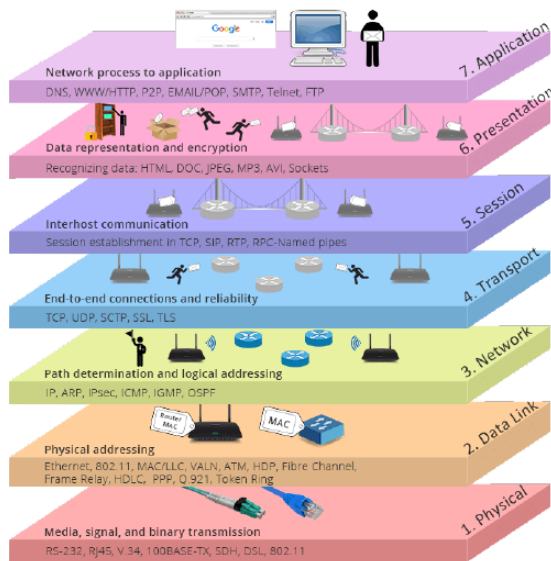


- Wide bandwidth ( ~ 8M/Chanel), **real-time**, point to many, mainly single-direction
- PAL, NTSC... max 4.8Gb/cable
- [http://www.360doc.com/content/17/0221/15/36705993\\_630852940.shtml](http://www.360doc.com/content/17/0221/15/36705993_630852940.shtml)



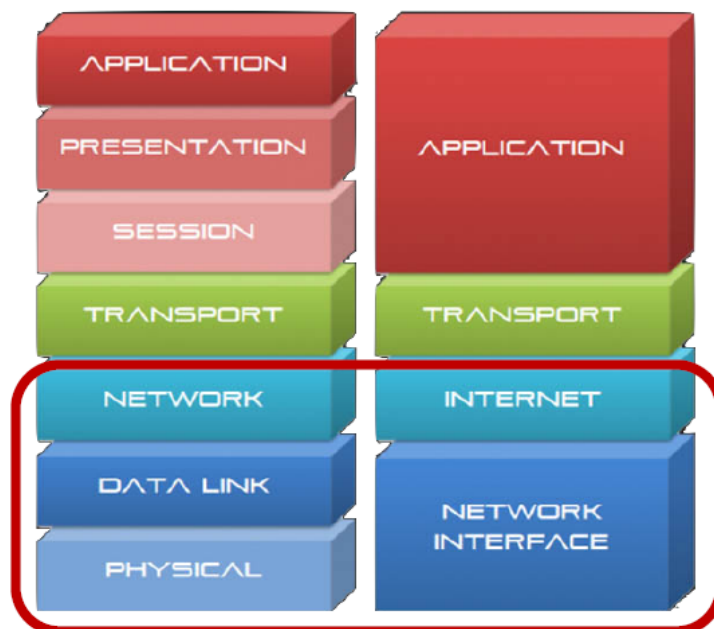
- From narrow to wide (from 14.4kb to 1G)
- **Nonsynchronous**, point to point, dual – direction
- TCP/IP family

# OSI 7 layers network model



Host level, i.e. Servers, PCs, Handphones, IoTs  
B - Byte

Network level  
b - bit



TCP/IP package is asynchronous.

ISO defined OSI (Open System Interconnect) model, also called TCP/IP model.

## Terms

**TDM:** 时分复用技术 (time-division multiplexing) 是将不同的信号相互交织在不同的时间段内, 沿着同一个信道传输; 在接收端再用某种方法, 将各个时间段内的信号提取出来还原成原始信号的通信技术。

**SDH (Synchronous Digital Hierarchy):** 同步数字体系, 为不同速率的数字信号的传输提供相应等级的信息结构。

DSL (Digital Subscriber Line): 意为数字用户线路,是指以电话线为传输介质的传输技术组合。

Cable: 电缆

modem: 调制解调器,俗称“猫”。它能把计算机的数字信号翻译成可沿普通电话线传送的模拟信号。

ISDN (Integrated Service Digital Network, 综合业务数字网): 俗称“一线通”,电话局和用户之间仍然采用一对铜线,做到端到端的数字化。

ADSL (Asymmetric Digital Subscriber Line): 非对称数字用户线路。上行和下行的速度不对称(上传慢,下载快);且上网的时候高频和低频分离,所以上网电话两不误。

ATM (Asynchronous Transfer Mode): 异步传输模式,将数据分割成固定长度的信元(cell),通过虚连接进行交换。

FTTH (optical fiber to home): 光纤到户,将光网络单元安装在住家用户或企业用户处。