

# Management Information Systems

B04. E-Business and E-Commerce



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- Course: Management Information Systems
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- Professor: Sync Sangwon Lee, Ph. D

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## Learning Objectives

- 01. Describe electronic commerce, its scope, benefits, limitations, and types.
- 02. Understand auctions and bartering.
- 03. Describe the major applications of business-to-consumer commerce, including service industries, and major issues faced by e-tailers.
- 04. Discuss the importance and activities of online advertising.
- 05. Describe business-to-business applications.
- 06. Describe emerging EC applications such as intrabusiness and B2E commerce.
- 07. Describe e-government activities and consumer-to-consumer e-commerce.
- 08. Describe the e-commerce support services, specifically payments and logistics.
- 09. Discuss some ethical and legal EC issues.
- 10. Describe EC failures and strategies for success.



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## 01. Electronic Business

- Electronic Business
  - E-commerce (EC) describes the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, including the Internet.
  - E-business (EB) refers to a broader definition of e-commerce, not just the buying and selling of goods and services, but also servicing customers, collaborating with business partners, conducting e-learning, and processing electronic transactions.



## 01. Electronic Business

- Electronic Business
  - Electronic commerce can take several forms depending on the degree of digitization (the transformation from physical to digital).
  - The degree of digitization relates to:
    - The product (service) sold
    - The process
    - The delivery agent (or intermediary).



## 01. Electronic Business

- EC Organizations
  - Brick-and-mortar (or old-economy) refer to pure physical organizations (corporations).
  - Virtual (or pure-play or pure-click) organizations are companies that are engaged only in EC .
  - Click-and-mortar (or click-and-brick) organizations are those that conduct some e-commerce activities, yet their primary business is done in the physical world.

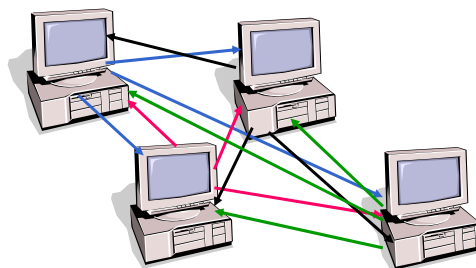


<http://blog.dailytrader.com/2011/02>

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## 02. Electronic Commerce

- Transaction Medium
  - Most e-commerce is done over the Internet.
  - But EC can also be conducted on private networks, such as value-added networks (VANs, networks that add communication services to existing common carriers), on local area networks (LANs) or wide area networks (WANs).



Information Technology for Management, Ed. 5, Efraim Turban et al., Wiley

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## 02. Electronic Commerce

- E-commerce transactions can be done between various parties.
- Transaction Types
  - Business-to-business (B2B): Both the sellers and the buyers are business organizations.
  - Business-to-consumers (B2C): The sellers are organizations, and the buyers are individuals.
  - Consumers-to-businesses (C2B): Consumers make known a particular need for a product or service, and suppliers compete to provide it.



<http://blog.trademart.in>

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## 02. Electronic Commerce

- E-commerce transactions can be done between various parties.
- Transaction Types
  - Consumer-to-consumer (C2C): Individuals sell products or services to other individuals.
  - Government-to-citizens (G2C): A government provides services to its citizens via EC technologies.
  - Intra-business (intraorganizational) commerce: An organization uses EC internally to improve its operations.
    - A special case is known as B2E (business to its employees)



<http://www.aaramshoppro.com>

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## 02. Electronic Commerce

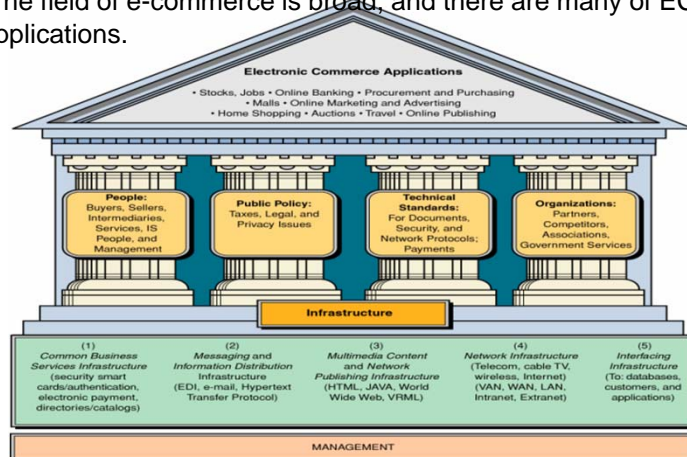
- E-commerce transactions can be done between various parties.
- Transaction Types
  - Mobile commerce (m-commerce): When e-commerce is done in a wireless environment.
  - Collaborative commerce (c-commerce): In c-commerce, business partners collaborate electronically.



<http://www.consumercareinc.com>

## 02. Electronic Commerce

- Components of EC
  - The field of e-commerce is broad, and there are many of EC applications.



Information Technology for Management, Ed. 5, Efraim Turban et al., Wiley

## 02. Electronic Commerce

- Components of EC
  - To execute these applications, companies need the right information, infrastructure, and support services. As shown:
    - People: Sellers, buyers, intermediaries, information systems specialists and other employees, and any other participants.
    - Public policy: Legal and other policy and regulating issues, such as privacy protection and taxation.
    - Marketing and advertising: Like any other business, EC usually requires the support of marketing and advertising.
    - Support services: Many services are needed to support EC. They range from payments to order delivery and content creation.
    - Business partnerships: Joint ventures, e-marketplaces, and partnerships are some of frequently occurring relationships in e-business.



<http://www.bigbossbusiness.net>

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## 03. Auctions and Bartering

- Auctions and Bartering
  - The major mechanism for buying and selling on the Internet is the electronic catalog.
  - There are two common mechanisms used in its implementation:
    - Electronic auctions and bartering online.



<http://bizduniya.blogspot.com>

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### 03. Auctions and Bartering

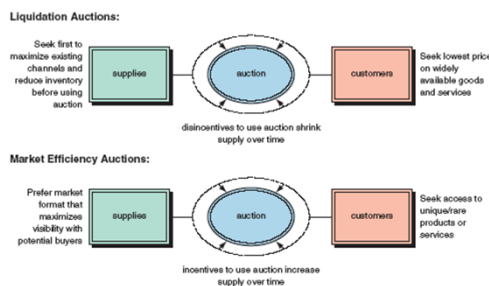
- Auctions
  - Auctions are used in B2C, B2B, C2B, e-government, and C2C commerce.
  - Electronic auctions (e-Auctions): A market mechanism by which sellers place offers and buyers make sequential bids.
    - Forward auctions are auctions that sellers use as a selling channel to many potential buyers. Items are placed at sites for auction and buyers bid continuously for the items.
    - Reverse auctions, have one buyer, usually an organization, that wants to buy a product or a service. Suppliers are invited to submit bids.



<http://biddingwebsite.blogspot.com>

### 03. Auctions and Bartering

- Bartering
  - Electronic bartering, the exchange of goods or services without a monetary transaction.
  - Types
    - Individual-to-individual bartering
    - Corporate e-bartering (e.g., barterbrokers.com)



Information Technology for Management, Ed. 5, Efraim Turban et al., Wiley



## 04. Business-To-Consumer

- Business-To-Consumer (B2C)
  - Electronic Retailing: Storefronts and Malls
  - For generations home shopping from catalogs has flourished, and television shopping channels have attracted millions of shoppers.
  - However, these methods have drawbacks:
    - Both methods can be expensive.
    - Paper catalogs are sometimes not up-to-date.
    - Television shopping is limited to what is shown on the screen at any given time.



<http://search-engine-optimisation.seotechnologies.com.au>

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## 04. Business-To-Consumer

- Electronic Retailing (e-tailing)
  - The concept of retailing and e-tailing implies the sale of goods and/or services to individual customers.
  - Electronic retailing (e-tailing) is the direct sale of products through electronic storefronts or electronic malls, usually designed around an electronic catalog format and/or auctions.



<http://www.ebusinesscity.com>

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## 04. Business-To-Consumer

- Electronic Retailing (e-tailing)
  - Types
    - Electronic storefronts: Hundreds of thousands of solo storefronts can be found on the Internet, each with its own Internet name and EC portal, such as Home Depot, The Sharper Image, or Wal-Mart.
    - Electronic mall: As a cybermall or e-mall, it is a collection of individual shops under one Internet address. The basic idea of an electronic mall is the same as that of a regular shopping mall—to provide a one-stop shopping place that offers many products and services.



<http://falcon.txcc.commnet.edu>

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## 04. Business-To-Consumer

- E-tailing Issues
  - Resolving channel conflict: A firm's distribution channels compete with each other and with the firm.
  - Resolving conflicts within click-and-mortar organizations. When an established company decides to sell direct online, it may create a conflict within its existing operations in areas such as pricing, services, allocation of resources and logistical support.



<http://www.nett.com.au>

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## 04. Business-To-Consumer

- E-tailing Issues
  - Organizing order fulfillment and logistics. E-tailers face a difficult problem of how to ship small quantities to a large number of buyers.
  - Determining viability and risk of online e-tailers. How long does a company operate while losing money and how will it finance the losses.
  - Identifying appropriate revenue models. It is necessary to identify appropriate revenue/business models.



<http://www.buzzom.com>

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## 04. Business-To-Consumer

- Service Industries
  - Delivery of services (buying an airline ticket or stocks) can be done 100 percent electronically, with considerable cost reduction potential.
  - Therefore, online services is growing very rapidly.



<http://www.realtimemanager.net>

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## 04. Business-To-Consumer

- Service Industries
  - Types
    - Electronic banking: As cyberbanking, it includes various banking activities conducted from home or a business instead of at a physical bank
    - International and multiple-currency banking: International banking and the ability to handle trading in multiple currencies, transfers of electronic funds and electronic letters of credit are critical for international trade.
    - Online securities trading: It can be placed from anywhere, any time. Investors can find a considerable amount of information regarding a specific company or in a mutual fund.



<http://www.dib.ae>

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## 04. Business-To-Consumer

- Service Industries
  - Types
    - Online job market: The Internet offers a perfect environment for job seekers and for companies searching for employees.
    - Travel services: The Internet is an ideal place to plan, explore, and arrange almost any trip.
    - Real estate: Real estate transactions are an ideal area for e-commerce. The customer can view many properties, sort and organize properties according to preferences and can preview the exterior and interior designs of the properties, shortening the search process.



<http://www.fnnews.com>

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## 04. Business-To-Consumer

- Customer Service
  - Phases in customer service life cycle.
    - 1) Requirements
    - 2) Acquisition
    - 3) Ownership
    - 4) Retirement



<http://www.esbjournal.com>

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## 04. Business-To-Consumer

- Issues in E-Tailing Market Research
  - To successfully conduct electronic commerce, especially B2C, it is important to find out who are the actual and potential customers and what motivates them to buy. Finding out what specific groups of consumers want is done via segmentation, dividing customers into specific segments, like age or gender.
  - Market researchers have tried to understand consumer behavior, and develop models to help vendors understand how a consumer makes a purchasing decision. If the process is understood, a vendor may be able to influence the buyer's decision, through advertising or special promotions.

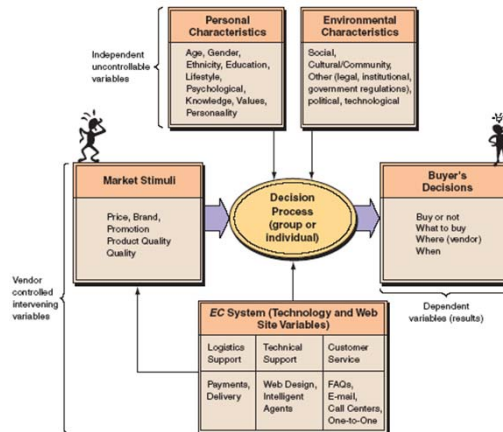


<http://www.watblog.com>

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## 04. Business-To-Consumer

- Consumer Behavior Model



Information Technology for Management, Ed. 5, Efraim Turban et al., Wiley

## 04. Business-To-Consumer

- Issues in E-Tailing

- Several models have been developed in an effort to describe the details of the decision-making process that leads up to and culminates in a purchase.
- Generic purchasing-decision model
  - 1) Need identification
  - 2) Information search
  - 3) Evaluation of alternatives
  - 4) Purchase and delivery
  - 5) After-purchase evaluation.



<http://www.trak.in/>

## 04. Business-To-Consumer

- Market Research Process
  - There are basically two ways to find out what customers want. The first is to ask them, and the second is to infer what they want by observing what they do.
    - Asking customers what they want
    - Observing customer behavior on the web



<http://www.peaksurveys.com>

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## 04. Business-To-Consumer

- Market Research Process
  - Asking customers what they want:
    - The Internet provides easy, fast, and relatively inexpensive ways for vendors to find out what customers want by interacting directly with them.
    - The simplest way is to ask potential customers to fill in electronic questionnaires.



<http://www.marketingplaninfo.com>

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## 04. Business-To-Consumer

- Market Research Process
  - Observing customer behavior on the web:
    - The Web is a rich source of business intelligence captured from a company's Web sites.
    - By analyzing the user behavior patterns contained in the clickstream data inference about behavior can be made.
      - Brand- and vendor-finding agents and price comparisons
      - Search agents
      - Collaborative filtering agents
      - Other agents



<http://www.marketguidepro.com>

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## 04. Business-To-Consumer

- Online Advertising
  - Advertisement is an attempt to disseminate information in order to influence a buyer-seller transaction.
  - Unlike traditional advertising on TV or newspapers which is impersonal, one-way mass communications, Internet advertising is media-rich, dynamic, and interactive.
  - The most common advertising methods online are banners, pop-ups, and e-mails.



<http://www.inquisitr.com>

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## 04. Business-To-Consumer

- Online Advertising
  - Types
    - Banners are electronic billboards and is the most commonly used form of advertising on the Internet
      - Keyword banners appear when a predetermined word is queried from a search engine.
      - Random banners appear randomly
    - Pop-up, pop-under, and similar ads.
      - A pop-up ad appears in front of the current browser window.
      - A pop-under ad appears underneath the active window.
    - E-mail advertising.
    - Electronic catalogs and brochures.
    - Other forms of internet advertising.

<http://www.kleinco'sult.net>



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## 04. Business-To-Consumer

- Advertising Issues and Approaches
  - Unsolicited Advertising
    - Spamming
  - Permission Marketing
  - Viral Marketing
  - Interactive Advertising and Marketing
  - On-line Promotions
  - On-line Coupons



<http://www.seanseo.com>

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## 05. Business-To-Business

- Business-To-Business (B2B)
  - In B2B applications, the buyers, sellers, and transactions involve only organizations.
  - It covers a broad spectrum of applications that enable an enterprise to form electronic relationships with its distributors, resellers, suppliers, customers, and other partners.



<http://www.idahopress.com>

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## 05. Business-To-Business

- Market Places
  - Sell-side marketplaces:
    - Organizations attempt to sell their products or services to other organizations electronically, from their own private e-marketplace.
    - This model is similar to the B2C model in which the buyer is expected to come to the seller's site and place an order.
  - Buy-side marketplaces:
    - Organizations attempt to buy needed products or services from other organizations electronically, usually from their own private e-marketplace.
    - One buy-side model is a reverse auction.
    - Here, a company that wants to buy items places a request for quotation (RFQ) on its Web site, or in a third-party bidding marketplace.



<http://www.emarketservices.com>

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## 05. Business-To-Business

- E-procurement
  - Purchasing by using electronic support is referred to as e-procurement.
  - In addition to reverse auctions e-procurement uses other mechanism.
  - Two popular ones are group purchasing and desktop purchasing.
    - Group purchasing
    - Desktop purchasing.



<http://www.wbsusa.com/>

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## 05. Business-To-Business

- E-procurement
  - Group purchasing
    - The requirements of many buyers are aggregated so that they total a large volume, and thus merit more seller attention.
    - Once buyers' orders are aggregated, they can be placed on a reverse auction, and a volume discount can be negotiated.

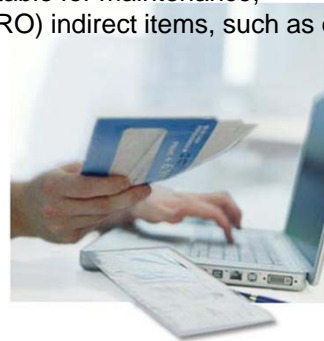


<http://web-site-development-solutions.blogspot.com>

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## 05. Business-To-Business

- E-procurement
  - Desktop purchasing.
    - In this variation of e-procurement, suppliers' catalogs are aggregated into an internal master catalog on the buyer's server, so that the company's purchasing agents can shop more conveniently.
    - Desktop purchasing is most suitable for maintenance, replacement, and operations (MRO) indirect items, such as office supplies.

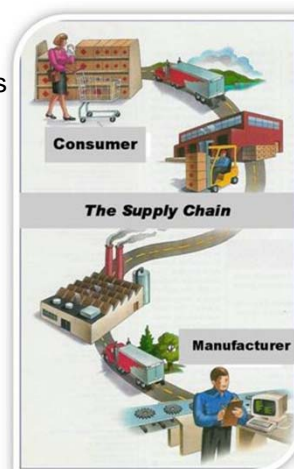


<http://www.publictendering.com>

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## 05. Business-To-Business

- Electronic Exchanges
  - Electronic Exchanges are E-marketplaces in which there are many sellers and many buyers.
  - Types
    - Vertical distributors for direct materials
    - Vertical exchanges for indirect materials
    - Horizontal distributors
    - Functional exchanges



<http://communic84bis.wordpress.com>

## 05. Business-To-Business

- Electronic Exchanges
  - Vertical distributors for direct materials
    - These are B2B marketplaces where direct materials (materials that are inputs to manufacturing) are traded in an environment of long-term relationship, known as systematic sourcing.
  - Vertical exchanges for indirect materials
    - Here indirect materials in one industry are purchased on an “as-needed” basis (called spot sourcing).
    - Buyers and sellers may not know each other.
    - In such vertical exchanges, prices are continually changing, based on the matching of supply and demand.



<http://www.verticalsystems.com>

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## 05. Business-To-Business

- Electronic Exchanges
  - Horizontal distributors
    - These are “many-to-many” e-marketplaces for indirect (MRO) materials, such as office supplies, used by any industry.
    - Prices are fixed or negotiated in this systematic sourcing-type exchange.
  - Functional exchanges
    - Here, needed services such as temporary help or extra space are traded on an “as-needed” basis (spot sourcing).
    - Prices are dynamic, and they vary depending on supply and demand.



<http://blog.daum.net/mocle>

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## 05. Business-To-Business

- Employees
  - Companies are finding many ways to do business electronically with their own employees.
  - They disseminate information to employees over the intranet, they allow employees to manage their fringe benefits and take training classes electronically.
  - Also, many companies have electronic corporate stores that sell a company's products to its employees, usually at a discount.



<http://www.wellnesscorporatesolutions.com>

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## 05. Business-To-Business

- Employees
  - Some other uses:
    - Sales force automation is a technique of using software to automate the business tasks of sales, including order processing, contact management, information sharing, inventory control, order tracking, customer management and sales forecast analysis.
    - E-commerce between strategic business units (SBUs)
    - E-commerce between and among employees



<http://blog.promodirect.com>

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## 06. Electronic Government

- E-Government
  - E-government is the use of Internet technology in general and e-commerce in particular to deliver information and public services to citizens, business partners and suppliers, and those working in the public sector.
  - It can be divided into three major categories:
    - Government-to-citizens (G2C)
    - Government-to-business (G2B)
    - Government-to-government (G2G)



<http://www.seeregionalnetworkofpolicymakers.org>

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## 07. Consumer-To-Consumer

- Customer-To-Customer (C2C)
  - Customer-to-customer (C2C) e-commerce refers to e-commerce in which both the buyer and the seller are individuals (not businesses).
  - C2C is conducted in several ways on the Internet, where the best-known C2C activities are auctions.
  - Types
    - C2C Auctions.
    - Classified Ads.
    - Personal Services.
    - Support Services to C2C.



<http://www.presentermedia.com>

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## 08. E-Commerce Support Services

- E-Commerce Support Services
  - B2B and B2C applications require payments and order fulfillment. Portals require content, etc.
  - These services include:
    - E-infrastructure (mostly technology consultants, system developers and integrators, hosting, security, and networks)
    - E-process (mainly payments and logistics)
    - E-markets (mostly marketing and advertising)
    - E-communities (different audiences and business partners)
    - E-services (CRM, PRM, and directory services)
    - E-content (supplied by content providers)

e-commerce



<http://www.simoncotter.com>

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## 08. E-Commerce Support Services

- Electronic Payments
  - Electronic payments are an integral part of doing business, whether in the traditional way or online.
  - Unfortunately, in most cases traditional payment systems are not effective for EC, especially for B2B.



<http://www.eventful.co.kr>

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## 08. E-Commerce Support Services

- Electronic Payments
  - Types
    - Electronic checks (e-checks) are similar to regular checks. They are used mostly in B2B
    - Electronic credit cards make it possible to charge online payments to one's credit card account.
    - Purchasing cards, the B2B equivalent of electronic credit cards.
    - Electronic cash (e-cash) appears in three major forms: stored-value cards, smart cards, and person-to-person payments.



<http://www.teeky.org>

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## 08. E-Commerce Support Services

- Electronic Payments
  - Types
    - Electronic bill presentment and payments allow customers to pay their recurring monthly bills, such as telephone, utilities, credit cards, etc. online.
    - E-wallets are mechanisms that provide security measures to EC purchasing. The wallet stores the financial information of the buyer, including credit card number, shipping information, and more.
    - Virtual credit cards are a service that allow you to shop with an ID number and a password instead of with a credit card number.

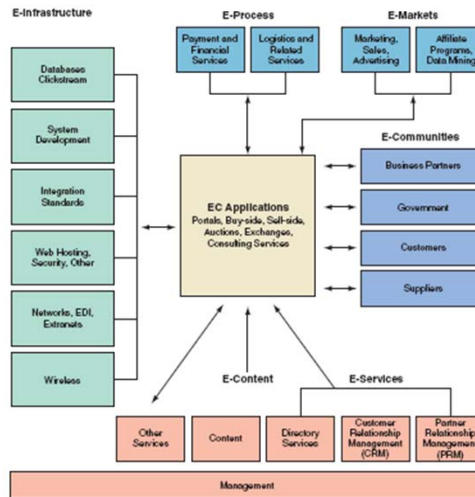


<http://www.intranet-services.com>

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## 08. E-Commerce Support Services

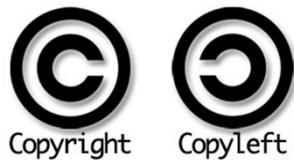
- Structure



Information Technology for Management, Ed. 5, Efraim Turban et al., Wiley

## 09. Ethical and Legal Issues in E-Business

- Ethics and Legal Issues
  - Copyright
  - Copyleft
  - Intellectual property
  - Business model patent



<http://aitbeds.blogspot.com>



<http://online-fashion-info.blogspot.com>