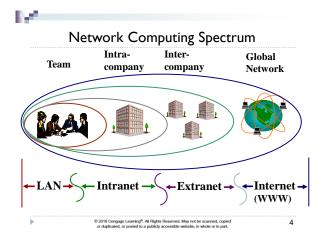
	introduction to information systems		
	Instructor: Kerry Augustine		
	5 D		
	E-Business, E-Commerce		
	Lecture Outline 10		
ly de			
Le	earning Objectives		
	well as show how organizations utilize these environments Describe electronic commerce and how it has evolved		
•	Describe the strategies that companies are adopting to		
	compete in cyberspace  Describe the stages of business-to-consumer electronic		
	commerce and the key drivers for the emergence of mobile		
	commerce Understand the keys to successful electronic commerce		
	applications		
•	Understand general eBusiness security fundamentals		
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	Network Computing Spectrum		
	- Intranet/ Extranet/ Internet		
		3	

ACS-1803



Py6

# Internet and the World Wide Web Capabilities

- ▶ The Internet Changed Everything
  - Intranet internal, private network using Web technologies to facilitate transmission of proprietary information within the organization
  - Extranet two or more firms using the Internet to do business together
  - Internet and World Wide Web created an entirely new communications capability for the emergence of Electronic Business (eBusiness)
  - The Internet opened up access to markets by lowering barriers to entry.

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# **Network Computing Spectrum**

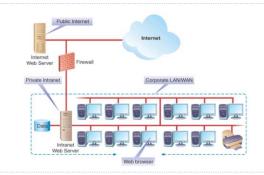
Intra-Team company





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#### Intranet Architecture



#### Intranet Applications





# Intranet Applications

- Training

   Provides online access to a host of training functions including course catalogs, registration, content (video, slides, other materials) and evaluation

   Provides significant increases in productivity and standardization, and cost reductions (e.g. travel costs)

#### Application Integration

- Allows for integration and consolidation of information from disparate
- systems into a single point of access
- Increases employee productivity and output quality

#### Real-time Access to Information

- Allows employees access to real-time system information.
- This reduces customer service needs by giving all authorized and interested parties direct system access

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### Intranet Applications

#### Online Entry of Information

- Allows for direct online input to streamline routine business processes (e.g. expense reporting)
- Provides for significant cost reductions from reducing administrative support and shifting maintenance functions back to the employee (i.e. sick leave applications)

#### Collaboration

- Allows employees to communicate business activities across
- geographic and departmental boundaries
- Allows for shorter development cycle times
- Allows employees to stay abreast of current projects, corporate, and market conditions

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### Network Computing Spectrum

Team

Intracompany Intercompany





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#### **Extranets**

#### Extranets

- Extranets are **secure** network architectures that provide customers, suppliers, and employees with access to **internal** systems.
- Extranets enable two or more firms to use the Internet to do business together.
- $\bullet$  They are an excellent use of  $\bf B2B$  to allow companies to achieve a positive return on their tech investments.

#### **Extranet Benefits**

- Improves timeliness and accuracy of communications, thereby reducing errors and misunderstandings
- Uses Electronic Data Interchange (EDI) as the standard protocol for allowing disparate computing platforms to communicate without additional investments in the application systems.
- Easy to use, requires little training
- Used to automate transactions, reducing cost and cycle time

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# Electronic Data Interchange (EDI)

- Electronic Data Interchange
   The transmission of electronic business forms between business partners (e.g. purchase order)
- Typically used by large organizations via VAN...very expensive
- The internet (VPN) has opened this technology to smaller firms
   Utilizes universal standard transmission protocols to
- communicate and transmit data between different systems.

- EDI transactions are supported by two types of network methods:

  I. VAN (Value Added Network)

  - 2. VPN (Virtual Private Network)

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## Value Added Network (VAN)

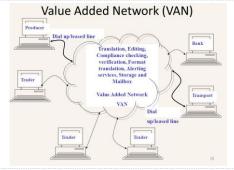


- YAN (Value Added Network) providers are private network operators that provide guaranteed delivery. The VAN is responsible for routing, storing and delivering EDI messages. They also provide delivery reports. VANs may be operated
  - · telecom companies;
  - · industry group consortia;
  - a large company interacting with its suppliers/vendors.

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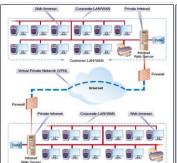


# Value Added Network (VAN)



# 1

### Virtual Private Network (VPN)



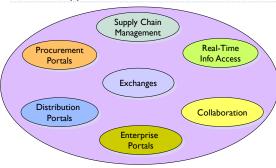
#### Virtual Private Network

- (VPN) is a secure network technique to protect extranet communications over an IP network
- Uses a technique called tunneling to encapsulate, encrypt, and transmit data over the Internet
- Requires server authentication (verify user with password) to allow operation
- May be managed as a fully integrated, end-to-end dedicated private network.
- Similar to a VAN utilizes the IP network backbone and is a more cost-effective option for SME's.
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# **Extranet Applications**



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## **Extranet Applications**

#### **Supply Chain Management**

- Used to **exchange** supply and manufacturing **information** between **customers** and **suppliers**
- The extranet contains features allowing participants to purchase online, check supplier inventory, transfer design specifications, and other business related tasks

#### **Real-time Access to Information**

- Allowing business partners and customers access to realtime system information
- This reduces customer service needs by giving all authorized and interested parties direct system access

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# **Extranet Applications**

#### Collaboration

- Allows companies to respond proactively to marketplace changes by working directly with suppliers and customers
- Allows for **shorter** development **cycle times**
- Allows for reorganization of the purchasing function turning buyers into supplier relationship managers

#### **Enterprise Portals**

- These are access points (front doors) combined from multiple extranets where business partners access secure, proprietary company information
- This provides a **single point of access** for information that comes from a **variety** of disparate **systems**
- Benefits include faster access for business partners, reduced maintenance cost by reduction in total extranets

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eBusiness/ eCommerce - B2C, B2B, B2E, C2C

# Electronic Business Defined

### Electronic Business

is using electronic information to improve performance, create value and enable new relationships between business and customers

#### **Electronic Commerce**

is the marketing, selling and buying of products and services on the Internet

#### Internet Commerce

is the online exchange of information and services utilizing network technologies

Web Commerce

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# Types of Electronic Commerce

Type of EC	Description	Example
Business-to-Consumer (B2C)	Transactions between businesses and their customers	A person buys a book from Amazon.com
Business-to-Business (B2B)	Transactions among businesses	A manufacturer conducts business over the Web with its suppliers
Business-to-Employee (B2E)	Transactions between businesses and their employees	An employee uses the Web to make a change in his/her health benefits
Consumer-to-Consumer (C2C)	Transactions between people not necessarily working together	A person purchases some memorabilia from another person via eBay.com

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# E-Commerce Impact to Competiveness

- ▶ Enables new products and services
- ▶ Encourages substitute products
- ▶ Lowers barrier to entry
- ▶ Changes balance of power of customers and suppliers
- ▶ Transforms some industries
- Creates new opportunities for creating new markets, building brands, and large customer bases

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eBusiness/ eCommerce - Strategy and Competitiveness



# Traditional vs Strategy Support Process

# **Example AVIS RENTA CAR**

Using handheld technology combined with a reengineered business process to create a competitive advantage

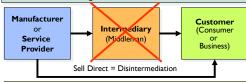
	Traditional Rental Car Return Service Encounter	Avis's Computer-Based Service Encount
	Return car to lot attendant, get bags from another attendant, walk inside and wait in line to settle contract with another attendant, walk out, and board a shuttle.	Return car to lot attendant, grab receipt and bags, and board shuttle.
Elapsed time	5-20 minutes	5-20 seconds
Number of people to interact with	2-3 people	1–2 people
Average number of footsteps customer takes	60-75 steps	5-10 steps
Relative efficiency	Low	High

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# Impact of the Web: Disintermediation

Disintermediation

Removal of the intermediary (middleman) in a sale.
Companies can sell directly to customers (retail or wholesale) without assistance using the Internet



Example

· Airlines selling directly to flyers without a travel agent or customer service representative

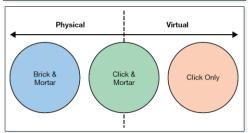
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## eCommerce Business Strategies

Business Strategies come in one of the following three types. All require a sound business model to be successful (see next)



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# Brick-and-Mortar & Click-and-Mortar Strategies



#### Brick-and-Mortar

- Operate a firm solely in traditional physical markets
- Approach business activities traditionally by operating physical locations (e.g. stores, offices, manufacturing plants)

#### Click-and-Mortar

- Operate a firm in physical locations and has added an EC component to their business
- Requires maximization of business opportunities in both the physical and virtual environments
- This strategy requires a significant investment in systems and



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# Click-Only Strategy



- Business transactions are only conducted virtually
- Can require significant expertise and investment in technology and systems staff
   There are many different revenue models

Revenue Model	Examples	Revenue Source	Table 5.4 Five comm
Advertising	Yahoo.com	Fees from advertisers in exchange for advertisements	revenue models for e-business.
Subscription	WSJ.com, Consumerreports.org, Sportsline.com	Fees from subscribers in exchange for access to content or services	
Transaction Fee	eBay.com, E-Trade.com	Fees (commissions) for enabling or executing a transaction	
Sales	Amazon.com, LLBean.com, Gap.com, Sears.com, JCPenney.com	Sales of goods, information, or services	
Affiliate	MyPoints.com	Fees for business referrals	

Laudon/Traver, E-Commerce: Business, Technology, Society, Table 2.1 (p. 62), Table 2.2 (p. 56)
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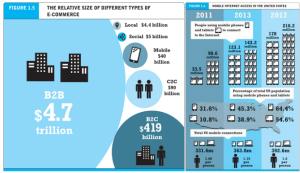
# The Mobile Platform

- Most recent development in Internet infrastructure
- Enables access to the Internet via wireless networks or cell-phone service
- Mobile devices include
  - ▶ Tablets
  - Smartphones
  - Ultra-lightweight laptops

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# B2B vs B2C vs MC



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## The Virtual Enterprise

Uber, the world's largest taxi company, owns no vehicles.



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▶ Facebook, the world's most popular media owner, creates no content.



Alibaba, the most valuable retailer, has no inventory.



Airbnb, the world's largest accommodation provider, owns no real estate.



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