

# Chapter 5

## Electronic Commerce: New Ways of Doing Business

*Developing a sound grounding in electronic commerce  
concepts and vocabulary*

*Samuele Astuti*

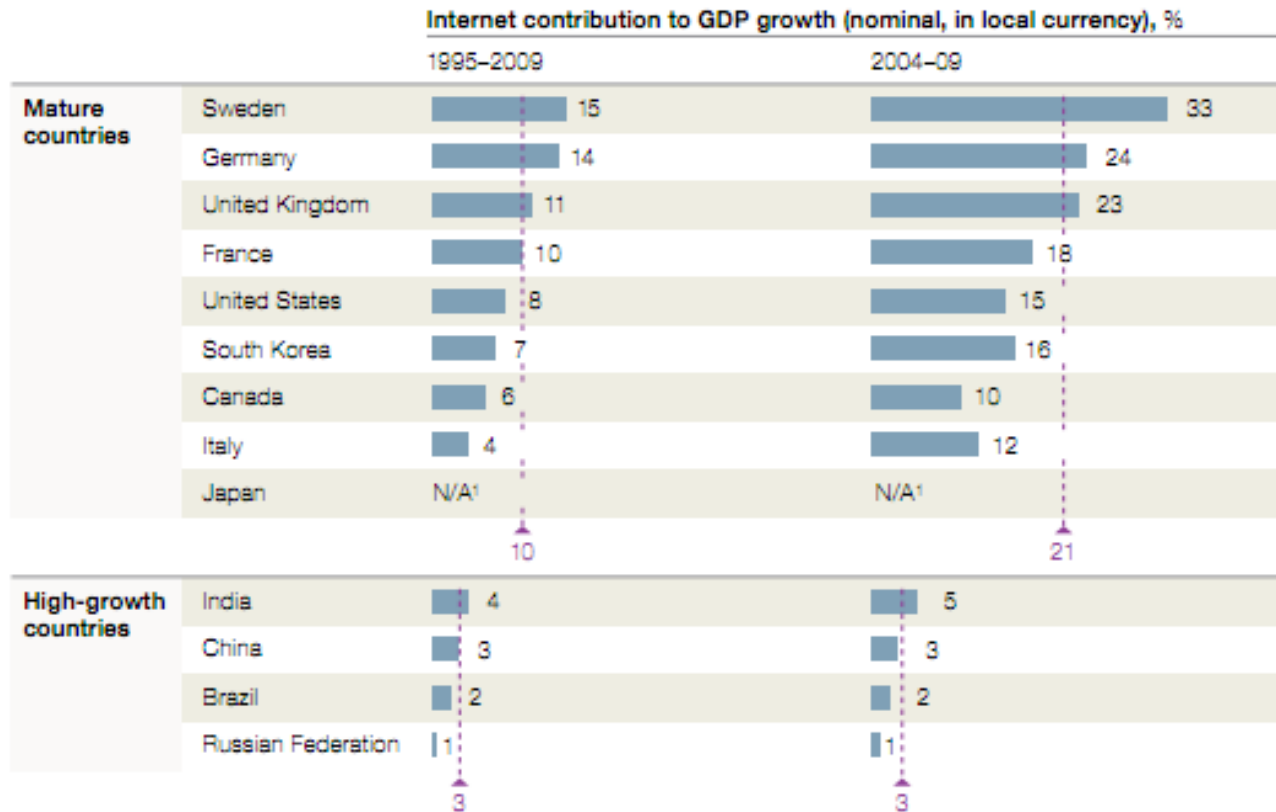
# Learning Objectives

1. Understand and be able to clearly articulate what the Internet is, its principal characteristics, and the principal services it makes available to users.
2. Broaden your definition of the Internet from a network of computer networks to an information grid connecting a staggering range of devices, both wired and wireless.
3. Be able to compare and contrast *electronic commerce* and *electronic business*, and provide examples of each. Identify and understand the enablers of electronic commerce trends.
4. Categorize electronic commerce phenomena on a number of different dimensions, including the type of transactions taking place and the structure of the organizations involved.
5. Understand and apply the concept of *business model*, and explain why the Internet has led to so much business model experimentation. Identify the principal *revenue models* employed in electronic commerce and explain the dominant business model in use today.
6. Understand and evaluate the principal implications of electronic commerce for both established firms and new entrants.
7. Be able to evaluate the *Web 2.0* phenomenon and be able to discuss both its technological and organizational manifestations.
8. Discuss some of the more relevant future electronic commerce and electronic business trends.

# Introduction

- A basic understanding of how the Internet works and a mastery of the business vocabulary
- The research found that the Internet contributes directly as a vehicle for economic activity (e.g., online sales, advertisement) and indirectly as an element of economic progress is very important today
- The internet is a catalyst for job creation adding 2.6 jobs for every technology job lost

# Impact of the Internet



<sup>1</sup>Negative growth due to deflation.

Source: Organisation for Economic Co-operation and Development (OECD) national accounts, McKinsey analysis

# The Internet

- The Internet is an infrastructure upon which *services*—such as e-mail, the Web, instant messaging, and many others—are delivered
- Today we can confidently estimate that there are more intelligent devices connected to the Internet than there are people with access
- We already see laptops and advanced handsets connected, but in the future everything that will benefit from being connected will be connected, including heart monitors, house appliances, and sensors of all kind

# Internet Services

**M (10) Mashable!** [Share](#) [Edit](#) [×](#)

## Mashable

All That's New on the Web

News | **Invites** | Jobs | Buzz Tracker

- 3G Mobile Internet Comes to Mount Everest 2 hours ago
- How Xobni Went From E-mail Add-On to Productivity Platform 3 hours ago
- James Cameron on "Avatar 2" and the Impending Environmental Crisis 7 hours ago
- HOW TO: Protect Yourself From Firesheep With a VPN 8 hours ago
- Mozilla Gives Firefox a New Add-On for Audio and Video Recording 10 hours ago
- Flickr Now Lets You Sign Up With Your Google Account 11 hours ago
- Mashable Is Hiring Editors and Reporters! Here's How to Apply 13 hours ago
- Adobe Demos Flash-to-HTML5 Conversion Tool [VIDEO] 13 hours ago
- YouTube's Burgeoning Promoted Videos Business 14 hours ago
- Microsoft Posts Record Earnings, But Still Losing Billions on the Web 14 hours ago

**TC (7) TechCrunch** [Share](#) [Edit](#) [×](#)

- Cloud Computing Startup Nomadesk Raises \$7 Million Series B To Support US Expansion 1 hour ago
- Boticca, An Online Marketplace For More Original Accessories 2 hours ago
- The Banned White iPhone 4 Promo [Humor] 4 hours ago
- Siemens Wins \$466 Million Contract To Build 70 Green Trains 4 hours ago
- It's Kinda Rough For MySpace Over on Quora 5 hours ago
- Where in the World Is Eduardo Saverin? In Singapore, Funding Facebook Comes At A Price ...

**LH (7) Lifehacker** [Share](#) [Edit](#) [×](#)

- Call Confirm Adds a Confirmation Dialog to Prevent Accidental Calls [Downloads] 45 minutes ago
- Detect a Politician's Lies by Watching for Over-Confident Statements [Lying] 11 hours ago
- Best File Encryption Tool? [Hive Five Call For Contenders] 12 hours ago
- Remains of the Day: Mint Data Exposes What Other People Are Spending at Your Favorite Haunts [For What Its Worth] 12 hours ago
- Is Facebook Evil? [Reader Poll] 13 hours ago
- CCleaner Releases Version 3.0, Adds Secure Drive Wiping and Other Improvements [Downloads] 13 hours ago
- How to Beat a Polygraph Test [Video] 14 hours ago

**Twitter / gpiccoli** [Share](#) [Edit](#) [×](#)

What are you doing? Characters available: 140



[Home](#) [Refresh](#) [Send](#) [Profile](#) [Star](#) [More](#)

**Alltop** How to thwart food thieves with... laxatives and fake mold <http://om.ly/ywEb> about 3 hours ago

**Alltop** 20 best cities for trick-or-treating <http://om.ly/ywEY> about 3 hours ago

**Alltop** New tricks for old-fashioned cake cutting <http://om.ly/yvvh> about 4 hours ago

**Alltop** BP oil used as ink for clever poster design <http://om.ly/yvvh> about 4 hours ago

**(7) I, Cringely** [Share](#) [Edit](#) [×](#)

- License to Print Money 2 days ago
- Energy Past, Energy Future 3 days ago
- AOL+Yahoo is a Jealousy Game 1 week ago [Share](#) [Edit](#) [×](#)
- Show Me the Money 2 weeks ago [Share](#) [Edit](#) [×](#)
- Spies Like Us 3 weeks ago [Share](#) [Edit](#) [×](#)
- Crunch Time at AOL 3 weeks ago [Share](#) [Edit](#) [×](#)
- Google's Pound of Flesh 1 month ago [Share](#) [Edit](#) [×](#)

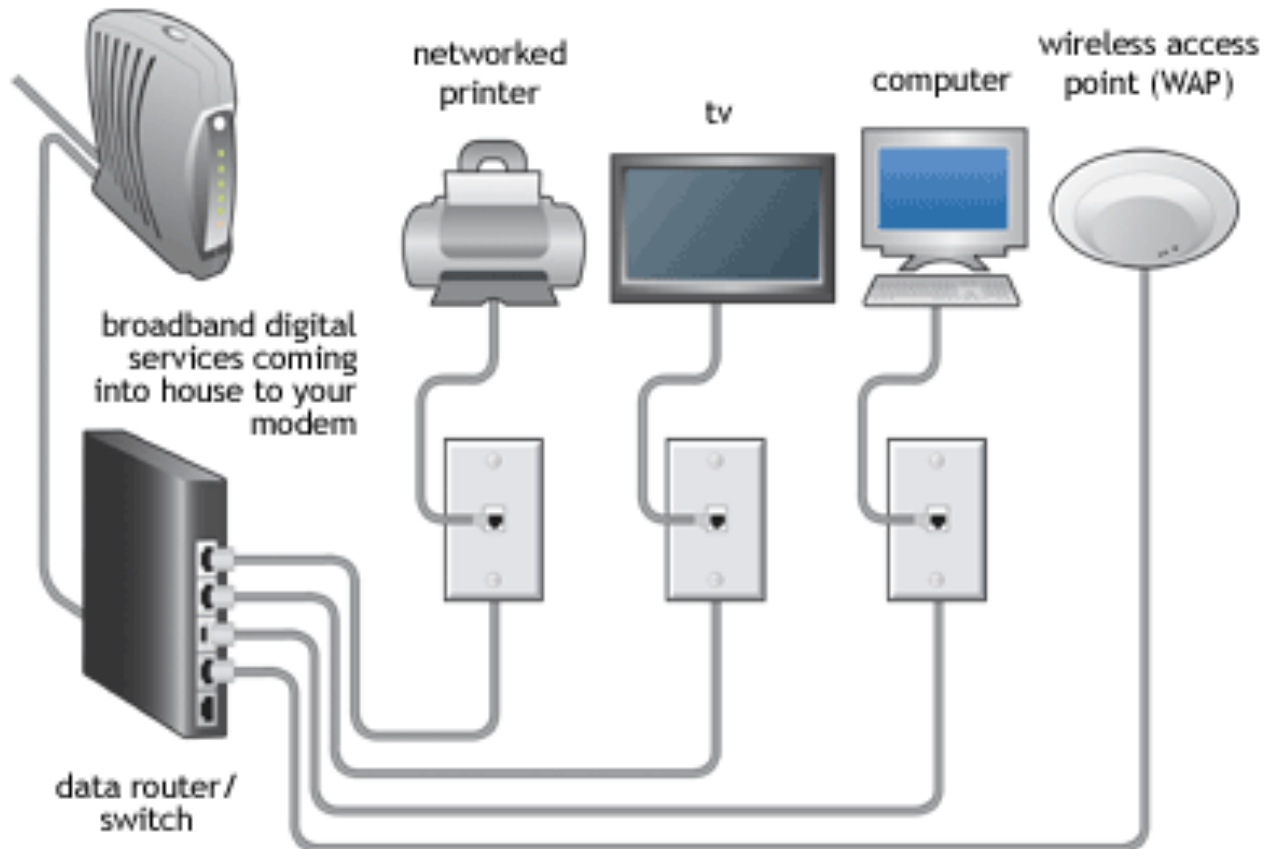
**CK (7) How to Change the World** [Share](#) [Edit](#) [×](#)

- How to Make Paper.li and Flipboard Rock 2 months ago
- Need example of a personal story of enchantment 2 months ago
- Best Twitter Client for iPhone and iPad 2 months ago
- How to get a free copy of my first book, The Macintosh Way 2 months ago
- How to Find Freedom 3 months ago
- Examples of Enchanting Things 3 months ago
- Why too much money is worse than too little 3 months ago

**(10) Mashups via** [Share](#) [Edit](#) [×](#)

- Where Is My Train? 4 hours ago
- Take Kerala (India) 4 hours ago
- TV.ListAndPlay.com yesterday
- Street Invaders yesterday
- TwitGrids 2 days ago
- iBordeaux 2 days ago
- Office² iPad 2 days ago
- DCAlerts 3 days ago
- Mapeas 4 days ago
- Current Weather 4 days ago

# Multiplicity of Devices



# Standards & Protocols

- A protocol is an agreed-upon set of rules or conventions governing communication among the elements of a network (i.e., network nodes)
  - TCP/IP
  - HTML



# The Future Internet

- The Internet of tomorrow will be as dramatic a change from the Internet of today as today's Internet is from the unconnected, proprietary computing networks of yesterday
- Mobile computing devices, broadband access, wireless networks, and computing power embedded in everything from refrigerators to automobiles will converge into a new global network

# eCommerce and eBusiness

- **Electronic commerce**
  - An online exchange of value
  - The process of distributing, buying, selling, marketing, and servicing products and services over computer networks such as the Internet.
- **Electronic business**
  - The use of Internet technologies and other advanced IT to enable business processes and operations.



# The Enablers

- Affordable computing equipment
- Access to the Internet
- Ease of use
- Open standards

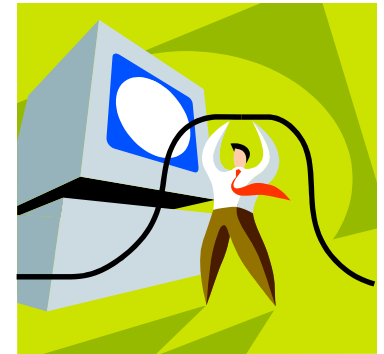


# Categorizing eCommerce Initiatives

- Categorizing ventures by transaction type
  - Business-to-Consumer (B2C)
  - Business-to-Business (B2B)
  - Consumer-to-Consumer (C2C)
  - Consumer-to-Business (C2B)
  - eGovernment
- Categorizing ventures by company structure
  - Bricks and mortar
  - Bricks and clicks
  - Pure play

# Business-to-Consumer (B2C)

- Business-to-consumer transactions:  
Involve a for-profit organization on one side and the end-consumer on the other.
- Examples:
  - Amazon.com
  - Target.com
  - Edmunds.com
- The most visible kind of eCommerce.



# Business-to-Business (B2B)

- Businesses-to-business transactions: Two or more business entities take part in the transaction.
- The transactions can range from one-time interactions to unique and highly tailored relationship between two firms.
- Example: Premier Pages of Dell.com

# Consumer-to-Consumer (C2C)

- Consumer-to-consumer transactions: Enable individual consumers to interact and transact directly



myspace

Sign up

Login

# Consumer-to-Business (C2B)

- Consumer-to-business transactions: Individuals transact with business organizations not as buyers of goods and services, but as suppliers

The screenshot shows the Elance website interface. At the top, the Elance logo is on the left, and navigation links for Providers, MyElance, Help, About Elance, and News are on the right. A search bar is also present. Below the logo, there are tabs for Design, Programming, Websites, Writing, and Other. A welcome message says "Welcome! Sign in or register".

The main heading reads "Find the Experts You Need to Get the Job Done" and "Elance - The World's Largest Online Services Marketplace and Workspace." Below this is a large image showing a collage of people working at computers, with a process flow: "Post Project → Get Quotes → Choose Provider → Reach Goal".

On the right side, there is a "Learn More" section with links: "How it works", "Who uses Elance", "All about Elance Providers", "What it costs", "About Elance", and "Become a Provider". Below that is a "Get Free Quotes:" section with a "Post Your Project" button and "Or Browse Fixed-Price Packages:" section with links for "Logo Design Packages", "Brochure Design Packages", and "Website Design Packages".

At the bottom, there is a table of services:

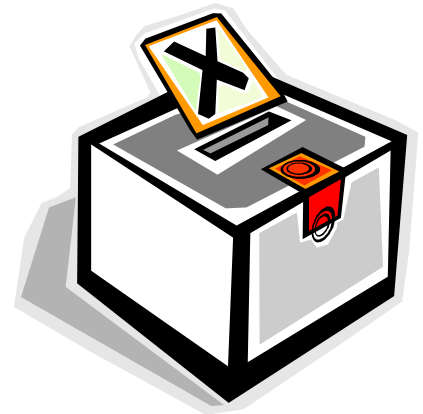
Design	Programming	Websites	Writing	Other
3D Images	Ajax	Audio Upload	Book Review	Accounting
Animation	.net	Browser Testing	Copywriting	Billing & Collections
Book CD/Covers	C#	Catalog	Editing	Pulk Mailing

At the bottom right, it says "Since 1999 Mountain View, California".



# eGovernment

- Electronic government: Transactions involving legislative and administrative institutions.
- eGovernment transaction can occur with individual citizens, businesses or other governments.
- Example:
  - Electronic filing of income tax
  - Electronic voting



# Bricks and Mortar

- Bricks and mortar: “Traditional” organizations that have physical operations and locations and don’t provide their services exclusively through the Internet.



# Bricks and Clicks

- Bricks and clicks: Organizations that have hybrid operations
  - Also known as click and mortar
- Two approaches
  - Developing independent ventures to take advantage of the opportunities, and capital, available to online ventures
  - Running the online channel as part of the bricks and mortar operations in a highly integrated fashion

The screenshot displays the CVS/pharmacy website interface. At the top, there is a red navigation bar with the CVS/pharmacy logo and icons for Pharmacy, Shop, Photo, and ExtraCare. Below this is a search bar and a shopping cart icon showing 0 items for \$0.00. The main content area features a blue sidebar with a 'Prescription Center' and various links like 'Refill Prescriptions' and 'View/Print Rx Records'. The central banner promotes 'Buy 40 4x6 Prints, Get 20 FREE' with a 'CVS Photo' logo and a 'Promo Code: 20FREE'. To the right, there are sections for 'My Local Store' with a ZIP code field, 'Sports physicals' with a 'SAVE \$20' offer, and 'Featured Online Savings!' listing products like Huggies, Hair Regrowth, and Crest Whitestrips with their respective discounts.

# Pure Play

- Pure play: Firms with no stores providing their services exclusively through the Internet.
- Example:
  - Google
  - Amazon.com
  - Yahoo!

No stores  $\neq$  No physical operations

# Business Models

- A business model
  - Captures the firm's concept and value proposition,
  - Conveys:
    - The market opportunity
    - What product or service the firm offers
    - What strategy the firm will follow to seek a dominant position
  - Identifies organizational capabilities the firm plans to leverage to turn the concept into reality.
- The network economy offered opportunity for new business models

# A New Business Model

Your Trip: Ithaca, NY to Milan, Italy [change cities](#) Depart: Fri, August 25 Return: Sat, December 23



You can save up to 40% over leading online sites when you Name Your Own Price® for your flight.<sup>1</sup> We guarantee you a quality travel experience at the best price possible.

## Select Departure and Arrival Airports

### Departure Airports

- Ithaca - Tompkins County, NY (ITH)
- Syracuse - Hancock Intl, NY (SYR)
- Greater Buffalo Intl, NY (BUF)
- Newburgh - Stewart Intl, NY (SWF)
- Allentown - Lehigh Valley Intl, PA (ABE)
- Albany - County, NY (ALB)

### Arrival Airports

- Milan - Malpensa, Italy (MXP)
- Milan - Linate, Italy (LIN)
- Milan - Orio Al Serio, Italy (BGY)

Best deal airport option Not available for this trip

## Name Your Own Price® and Save Up to 40% on Your Trip<sup>1</sup>



Name Your Own Price<sup>SM</sup> Per Round-trip Ticket \$ 780 .00

Total charges, including [taxes and fees](#), are displayed on the following page.

Not Flexible?

[Choose exact flight times and prices](#)

## Priceline.com: name-your-own price model

# Revenue Models

- A revenue model specifies how the firm intends to make money
  - **Pay for service:** The firm offers a product or a service for sale
  - **Subscription:** Customers pay for the right to access the content
  - **Advertisement support:** The firm makes its content or service free for a large audience and sells access to its audience to interested advertisers
  - **Affiliate:** The firm generates revenue from a third-party based on traffic it send to the partner web site.
  - **Freemium:** The firm gives away its product or service for free, and attempts to build a large customer base by reducing the obstacle created by the payment

# Revenue Models



English

## Maximize revenue from your online content

Google AdSense is a free program that empowers online publishers to earn revenue by displaying relevant ads on a wide variety of online content, including:



### Site search results

Easily add a custom search engine to your site, and earn from ads on the search results pages.



### Websites

Display ads on your website that are suited to your audience's interests, and earn from valid clicks or impressions.



### Mobile webpages and apps

Connect your mobile users with the right ad at the right time as they seek information on the go.

[View all of Google's solutions for publishers!](#)

**Sign up now**

Sign in with your  
**Google Account**

Email:   
ex: pat@example.com

Password:

[Can't access your account?](#)

©2011 Google - [Help](#) - [Success Stories](#) - [Blog](#) - [Forum](#) - [Terms](#) - [Program Policies](#) - [New Interface](#)

The screenshot shows the Amazon Associates homepage. At the top, it says "amazonassociates" and "Help | Feedback | Select Locale | United States". The main heading is "Make Money Advertising Amazon Products" with a sub-heading "Earn up to 15%\* in referrals by advertising Amazon products." Below this are three main sections: "Advertise products on your web page", "People follow the links to Amazon", and "Earn up to 15%\* when they buy". There is a "Get Started Tour" button. On the right, there is a sign-in section for existing members and a "Join now for FREE!" button for new members. At the bottom, there are three columns: "Links & Banners", "Widgets", and "Site Stripe", each with a "Learn more" button.



# Freemium



Have an account?

[Sign in](#)

## Meet Triplt Pro. Your new personal travel assistant.

Triplt Pro helps you tame the chaos and complexity of travel. It has all the awesomeness of Triplt for organizing your travel plans, plus a suite of features that keep you in the know, on the go. All for less than the cost of a sandwich lunch at the airport each month. **Get a FREE 30 day trial.**

### Know before you go



Instant alerts about flight delays, cancellations and gate changes sent right to your phone.

### Track all your points



At last, all your frequent travel account information, balances, and expirations in one place.

### Share automatically



Automatically share all your travel plans with the people who need to know exactly where you are...and where you're going.

### Find alternate flights fast



We'll help you when you need to find another way there, including flight status and open seats.

### NEW! Get flight refunds



If your airfare is eligible for a refund, you'll be the first to know. [Learn more](#)

### Travel with privileges



Complimentary 1-year memberships to Hertz #1 Club Gold and Regus Gold. VIP car rental and access to 1,100 business lounges worldwide. (\$660 value)

[Get Triplt Pro Now](#)

Or, sign up for a regular Triplt account

**FREE 30 day trial**

new lower price - just \$49/year

**FASTCOMPANY**

"Must-Have Mobile Apps for the Road Warrior"  
June 2010

**Inc.**

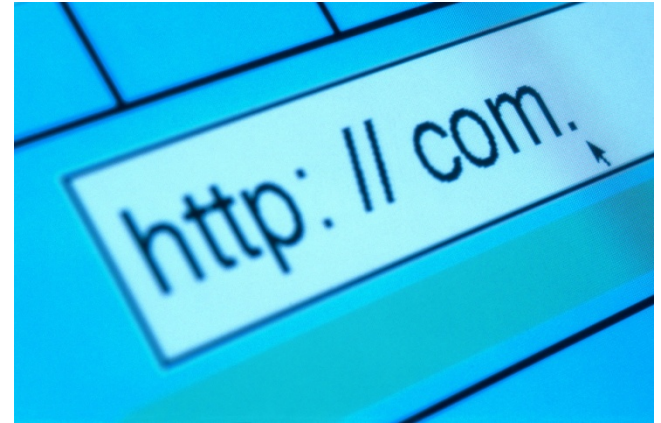
"50 top picks for the best of business travel"  
July 2010

**lifehacker**

"Lifehacker Pack "Best of List" for iPhone"  
& for Android  
August 2010

# Dominant Business Models

- Online retailing
- Infomediaries
- Content providers
- Online communities
- Exchanges
- Infrastructure providers



# Online Retailing

- Takes control of inventory it then resells at a profit
- Fulfillment is a critical capability for these organizations
- Revenue model: pay for service
- Pure play vs. Bricks & Clicks



# Infomediaries

- Information intermediaries
  - Use the Internet to provide specialized information on behalf of product or service providers.
  - Do not sell the goods and services or take ownership of inventory.
- Examples:
  - Consumer electronics: MySimon.com
  - Travel: Kayak.com
  - Autos: Edmunds.com



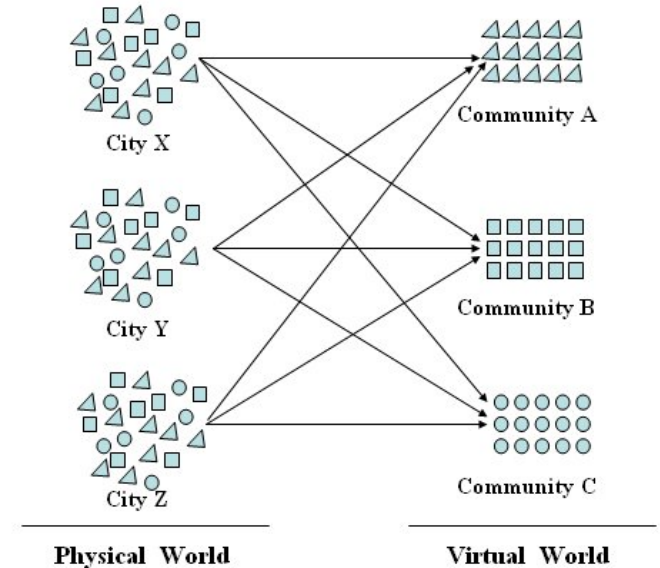
# Content Providers

- Content providers develop and publish content.
- Sources of contents
  - Owned: Generated by the organization's staff
  - Not owned: User-generated
- Revenue model: ad supported, subscription, pay per download
- Examples:
  - News: Reuters.com
  - Current information: Eonline.com
  - Historical and reference information: Britannica.com
  - Travel information and tips: EpicTrip.com



# Online Communities

- A group of people brought together by a common interest or goal
- The community is virtual and alleviates the physical constraint
- Example:
  - Yahoo! Answers



# Exchanges

- Exchanges: Create a market-place for buyers and sellers to come together and transact
- Provides a “market making”
- Compensated with fees, commission on sales, or consulting fees



# Infrastructure Providers

- Companies that have been able to create value by developing and managing the infrastructure of electronic commerce.
- Revenue model: pay for service
- Example:
  - Hardware companies managing the Internet backbone: MCI WorldCom
  - Internet Service Providers (ISP) enabling access to the Internet and its services: AOL
  - Instance payment service companies: PayPal



# eCommerce Implications

- Disintermediation: Shortening the distribution chain by eliminating intermediaries and establishing direct relationship with customers
- Re-intermediation: Creating opportunities for new intermediaries to exist alongside their brick and mortar counterparts
- Market efficiency: Reducing search costs increases difficulty in profiting from strategies rooted in asymmetry of information or high search costs
- Channel conflict: The dilemma of firms facing the choice between disintermediation or re-intermediation
- Customer and employee self-service: Saves time & money by providing customers & employees with the ability to do their own transactional processing

# Trends in Technological Innovation

- Web 2.0 :
  - Free
  - Easy to use
  - Less structured
  - More interactive
- Wiki: Enables simple co-authoring and editing of Web content
- Blogs: Online journals that individuals keep and publish on the Web
- Real Simple Syndication (RSS):
  - Enables the creation of web feeds
  - Broadcasted to all subscribers once a trigger event occurs
- Tags: Used to structure and categorize the increasing amount of available user-generated content

# Trends in Business Innovation

- **Mobile commerce (M-commerce):**
  - The ability of completing commercial transactions using mobile devices, such as cellular phones
  - Offers the ability to reach consumers in real-time, at the point of service, based on their current location
- **U-commerce**
  - The use of ubiquitous networks to support personalized and uninterrupted communications and transactions



# The Recap

- The Internet, traditionally thought of as a network of computer networks, is evolving into a global information grid enabling ever-changing devices, and the people who use them, to easily connect and disconnect from it
- Electronic commerce is defined as an online exchange of value while electronic business as the digital enablement of internal organizational business processes
- We classified electronic commerce as business-to-consumer (B2C), business-to-business (B2B), consumer-to-consumer (C2C), consumer-to-business (C2B), and eGovernment

# The Recap

- The dominant business models that have emerged in the network economy are online retailing, infomediaries, content providers, online communities, exchanges, and infrastructure providers
- A key feature of a business model is the revenue model—the firm's plan for building a revenue stream
- The dominant revenue models that have emerged are pay for service, subscription, advertisement support, and affiliate

# What We Learned

1. Understand and be able to clearly articulate what the Internet is, its principal characteristics, and the principal services it makes available to users.
2. Broaden your definition of the Internet from a network of computer networks to an information grid connecting a staggering range of devices, both wired and wireless.
3. Be able to compare and contrast *electronic commerce* and *electronic business*, and provide examples of each. Identify and understand the enablers of electronic commerce trends.
4. Categorize electronic commerce phenomena on a number of different dimensions, including the type of transactions taking place and the structure of the organizations involved.
5. Understand and apply the concept of *business model*, and explain why the Internet has led to so much business model experimentation. Identify the principal *revenue models* employed in electronic commerce and explain the dominant business model in use today.
6. Understand and evaluate the principal implications of electronic commerce for both established firms and new entrants.
7. Be able to evaluate the *Web 2.0* phenomenon and be able to discuss both its technological and organizational manifestations.
8. Discuss some of the more relevant future electronic commerce and electronic business trends.