3

e-Business Models

Objectives

- To understand the different business models being implemented on the Internet.
- To explore the transition of brick-and-mortar businesses to e-Businesses.
- To understand Internet business models as they are used among the leading online industries.
- To learn the terminology and basic principles behind e-commerce.
- To learn about the many options open to Web entrepreneurs.

The Road to the City of Emeralds is paved with yellow brick.
Lyman Frank Baum

Ye shall no more give the people straw to make brick.
The Old Testament

All intelligent thoughts have already been thought; what is necessary is to try and think them again.
Johann Wolfgang von Goethe

And the portal opens to receive me...
Ann Radcliffe

Outline

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3.1 Introduction

There are many benefits of bringing your business to the Web. An e-business can offer personalized service, high-quality customer service, and improved supply chain management. In this chapter we explore the different types of businesses operating on the Web, as well as the technologies needed to build and run an e-commerce Web site.

Amazon.com, eBay, Yahoo! and others have helped to define industry categories and business models on the Web. Entrepreneurs starting e-businesses need to be aware of these models and how to implement them effectively. In this chapter, we review the storefront model, the auction model, dynamic pricing models, the portal model and other Web busi-

ness models. *An e-business* is defined as a company that has an online presence. E-businesses that have the ability to sell, trade, barter and transact over the Web can be considered *e-commerce* businesses. The combination of a company's policy, operations, technology and ideology define its business model. In this chapter, we define a number of models and the technologies that make them possible. Businesses within a particular model can leverage these fundamental technologies to differentiate themselves from the competition.

3.2 Storefront Model

Shopping online is an increasingly popular activity. At the close of 1999, nearly 55 million people, 60 percent of Internet users, were shopping online.[1] The move toward e-commerce presents many benefits, as well as a host of new considerations. The storefront model is what many people think of when they hear the word e-business. The storefront combines transaction processing, security, online payment and information storage to enable merchants to sell their products on the Web. This is a basic form of e-commerce where the buyer and the seller interact directly.

To conduct storefront e-commerce, merchants need to organize an online catalog of products, take orders through their Web sites, accept payments in a secure environment, send merchandise to customers and manage customer data (such as customer profiles). They must also market their sites to potential customers—a topic further explored in Chapter 4, "Internet Marketing".

Although the term e-commerce is fairly new, large corporations have been conducting e-commerce for decades by networking their systems with those of business partners and clients. For example, the banking industry uses *Electronic Funds Transfer (EFT)* to transfer money between accounts. Many companies also use *Electronic Data Interchange (EDI),* in which business forms, such as purchase orders and invoices, are standardized so that companies can share information with customers, vendors and business partners electronically.

Until recently, e-commerce was feasible only for large companies. However, the Internet and the World Wide Web make it possible for small businesses to compete with large companies. E-commerce also allows companies to conduct business *24-by-7*, all day, everyday, worldwide.

Some of the most successful e-businesses are using the storefront model. Many of the leading storefront model companies are *B2C* (business-to-consumer) companies. For example, **`More.com`** (**`www.more.com`**) is a health and beauty e-commerce site that uses a shopping cart to allow customers to shop, buy and arrange shipment. Products include skin care, eye care, pharmaceuticals and many other products associated with health and wellness.

`Ticketmaster.com` (**`www.ticketmaster.com`**) uses the Internet to sell tickets improve its customer service. Customers have access to seating plans, show listings and price discounts. Ticketmaster uses shopping-cart technology, an advanced database system and a strong supporting infrastructure to make this possible.

Although both companies use a shopping cart and supporting technologies to offer their products and services to customers, each has chosen a different approach to e-commerce.

3.2.1 Shopping-cart Technology

One of the most commonly used e-commerce enablers is the *shopping cart*. This order-processing technology allows customers to accumulate items they wish to buy as they continue to shop. Supporting the shopping cart is a product catalog, which is hosted on the *merchant server*

in the form of a *database*. The merchant server is the data storage and management system employed by the merchant. A database is a part of the merchant server designed to store and report on large amounts of information. For example, a database for an online clothing retailer would typically include such product specifications as item description, size, availability, shipping information, stock levels and on-order information. Databases also store customer information, such as names, addresses, credit-card information and past purchases. The **Amazon.com** feature explains the these technologies and how they are implemented.

Amazon.com

Perhaps the most widely recognized example of an e-business that uses shopping-cart technology is **Amazon.com**.[2, 3] Opened in 1994, the company has rapidly grown to become one of the world's largest online retailer. Amazon offers millions of products to more than 17 million customers in 160 countries. For customers who prefer choice, **Amazon.com** also offers online auctions.

In its first few years, **Amazon.com** served as a mail-order book retailer. Their line of products has since expanded to include music, videos, DVDs, electronic cards, consumer electronics, hardware, tools, beauty items and toys. The Amazon catalog is constantly growing, and the site allows you to navigate quickly among millions of products.

Amazon.com uses a database on the server side that allows customers on the client side to search for products in a variety of ways. This is an example of a *client/server application*. The Amazon database consists of product specifications, availability, shipping information, stock levels, on-order information and other data. Book titles, authors, prices, sales histories, publishers, reviews and in-depth descriptions are also stored in the database. This extensive database makes it possible to cross-reference products. For example, a novel may be listed under various categories, including fiction, best-sellers and recommended titles.

Amazon.com personalizes its site to service returning customers; a database keeps a record of all previous transactions, including items purchased, shipping and credit-card information. Upon returning to the site, customers are greeted by name, and lists of recommended titles presented, based on customer's previous purchases. Amazon searches the customer database for patterns and trends among its clientele. By monitoring such customer data, the company provides personalized service that would otherwise need to be handled by sales representatives. Amazon's computer system drives sales of additional items without human interaction.

Buying a product at Amazon is simple. You begin at the **Amazon.com** home page and decide the type of product you would like to purchase. For example, if you are looking for *C++ How to Program: Third Edition*, you can find the book by using the **Search Box** in the top-left corner of the home page. Select **Books** in the **Search Box**, then type the title of the book into the window. This takes you directly to the product page for the book. To purchase the item, select **Add to Shopping Cart** on the top-right corner of the page. The shopping-cart technology processes the information and displays a list of the products you have placed in the shopping cart. You then have the option to change the quantity of each item, remove an item from the shopping cart, check out or continue shopping.

Amazon.com (Cont.)

When you are ready to place your order, you proceed to checkout. As a first-time visitor, you will be prompted to fill out a personal identification form including name, billing address, shipping address, shipping preference and credit-card information. You are also asked to enter a password that you will use to access your account data for all future transactions. Once you confirm your information, you can place your order.

Customers returning to Amazon can use its *1-Click℠ system*. This allows the customer to reuse previously entered payment and shipping information to place an order with just one click of the mouse. This is an excellent example of how an intelligently designed database application can make online business transactions faster and easier.

When your order is placed, Amazon sends a confirmation to you by e-mail. A second e-mail is sent when the order is shipped. A database monitors the status of all shipments. You can track the status of your purchase until it leaves the **Amazon.com** shipping center by selecting the **Your Account** link at the bottom of the page and entering your password. This will bring you to an **Account Maintenance** page. You can cancel your order at any time before the product is shipped, which usually occurs within 24 to 48 hours of purchase.

Amazon.com operates on secure servers that protect your personal information. If you feel uncomfortable using your credit card on the Web, you can place your order through their Web site using the last five digits of your credit card and later complete your order by calling Amazon's Customer Service Department to provide the remaining numbers. We discuss Web security in Chapter 7.

Although the shopping cart is only one method of conducting transactions online, it is an effective way of buying and selling products on the Internet. Many companies combine a number of purchasing methods to give their customers a wide array of options. In Chapter 26, you will learn to build your own storefront using key technologies such as the shopping cart, online auction technology and price-comparison technology.

While shopping-cart technology offers consumers the convenience of quick and easy transactions, it creates problems regarding consumer privacy and online security. These issues will be discussed at length in Chapter 6 and Chapter 7. For more examples of e-businesses who have found success using this technology visit **www.etoys.com**, **www.webvan.com**, and **www.cdnow.com**.

3.2.2 Online Shopping Malls

Online shopping malls present consumers with a wide selection of products and services. They are often considered to be more convenient than searching and shopping at independent online storefronts for several reasons. Consumers can search and shop for a variety of products, and rather than making several separate purchases, they can use the mall's shopping-cart technology to purchase items from many stores in a single transaction. Often these sites act as shopping portals, directing traffic to the leading shopping retailers for a specific product.

Leading online malls include **Mall.com** (**www.mall.com**), which features many of the same vendors you will find in your local brick-and-mortar mall—offline retailers such

as JCrew, Harrods, and the Sharper Image. **Shopnow.com**, **www.shopnow.com** and **www.DealShop.com** are other online malls offering a wide variety of shopping options.

3.3 Auction Model

Forrester Research reveals that an estimated $3.8 billion will be spent on online person-to-person auctions in the year 2000 alone. This number is dwarfed by the $52 billion that is projected to be spent on business-to-business auctions in 2002.[4] The Web offers many different kinds of auction sites, in addition to sites designed to search existing auction sites in order to pinpoint the lowest prices on an available item.

Usually, auction sites act as forums through which Internet users can log-on and assume the role of either bidder or seller. As a seller, you are able to post an item you wish to sell, the minimum price you require to sell your item and a deadline to close the auction. Some sites allow you to add features, such as a photograph or a description of the item's condition. As a bidder, you may search the site for availability of the item you are seeking, view the current bidding activity and place a bid (bids are usually in designated increments). Some sites allow you to submit a maximum bidding price and will continue bidding for you. Auction technology will be explained inn depth in the eBay feature.

The *reverse auction model* allows the buyer to set a price as sellers compete to match or even beat it. One example of a reverse auction site is **Liquidprice.com** which processes your auction within two days. A faster option is available when the buyer sets a *reserve price.* A reserve price is the lowest price that the seller will accept in any type of auction. Sellers can set the reserve price higher than the minimum bid. If no bid meets the reserve price, the auction is unsuccessful. If a seller sets a reserve price at **Liquidprice.com**, the seller will receive a series of bids within six hours of their initial post. However, if a successful bid is made, the buyer and seller must commit.

Although auction sites usually require a commission on sales, these sites are only a forum for online buying and selling. They do not involve themselves in payment or delivery. After the auction has been completed, both the seller and the bidder are notified, and the method of payment and the cost of delivery is then worked out between the two parties.

eBay™

Online auctions have become an enormously successful method of e-commerce. The leading company in this business is eBay (Fig 3.1).[5, 6] At the time of publication, eBay was one of the most profitable e-businesses. The successful online auction house has its roots in a 50-year-old novelty item—Pez® candy dispensers. Linda Omidyar, an avid collector of Pez® dispensers, came up with the idea of trading them over the Internet. When she expressed this idea to her boyfriend, Pierre Omidyar (now her husband), he was instantly struck with the soon-to-be-famous e-business auction concept. In 1995, the Omidyars created a company called AuctionWeb. The company was renamed eBay and has since become the premier online auction house, with as many as 4 million unique auctions in progress and 450,000 new items added each day.

eBay™ (Cont.)

Fig. 3.1 The eBay home page. (These materials have been reproduced by Prentice Hall with the permission of eBay, Inc. COPYRIGHT © EBAY, INC. ALL RIGHTS RESERVED.)

On eBay, people can buy and sell just about anything. The company collects a submission fee plus a percentage of the sale amount. The submission fee is based on the amount of exposure you want your item to receive, with a higher fee required if you would like to be among the "featured auctions" in your specific product category, and an even higher fee if you want your item to be listed on the eBay home page under **Featured Items**. This listing will not appear every time you go to the home page, but it will be shown on the site periodically. Another attention-attracting option is to publish the product listing in a bold-face font; this requires a small additional charge.

eBay uses a database to manage the millions of auctions that it offers. This database evolves dynamically as sellers and buyers enter personal identification and product information. When a seller enters a product to be auctioned, the seller provides a description of the product, keywords, initial price, date and personal information. This data is used to produce the product profile seen by potential buyers. (Fig. 3.2).

eBay™ (Cont.)

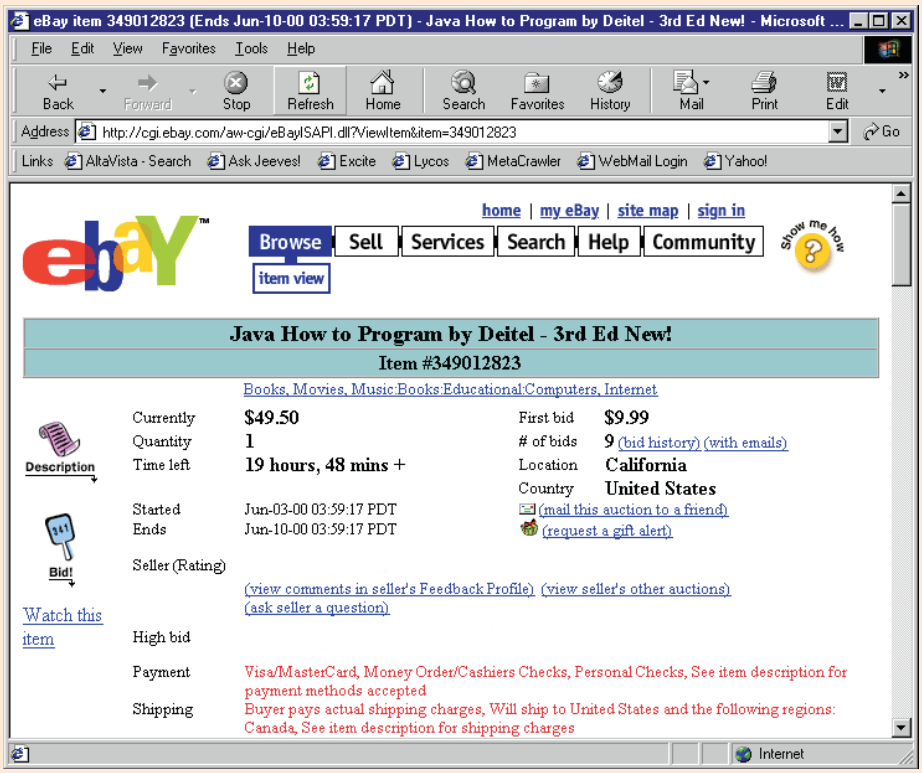

Fig. 3.2 Placing a Bid on eBay. (These materials have been reproduced by Prentice Hall with the permission of eBay, Inc. COPYRIGHT © EBAY, INC. ALL RIGHTS RESERVED.)

The auction process begins when the seller posts a description of the item for sale and fills in the appropriate registration information. The seller must specify a minimum opening bid. If potential buyers feel this price is too high, the item may not receive any bids. In many cases, a reserve price is also set. Sellers might set the opening bid lower than the reserve price to generate bidding activity.

If a successful bid is made, the seller and the buyer negotiate the shipping details, warranty and other particulars. eBay serves as a liaison between the parties—it is the interface through which sellers and buyers can conduct business. eBay does not maintain a costly physical inventory or deal with shipping, handling or other services that businesses such as Amazon and other retailers must provide. eBay has spawned a number of new businesses that use the site as their means of selling products. These businesses depend on eBay to remain up and running. Because downtime can be costly to an online business, companies like eBay make investments in *high-availability computing* and *continuous-availability computing*.

eBay™ (Cont.)

High-availability computing attempts to minimize down time; continuous-availability computing attempts to eliminate it completely. One key to such technologies is *fault-tolerant systems* that use *redundancy*. Every crucial piece of hardware—processors, disks and communications channels—has one or more levels of backup, so that, in a failure, the system simply shifts from a failed component to a backup component. This enables the system to keep running while the failed component is fixed or replaced. The same is true of data. Because companies cannot afford to lose their business data, it is also maintained redundantly.

Tandem and Stratus build continuous-availability and high-availability computing systems, respectively. For more information about these technologies, visit the Tandem Web site at **www.tandem.com** and the Stratus Web site at **www.stratus.com**.

The impact of eBay on e-business has been profound. The founders took a fairly restrictive offline business model and, by using the Internet, were able to bring it to the desktops of consumers worldwide. This business model consistently generates a profit on the World Wide Web. A recent article in *Business Week* states, "The bidding and close interaction between buyers and sellers promotes a sense of community—a near addiction that keeps them coming back".[7] By implementing traditional marketing strategies and keeping the process simple, eBay has offered a successful alternative to storefront-style e-commerce.

There are several other online auction sites. A few of the largest auctions sites are Yahoo! Auctions (**auctions.yahoo.com**), Amazon Auctions (**www.amazon.com**). FairMarket, Inc. (**www.fairmarket.com**) and Sotheby's (**www.sothebys.com**). If you prefer to see the auction as it happens visit **www.ibidlive.com**. There is a demo available on this site.

Auctions are also being employed by *business-to-business* Web sites. In these auctions the buyer and the seller are companies. Auctions are a good way for a company to sell excess inventory and gain access to new, price-sensitive customers. Three examples of B2B auction sites are DoveBid, Inc. (**www.dovebid.com**), WorldCall Exchange (**www.worldcallexchange.com**) and U-Bid-It.com (**www.u-bid-it.com**).

3.4 Portal Model

Portal sites give visitors the chance to find almost everything they are looking for in one place. They often offer news, sports and weather, as well as the ability to search the Web. When most people hear the word portal they think of search engines. *Search engines* are *horizontal portals*, or portals that aggregate information on a broad range of topics. Other portals are more specific, offering a great deal of information pertaining to a single area of interest.—these are called *vertical portals*.

Online shopping is a popular addition to the major portals. Sites such as **Hotbot.com**, **About.com**, **altavista.com** and **Yahoo.com** provide users with a shopping page that links them to thousands of sites carrying a variety of products.

Portals linking consumers to online merchants, online shopping malls and auction sites provide several advantages. See the feature on Yahoo! for a better example of a shopping portal. Portals help users collect information on the item for which they are looking and

allow users to browse independently owned storefronts, unlike some online shopping malls. Yahoo! permits users to browse a variety of sites while maintaining the convenience of paying through their Yahoo! account.

About.com offers its users an individualized experience through *GuideSite,* a service that acts as a personal shopper for the user. **About.com**'s "guides", each specializing in a particular product type, continually update the Web site and are accessible via e-mail for consumer comments and questions.[8]

Consumers must be savvy when using portals to do their online shopping. Each portal structures its online shopping experience a little differently. Some portals charge merchants for a link, others do not. For example, **GoTo.com** bills merchants per consumer "click-through." The more a business is willing to pay for each consumer "click," the higher that business will appear in **GoTo.com**'s ranks. Because charging merchants may limit the options available to customers, this may not be the best method.[8] Other sites, **About.com** and **altavista.com** for example, do not charge merchants to appear in some locations on their sites (**About.com**'s *GuideSite* and **Altavista.com**'s *Shopping and Services Categories*) but reserve the best areas of the site for paying customers. [9, 10]

Yahoo!

Yahoo! is a horizontal portal with an enormous number of site links and categories.(Fig. 3.3) It also provides consumers with shopping cart capabilities. Through Yahoo!, consumers can link to a variety of online stores adding items to their Yahoo! shopping cart. When they are ready to check out, consumers can purchase all their items through Yahoo! rather than moving from store to store. By limiting the number of registration and billing forms, this use of shopping-cart technology greatly reduces the time needed to make an online purchase.

To participate, a consumer clicks on the ***Shopping*** link at the top of Yahoo!'s home page. From there, a consumer can search for a product by selecting a category, conducting a keyword search or visiting one of the ***Featured Stores***. Other features included on this page are gift registration, ***Hot Products***, ***What's Selling Now*** and the Yahoo! Points reward system. In order to purchase through Yahoo!, you must register with the site. This is a simple process completed by clicking the ***Sign-In*** link and creating a username and password.

Once you are registered, you may begin searching for products within many Yahoo! Stores. After selecting a product and merchant, users have the option of adding the item to their shopping cart or putting it on their wish list.

Yahoo! Shopping is just one of the many sections within Yahoo! A visitor to the site can search the Web for any product. In order to improve the quality of their Web-searching capabilities, Yahoo! recently partnered with **Google.com**. When Web surfers enter a keyword into a search engine using Google search technology, they receive a list of links based on the popularity of each site. More specifically, the Web links are returned in descending order based on the number of people who link to that particular site.[11]

Yahoo! (Cont.)

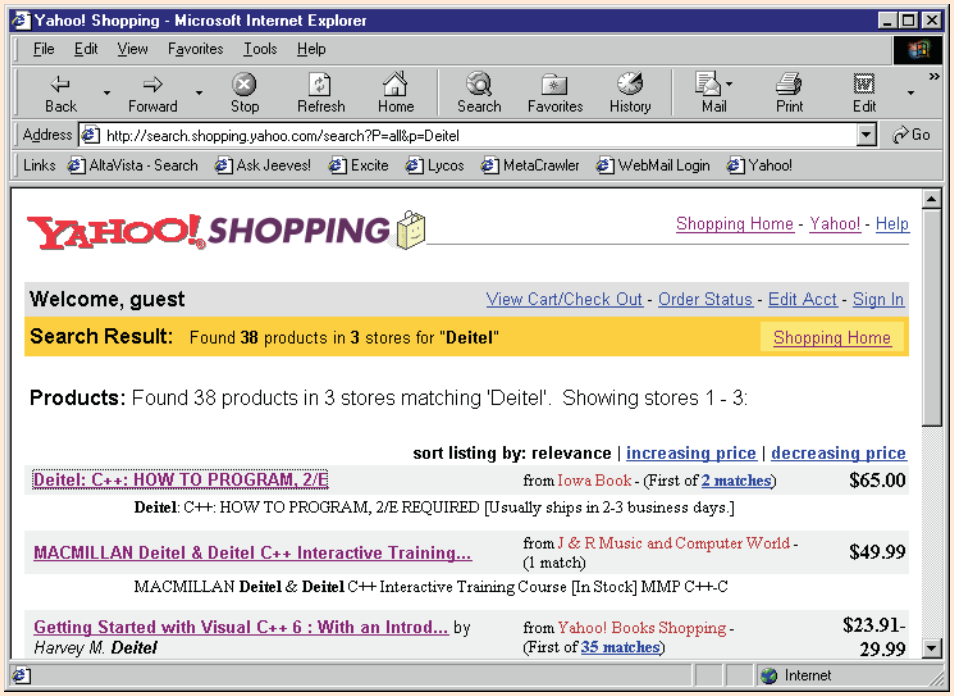

Fig. 3.3 Customers have the benefit of comparison shopping at Yahoo! Shopping. (Reproduced with Permission of Yahoo!© by Yahoo! Inc. YAHOO! and the YAHOO! logo are trademarks of Yahoo! Inc.)

Other leading horizontal portals include Ask Jeeves! (**www.ask.com**) and AltaVista (**www.av.com**). Ask Jeeves! is designed to search the Web for keywords associated with a particular question. Ask Jeeves! queries all of the major search engines to provide you with links to sites relating to your question. AltaVista links to all areas of the Web and offers free Internet access, shopping, affiliate opportunities and breaking news. You can also visit **www.google.com**, **www.metacrawler.com**, and **www.gomez.com** to search the Web.

Vertical Portals and Community Sites

Vertical portals offer a large amount of information in one subject area and are often described as community sites (see AOL feature). Community sites for an enormous number of special interest groups can be found online. Community sites create customer loyalty by allowing visitors to contribute to the sites, chat with friends and find information specifically targeted to them. Vertical portals tend to attract repeat visitors.

Many portal sites provide information pertaining to professional fields such as medicine and law. As a medical community site, Healtheon WebMD (**www.webmd.com**) offers a repository of documentation relating to the medical field. WebMD can also help

you find doctors and medical professionals. Physicians can become members of WebMD; joining the specialized practice portal allows them to keep up-to-date with medical announcements, read the latest medical journals and communicate with other members of the medical community. Medscape (**www.medscape.com**) and Dr. Koop (**www.drkoop.com**) also offer medical-portal sites.

There are many legal portals on the Web. The services provided by LEXIS (**www.lexis.com**) and its partner site NEXIS (**www.nexis.com**) are fee-based and usually purchased on a licence basis by law firms. LEXIS provides access to case and other legal data, as well as relevant news articles. Lexis speeds up the research process for people within the legal profession.

Other types of online communities center themselves around a particular demographic. **Bolt.com** is an online teen community that offers chat forums, message boards, polls and shopping. Bolt promotes longer visits by giving visitors free access to content targeted to teens and a chance to communicate with others in the same age group.

IVillage.com is a portal site for women. News and information on women's health, hobbies and general interest are available for free. Message boards are available for women who need questions answered or who would like to speak out on a given issue. **iEmily.com** (**www.iemily.com**) is a similar site designed for teenage women.

Internet.com is a portal site for the Internet and e-commerce. The latest news is offered along with links and a search option. **Internet.com** is loaded with content. All of the news articles are available free.

Epinions (**www.epinions.com**) gives visitors a chance to speak out on their hobbies, politics, favorite media, etc. Members are paid a few cents for each opinion they post. Epinions is a good place to find out real opinions on products and services you are considering. Some members have written hundreds of reviews on everything from film to automobiles.

3.5 Dynamic Pricing Models

The Web has changed the way business is done and the way products are priced. Companies such as Priceline (**www.priceline.com**) and Imandi (**www.imandi.com**) have enabled customers to name their prices for travel, homes, automobiles and consumer goods.

In the past, bargain hunters had to search out deals by visiting numerous local retailers and wholesalers. Today, a few mouse clicks is all you need to find the lowest price available.

America Online

America Online (Fig. 3.4) began this century with its highly publicized merger with Time Warner Entertainment.[12] Just 16 years after Steve Case started the company in his dorm room, AOL has become the leading media organization on the Web. The network of AOL companies includes Compuserve, Netscape, Digital City, ICQ and AOL Movie Phone.

On the Web, AOL has succeeded by offering a user-friendly and powerful community that allows the world to interact. According to the Web Site, AOL's 22 million users are able to conduct all of their browsing, email, chatting and downloading within the AOL format.

America Online (Cont.)

Fig. 3.4 The America Online home page. (Courtesy of America Online, Inc.)

Buying in bulk has always driven prices down, and there are now Web sites that allow you to lower the price by joining with other buyers to purchase products in large quantities. Another pricing strategy used by many e-businesses is to offer products and services for free. By forming strategic partnerships and selling advertising (Chapter 4, "Internet Marketing") many companies are able to offer their products at a greatly reduced rate and often for free. Bartering and offering rebates are other ways companies are keeping prices down on the Internet.

3.5.1 Name-Your-Price Model

The *name-your-price* business model empowers customers by allowing them to choose their price for products and services (See the Priceline.com feature). Many of the businesses that offer this service have formed partnerships with leaders of industries such a travel, lending, retail etc. These industry leaders receive the customer's desired price from the intermediary and decide whether or not to sell the product or service. If the customer's price is not reasonable then that customer will be asked to choose another price.

Priceline.com

Employing the name-your-price business model has catapulted **Priceline.com** into the spotlighT. You can name your price for airline tickets, hotel rooms, rental cars and mortgages. Its patented business mechanism, called the *demand-collection system*, is a *shopping bot* that takes customers' bids to the Priceline partners to see whether they will accept the prices for the requested products and services. Many e-businesses are using intelligent agents such as shopping bots to enhance their Web sites. Shopping bots are often used to scour data contained within a single database or across the Web to find answers to specific questions.

The buying process is easy at **Priceline.com**. Purchasing an airline ticket will be used as an example. When looking for a domestic flight, you first enter your departure location, destination, bid price and the number of tickets you would like to purchase. You then select the travel dates and airports in or near the departure or arrival cities. The more flexible you are with your travel arrangements, the greater your chance of getting the airline ticket for your stated price.

The **Priceline.com** bot presents the bid to the airlines and attempts to negotiate a fare below the customer's bid price. If the bid is accepted, **Priceline.com** retains the difference between the customer's bid and the actual fare price. The markup percentage varies with the price that is accepted by the airline. For domestic flights, the whole process takes about an hour.

Priceline.com is another example of how the Internet and Web are profoundly changing the way business is conducted. In the case of airlines, hundreds of thousands of airline seats go empty each day. **Priceline.com** helps airlines sell these seats. By facilitating the sale of excess inventory at a discount, **Priceline.com** allows airlines to realize increased revenue and helps passengers save money.

3.5.2 Comparison Pricing Model

The *comparison pricing model* allows customers to poll a variety of merchants and find a desired product or service at the lowest price (See the **Bottomdollar.com** feature). These sites often get their revenue from partnerships with particular merchants. Thus, you need to be careful when using these services, because you may not necessarily be getting the best price available on the entire Web. Other similar sites search the most popular stores on the Internet, trying to appeal to the largest audience.

3.5.3 Demand-Sensitive Pricing Model

The Web has enabled customers to demand better, faster service at cheaper prices. It has also empowered buyers to shop in large groups to achieve a group rate.

The concept behind the demand-sensitive-pricing business model is that the more people who buy a product in a single purchase, the lower the cost-per-person becomes. Selling products individually can be expensive because the vendor must price a product so that it covers selling and overhead cost while still generating a profit. When customers buy in bulk, this cost is shared and the profit margin is increased. Mercata (**www.mercata.com**) sells products using this business model for the home, electronics, computers

and peripherals among many other things. Customers become loyal to Mercata for helping them save money. MobShop (**www.mobshop.com**) offers comparable services. Because pricing and products do vary between these and other similar sites, so you may want to visit several such sites before making a purchase.

BottomDollar.com

BottomDollar.com uses *intelligent-agent* technology to search the Web and find the products you want at the best available prices. Intelligent agents are program that search and arrange large amounts of data, and report answers based on that data. A customer can use **BottomDollar.com** to search for a product or to browse the various categories on the site (Fig. 3.5). The service searches the catalogs of over 1,000 online retailers to find the products you want at the best available prices. The search usually takes less than a minute. Imagine trying to visit 1,000 different stores one-by-one to find the best price!

Fig. 3.5 The **bottomdollar.com** home page. (Courtesy of Network Commerce Inc.)

BottomDollar.com (Cont.)

Shopping bots and intelligent agents are changing the way people shop. Rather than going directly to the stores with established brand names, customers are using services like **BottomDollar.com** to get the best available prices. This forces online retailers to keep their prices competitive.

Similar comparison pricing sites include **Dealtime.com**, **Deja.com**, and **MySimon.com**. Unlike other comparison shopping sites, DealTime (**www.dealtime.com**) selects merchants based on customer popularity, reliability and reviews.

Deja.com (**www.deja.com**) is a multi-faceted Web site offering shopping, discussion groups, customer ratings and comparison shopping. Users of the service can then write opinions in the discussions and review sections. MySimon (**www.mysimon.com**) offers a comparison pricing search from a small number of better-known retailers.

3.5.4 Bartering Model

Another popular method of conducting e-business is *bartering*, or offering one item in exchange for another. **Ubarter.com** (**www.ubarter.com**) is a site that allows individuals and companies wishing to sell a product to post their listings. The seller makes an initial offer with the intention of bartering to reach a final agreement with the buyer. A broad range of products and services is available for barter.

If a business is looking to get rid of an overstocked product, iSolve (**www.isolve.com**) can help sell it. Products can be sold directly or on a barter basis. Potential customers send their pricing preferences to the merchant who evaluates the offer. Deals are often part barter and part cash. Examples of items typically bartered are overstocked inventory items, factory surplus and unneeded assets.

3.5.5 Rebates

Rebates can help attract customers to your site. Many companies offer "everyday low prices" and specials to keep customers coming back. eBates is a shopping site where customers receive a rebate on every purchase. eBates has formed partnerships with wholesalers and retailers who will offer discounts—the company passes these discounts to customers in the form of rebates. By adding value to a customers visit, eBates builds customer satisfaction and loyalty. What eBates retains a portion of the savings.

3.5.6 Offering Free Products and Services

Many entrepreneurs are forming their business models around advertising-driven revenue streams. Television networks, radio stations, magazines and print media use advertising to fund their operations and make a profit. The following sites offer their products for free on the Web. Many of these sites also form partnerships with companies to exchange products and services for advertising space and vise versa.

The Hollywood Stock Exchange (**www.hsx.com**) is a free gaming site where visitors become traders of entertainment stocks and star bonds. Traders are able to track the value of their movie and music stocks and bonds as they fluctuate. The strongest portfolios are

rewarded with prizes. The company is able to offer its services free by selling advertising to sponsors.

iWon.com (**www.iWon.com**) is a portal site that rewards users with raffle points as they browse the site's content. iWon has the appearance of a traditional search engine, offering links to news, sports, weather, and other topics. However, users registering and surfing the site become eligible for daily, weekly, monthly and annual prizes. Every advertisement and link has a point value and, as your points accrue, so do your chances of winning. **iWon.com** is able to support its free contests through advertising revenue and partnerships.

Freelotto.com (**www.freelotto.com**) also offers free contests supported by advertising revenue. After registering with **Freelotto.com**, you can enter a free lottery. FreeLotto awards tens of millions in cash and prizes through its online lottery system. However, you must visit sponsoring Web sites in exchange for your visit. **Freelotto.com** generates its income from these sponsors.

Freemerchant.com offers free hosting, a free store builder, a free shopping cart, free traffic logs, free auction tools and all necessary elements for running an e-commerce storefront. Freemerchant makes money from its strategic partnerships and referrals. Freemerchant partners are companies who can help small businesses establish a presence on the Web. These partners offer their services free of charge in exchange for advertising.

At **Startsampling.com** (**www.startsampling.com**) you can earn prizes for trying and reviewing products. This site allows you to request free samples from companies across the country.

Other Web sites that offer free resources are **free-programs.com**, **freestuff-center.com** and **emazing.com**.

3.6 B2B Exchanges

B2B e-commerce is defined as buying, selling, partnering, bartering or trading conducted between two or more businesses. Goldman Sachs has estimated that B2B e-commerce will generate as much as 1.5 trillion dollars in revenues by 2004, with some estimates running even higher.[13] The B2B marketplace is one of the fastest growing segments of e-commerce. Industry leaders have begun using B2B marketplaces and exchanges to improve their business methods on the Web. B2B exchanges allow businesses to buy, sell, auction, barter and distribute products and services. This cuts costs while improving efficiency.

*Procurement (*acquiring goods or services) and effective supply chain management can be difficult and costly aspects of running businesses. ICG Commerce Systems (**www.icgcommerce.com**) is a site that enables businesses, customers, suppliers, purchasers and any combination of these to interact and conduct transactions over the Internet. The system supports B2B, B2C and all variations of these models.

TradeAccess (**www.tradeaccess.com**) helps businesses form relationships and facilitate negotiations. The site aggregates all of the documentation and materials appropriate for a specific contract and negotiates the terms over the Web.

ItoI stands for Industry to Industry. This site, located at **www.itoi.com**, is designed for inter-industry trading and offers services in the chemical, retail, construction and energy industries. Visitors have the option of buying through traditional methods, auctioning or conducting exchanges. In an exchange, customers make requests and merchants attempt to fill their request at the best price. The business provides a marketplace for raw materials, chemicals, equipment and services.

Another kind of B2B exchange is available online at **eWork.com,** which allows businesses to exchange employees to complete short-term projects. eWork can search its databases and find qualified professionals to help you complete all of your projects. eWork is just one of many online companies that can help a business exchange human resources.

Other B2B exchanges include **www.cynomix.com** and **www.biz2biz.com**.

3.7 B2B Service Providers

B2B service providers make B2B transactions on the Internet easier. These e-businesses help other businesses improve policies, procedures, customer service and general operations.

Ariba (**www.ariba.com**) is a B2B service provider. Solutions include supply chain management, procurement, logistics, customer service features and many others.

Freemarkets.com is a B2B marketplace connecting buyers and sellers. Companies with surplus inventory can use Freemarkets to sell extra assets. Freemarkets specializes in hard-to-sell raw materials, property and equipment.

Because of the intense competition among Web sites for customers, the Web makes it more important than ever to keep your customers happy. Customer service and trouble-shooting are important. **Liveperson.com** has found a way to improve customer service on the Internet, by offering a product that connects visitors to your help center through a live text-based chat. By clicking an Icon on the site the visitor can speak directly with a company representative. Try the system at **www.liveperson.com**.

Business travelers who wish to do work often have to pay for time on a computer within a hotel's business center. PCRoomLink (**www.pcroomlink.com**) provides computers and secure Internet access to business travelers by putting computers in their hotel rooms. Membership is free and required when using the service.

B2B services are also available from **www.ceverything.com** and **www.magnifi.com**.

3.8 Online Trading and Lending Models

Another fast-growing area of e-commerce is online securities trading.[14, 15] According to U.S. Bancorp Piper Jaffray, Company and Industry Sources (**www.piperjaffray.com/re/re_ne2.asp?id=188**), "online trading volumes accounted for 37 percent of all retail trades for the first half of 1999, up from 30 percent in the second half of 1998." [14, 15]

Stock trades used to be handled only through brokers who were paid commissions for their services. However, due to the popularity of online trading, many brokerage houses have established a presence on the Web. Trading sites allow you to research securities, buy, sell and manage all of your investments from your desktop. Online trading often costs less than conventional brokerage.

Charles Schwab (**www.schwab.com**) is becoming one of the leading online trading providers. DLJ Direct (**www.dljdirect.com**) and Fidelity Investments (**www.fidelity.com**) offer similar services.

For more information about e-commerce and online trading, check out the latest news reports or review back issues of *Business Week* at **www.businessweek.com** and of *The Industry Standard* at **www.thestandard.com**. The Motley Fool (**www.fool.com**) is another good resource for online trading information.

E*TRADE

One of the leaders in online trading is E*TRADE (Fig. 3.6). The company was founded in 1982 to offer online stock quotes to the nation's major investment firms. With the development of the Web, E*TRADE created a Web site (**www.etrade.com**) where individual investors could manage their own investments, eliminating the need for brokers.

At E*TRADE, you can buy, sell and research stocks, bonds and other securities. If you have little knowledge about buying and selling stocks, E*TRADE offers two games in which you use fake "game money" to carry out stock trades or stock and options trades. Each player starts with $100,000 in virtual trading dollars and is given access to charts, graphs and recent news articles to help the player choose their investments. There is no risk of losing real money, so the players can feel free to experiment with different trading strategies. Each trade takes approximately one minute to process. The goal of each game is, of course, to increase the value of your portfolio. The E*TRADE games are a friendly way for beginners to experiment with online trading. Each game lasts a month and, at the end of each game, thirty-two players with the highest-valued portfolios receive prizes. To play the E*TRADE games and to learn more about online trading, visit **www.etrade.com**. An exercise at the end of the chapter encourages the reader to play the E*TRADE game. If you win a prize, please let us know!

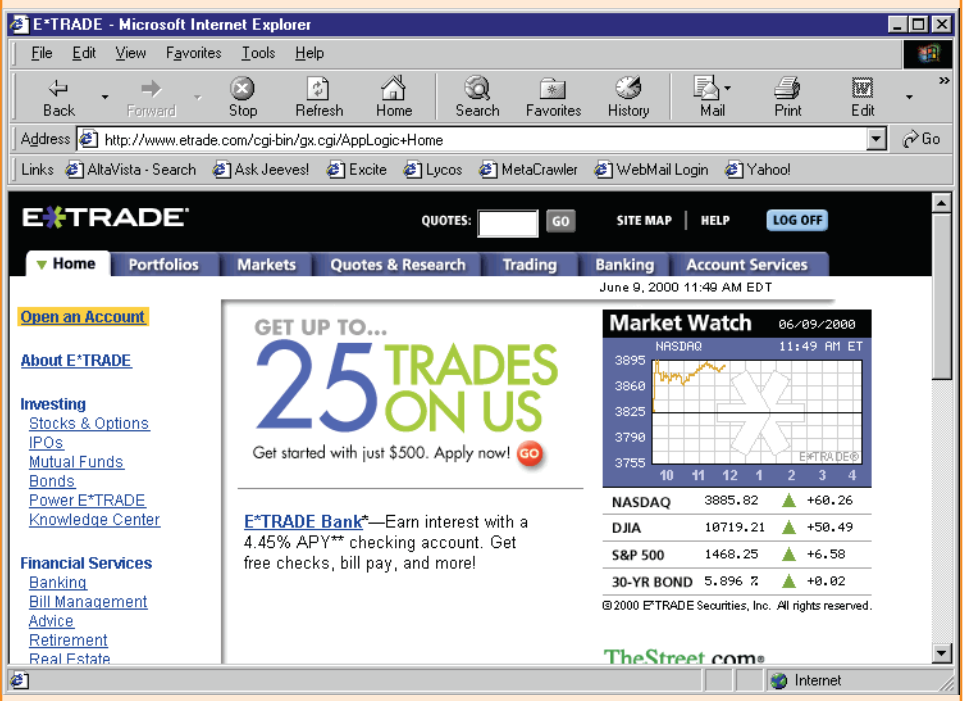

Fig. 3.6 E*Trade home page. (Courtesy of E*TRADE Securities Inc.)

3.9 Getting a Loan Online

Online lending is a growing segment of e-commerce. You might find a loan with a lower rate online than through traditional lending channels. The following companies make loans to customers over the Web.

E-LOAN (**www.eloan.com**) offers credit-card services, home equity loans and the tools and calculators to help you make educated borrowing decisions.

Rated the number-one mortgage e-commerce site by **Gomez.com**, Mortgagebot (**www.mortgagebot.com**.) offers a five-vendor rate search. This allows customers to find a bank in their neighborhood that is willing to offer them the lowest possible interest rate.

E-businesses can seek loans at eCredit (**www.ecredit.com**). This company has formed partnerships with leading lenders to speed the financing process. Once a business has received funding, eCredit will also help the business manage their new assets. eCredit customers include Hewlett-Packard, Intel and many other Fortune 1000 companies. LoansDirect (**www.loansdirect.com**) offers a comparable service. It is important to investigate a variety of options when getting a loan. A difference of a few interest points can significantly increase bills.

3.10 Recruiting on the Web

Recruiting and job searching can be done effectively on the Web (See the **monster.com** feature) Whether you are an employer or a job seeker, the Internet can improve your ability to recruit or find a job. Job seekers can learn how to write a resume and cover letter, post it online and search through job listings to find the jobs that best suit their needs. Employers can post jobs that can be searched by an enormous pool of applicants. In this section we will examine some of the recruiting options available on the Web.

Dice.c. om (**www.dice.com**) is a recruiting Web site that focuses on the computer industry. Fees are based on the number of jobs a company wishes to post and the frequency with which the postings are updated. Job seekers can post their resumes and search the job database for free.

Guru.com (**www.guru.com**) is a recruiting site for contract employees. Independent contractors, private consultants and trainers can use **guru.com** to find short-term and long-term work. Tips, articles and advice are available for contractors who wish to learn more about their industry and the best way to contract their work. Other sections of the site teach you how to run your business, buy the best equipment and manage legal issues. **Guru.com** includes an online store where you can buy products associated with small business management. Companies wishing to hire contractors need to register.

SixFigureJobs (**www.sixfigurejobs.com**) is a recruitment site designed for experienced executives. Executive positions are often hard to fill due to the high demands and experience required for the jobs. This site is designed to help fill these executive positions. Resume posting and job searching is free to job seekers.

Refer.com (**www.refer.com**.) rewards visitors for successful job referrals. Highly sought-after positions can earn thousands of dollars. If you refer a friend or family member and they are hired, you receive a commission.

These are just a few of the many recruiting-related sites on the Web. Some sites are targeted at specific groups of people such as computer programmers or electrical engineers,

while others offer their services to anyone. It is worthwhile to search and post on many of the sites at one time.

monster.com

Super Bowl ads and effective marketing have made **monster.com** one of the most recognizable online brands (Fig. 3.7). **monster.com** allows people looking for jobs to post their resumes, search job listings, read advice and information about the job-search process and take proactive steps to improve their career. These services are free to job seekers. Employers can post job listings, search resume databases and become featured employers.

Posting your resume at **monster.com** is simple and free. **monster.com** has a resume builder that allows you to post a resume to its site in 15-30 minutes; you can store up to 5 resumes and cover letters on the **monster.com** server. Some companies offer their applications directly on the **monster.com** site. **monster.com** has job postings in every state and all major categories. Furthermore, you can decide who gets to see your personal identification information. As one of the leading recruiting sites on the Web, **monster.com** is a good place to start your job search or to find out more about the search process.

Fig. 3.7 The **monster.com** home page. (Courtesy of **monster.com**.)

3.11 Online News Services

As we move into the information age, there is no question that the Web will play a major role in the publishing and news industries. Well-known news organizations such as CNN (see feature), The Wall Street Journal and Newsweek have all found the Web to be a dynamic environment on which to feature their content.

The Wall Street Journal (**www.wsj.com**), is one of the most widely read newspapers in the world, is offered in an online edition which includes full text and 24-hour updates. You can start by trying the online version on a free-trial basis, and, if you choose to subscribe, you will receive full access to the Barrons (**www.barrons.com**.) database—an online database of commentary and articles by leading investment analysts.

ESPN.com provides the latest sporting news and allows users to get in-depth information on their favorite players, teams, etc. **ESPN.com** offers live text, audio and video of games and highlights. Visitors can also enroll in fantasy sporting games, such as football, baseball and golf.

Quality writers with reliable sources can begin publishing their content on the Web. Traditional barriers of entry such as printing and distribution costs do not exist on the Web. This allows independent Web news organizations to compete with traditional news leaders. Matt Drudge has become a celebrity due to the success of his online news site, The Drudge Report (**www.drudgereport.com**).

3.12 Online Travel Services

Web surfers can search for and arrange all of their travel and accommodations online, and can often save money doing so. The Web gives people access to much of the same information previously accessible only by travel agents. (See the **Travelocity.com** feature) You will find the lowest prices, best times and the best accommodations available to you.

CNN Interactive

CNN Interactive is one of the most visited and most interactive sites on the Web. CNN has a network of sites designed to give current, highly targeted news and information to their visitors. Each of these sites offers streaming audio and video (Chapter 32) taken from broadcasts on the television network.

CNNallpolitics is a site offering more in-depth articles about politicians and their campaigns, public policy and global politics. CNNSI is the all-sports section of the CNN network. You can follow teams in every league or just catch up on the latest scores and highlights. CNNFN allows you to track financial news and securities data from your Web browser. MyCNN allows you to personalize the news and information that appears on your browser. You can choose text, audio and video in any category. You can then customize the way CNN appears when you visit the site.

CNN has also built sitLes offering information in foreign languages. They include news and information specific to each country and region. The network of sites that make up CNN Interactive uses the highest quality multimedia and content to add value to customers' experiences.

Microsoft offers travel services through **www.expedia.com**. Microsoft Expedia allows you to book all of your travel arrangements, including transportation and lodging. Membership is free, and members are given access to a database of information offering them the best available options.

Cheaptickets (**www.cheaptickets.com**) is a similar site that helps customers find discount fares for airline tickets, hotel rooms, cruise vacations and rental cars. Users are given access to a database of up-to-the-minute flight schedule data.

Many travel sites are targeting business travelers specifically. **BizTravel.com** will reimburse customers in the event of a late or cancelled flight, lost luggage, or poor in-flight service. The rate of reimbursement is based on the severity of the problem. All flights that are cancelled or arrive more than two hours later than scheduled are reimbursed in full. Lost luggage is also paid for in full. This system is designed for business travelers.

Another site designed for business travelers, **GetThere.com** (**www.getthere.com**), helps corporate clients cut travel costs by connecting them directly to airlines, hotels and rental cars through its site. GetThere also outsources its technology, allowing portal sites to offer similar services.

3.13 Online Entertainment

The Web is based on the communication of high-quality information developed with high-quality multimedia. The entertainment industry has recognized this and has leveraged its power to sell movie tickets, albums and any other entertainment-related content they can fit on a Web page. Some of the Web's greatest controversies surround the online entertainment industry. Internet copyright cases are becoming the norm as individuals begin to use the Internet to trade their media such as music and videos. These problems are discussed in Chapter 6, "Legal, Ethical and Social Issues: Internet Taxation".

Travelocity.com

The travel service industry has achieved tremendous success on the Web in the past few years. Consumers are booking their travel itineraries online, often at lower prices than those available through travel agents. **Travelocity.com** (**www.travelocity.com**) is an online travel service that enables you to make your travel arrangements with a single visit to their Web site. You can book flights, rental cars, hotel rooms and vacation packages without involving a travel agent.

Travelocity.com uses shopping-bot technology. For example, a customer who wishes to fly from New York to Los Angeles enters a time frame for the trip and airport codes to receive up-to-date fare information. The shopping bot scans airline rates and scheduling databases for matches. The site then displays a list of flights that fit the submitted criteria, rate information and a ticket-purchase option. Travelocity is just one of many sites offering this service.

iCast.com (**www.icast.com**) is a multimedia-rich entertainment site. Audio and Video downloads of popular music and films are available for free. Each news article is accompanied by a supporting multimedia file. For instance, news regarding a particular actress may include the trailer of her latest feature film. Visitors to the site will benefit from a high-speed connection. The iCast media player is a free product that allows visitors to play audio and video from the site.

The Internet Movie Database (**www.imdb.com**) combines a huge database, a well-designed and easily maneuverable site and interesting content to create a highly entertaining site. IMDB helps you to locate and learn more about your favorite films, actors, executives, production companies and news relating to filmed entertainment. A search for any given film will give information pertaining to that film's cast and crew and their personal history. IMDB is part of the **Amazon.com** network of Web sites.

3.14 Online Automotive Sites

Various sites allow users to research and purchase new and used cars. Whether or not you actually make your final arrangements for the purchase of a new vehicle online, many of the preliminary steps can be completed. Online auto sites provide users with the ability to explore options more efficiently than traveling among dealerships. Online automobile appraisers also offer users leverage in negotiating a price on a new car by giving them access to instant value estimates.

Autobytel (**www.autobytel.com**) is a one-stop shop where users buy, sell, maintain and learn more about automobiles. You can search classified ads for used cars or find the best price on a new car. Additionally, If you are looking to service your car, you can contact your local service station and request an estimate. You can also find out where to get the best value on car insurance.

Autoparts.com is an online auction site for people buying and selling auto parts. Once you register, you can begin searching through the database of auto parts. You can search for parts by year, make and model.

Auto.com is an online version of the Detroit Free Press. The site offers news and information regarding the automotive industry. The site is a good place to learn about the automobile industry as well as the car you drive.

Scour.net

Scour.net (**www.scour.net**) uses intelligent-agent technology to locate multimedia files on the Web. Users can find video clips, audio, images, live radio broadcasts and breaking news. The bot "scours" the Web in search of the multimedia that the user specifies. **Scour.net** uses its SmartMatch intelligent agent to respond to customer queries, even if only partial names are entered and words are misspelled. It searches for specific file types, such as **.mpg** files for video and **.au** files for audio (Chapter 32, "Multimedia"). Such searches would be difficult to conduct offline.

Currently, **Scour.net** is the most comprehensive multimedia search site available. Lycos offers a search for sounds and images within their search engine at **www.lycos.com**. AltaVista also offers a multimedia search capability at **www.altavista.com.**

3.15 Energy Online

A number of companies have set up energy exchanges where buyers and sellers come to communicate, buy, sell, and distribute energy. These companies sell crude oil, electricity and the products and systems for distributing them.

HoustonStreet (**www.houstonstreet.com**.) is an online market for traders looking to buy energy commodities. Traders can buy and sell crude oil, refined products and electricity from the HoustonStreet Web site.

Altranet (**www.altranet.com**.) also sells energy commodities. Utility companies can buy natural gas, electricity and heating oil directly from the site. Altranet also facilitates the distribution of products with the help of its subsidiaries.

Retail Energy (**www.retailenergy.com**) is a directory for the energy industry. This site was designed by the Power Marketing Association and offers a comprehensive listing of energy providers. Current energy prices for both electricity and natural gas are available.

3.16 Selling Brainpower

Companies can buy patents and other intellectual property online. It is often difficult for small businesses to invest time and money in research and development. Other companies have trouble finding the talent to create such property.

Companies who do not have the human resources to complete complex projects can find help at **HelloBrain.com**. When merchants post the projects they need completed and the compensation they are willing to pay, proposed answers will be sent from companies and contractors that can help. HelloBrain acts as the middleman offering free postings to merchants.

The Question Exchange (**www.questionexchange.com**) allows businesses and individuals to access programming-specific troubleshooting as well as customer service. Companies pay a subscription fee to gain access to the system—in exchange, users are able to ask programming-related development questions and access a database of 10,000 archived questions.

Yet2 (**www.yet2.com**) is an e-business designed to help companies raise capital by selling intellectual property such as patents and trademarks. Yet2 is backed by industry-leading companies who wish to sell intellectual property assets. You must register to get a full view of the properties, but Yet2 does offer a sample listing.

3.17 Online Art Dealers

The Web offers a new outlet for your favorite supplies and artwork which you can often find at a discount on the Web. shopping-cart technology and express shipping allow you to have your art and supplies within a few days of your order.

Art.com allows you to choose between fine art, photography, posters and prints, animations and many other media. You can search the **art.com** database by artist, medium, decor, size, subject, and genre. Artists also list their favorites, for you to peruse.

Guild.com is another art dealer offering pieces in a wide variety of media. The products are well documented, easy to find and range from a few hundred dollars to thousands of dollars. There are more than 7,000 products available to your shopping cart.

Atom Films (**www.atomfilms.com**) is one of the leading film sites on the Web and has frequently turned down offers to bring their content to the big screen. Members

of Atom Films have access to award-winning short films and animations delivered via streaming video.

Art.net (**www.art.net**) offers links to many art resources on the Web, including artists' home pages, suppliers and supporting services.

3.18 E-Learning

The e-learning industry is growing rapidly as the number of individuals with access to computers and hand-held-devices increases.[16] Universities and corporate-training companies offer high-quality distance education directly over the Web. There are companies on the Web that aggregate e-learning products and services from content creators and publishers worldwide, and offer them on a subscription basis to individuals and corporations. As technology increases and audio and video quality on the Web improve, so will the quality and availability of e-learning programs.

Click2Learn (**www.click2learn.com**) has created a database of products and services to help individuals and companies find the education they need. Click2Learn also has a skills assessment feature that helps customers evaluate their e-learning needs. Companies wishing to develop their own training can use the Click2Learn *Toolbook* product in order to develop and sell courses on the Click2Learn site. Once a customer has developed courseware for the Web, the course can be included within the Click2learn Web site.

Saba (**www.saba.com**) also aggregates e-learning materials and courses. Companies can create Saba learning e-stores—customized storefronts—to sell their e-learning products. Saba helps their customers turn traditional instructor-led courses into Web-based training courses. Additionally, customers can use Saba as an e-learning portal where they can find training products for themselves and their employees.

Blackboard.com (**www.blackboard.com**) allows teachers and educational organizations to post their courses on the Web. Once a company has bought a license for the **Blackboard.com** *CourseInfo™* course-development product, they can begin posting and offering their training materials and courses over the Web. For an additional fee, **Blackboard.com** offers trainers e-commerce capabilities, special marketing opportunities, more server space, and access to customer support.

WebCT (**www.webct.com**) helps educators and students leverage the power of the Web to improve their educational experience. WebCT sells a course development tool that enables educators to quickly build supplementary course materials or full courses to be offered through the WebCT learning hub. The company has offered courses to more than one million students.

Deitel & Associates, Inc. (**www.deitel.com**) teaches instructor-led training courses for many of the world's largest organizations. Deitel publications are used in each of its training courses, and in thousands of colleges and universities worldwide.

The Version 1 Deitel Web-based training courses are similar to the Deitel interactive multimedia *Cyber Classroom* products. The courses include the full content of the textbooks as well as complete audio walkthroughs, "live-code" examples and hundreds of solved problems. The products also include course management, scheduling and assessment features. The Version 2 Web-based training courses emulate the instructor-led training experience with more extensive lecture and lab features.

Colleges and universities have also begun integrating e-learning into their curricula. Jones International University (**www.getmymba.com**), the University of Illinois

(**www.online.uillinois.edu**) and the University of Phoenix (**www.universityofphoenix.com**) are among the first schools to offer complete degree programs online. Students are able to apply online and take courses at home using the Internet.

Many publishers are beginning to add electronic publishing departments to meet the demand for electronic books.[16] Electronic books, or *e-books* are publications that can be downloaded onto your computer or to a hand-held device and read at your convenience. Xlibris (**www.xlibris.com**) specializes in publishing books in electronic form. Other electronic publishing companies include **iPublish.com** (**www.ipublish.com**) and **netLibrary.com** (**www.netlibrary.com**).

3.19 Click-and-Mortar Businesses

Brick-and-mortar companies who wish to bring their businesses to the Web must determine the level of cooperation and integration the two separate entities will share. A company that can offer its services both online and offline can add value to the customers' experience. One of the major issues in e-commerce today is how to integrate the Internet into offline businesses. The following companies have all worked out successful answers to this question.

Barnes & Noble (**www.bn.com**) has established itself as a leader in the booksellers market both online and offline. Customers have access to the same inventory online as they do in the actual stores. In the event that a customer is dissatisfied with a purchase made online, they can return it to their local brick-and-mortar B&N store.

1-800-Flowers (**www.1800flowers.com**) has established a presence on the Web. Their customers can now view pictures of floral arrangements before making a purchase.

CircuitCity (**www.curcuitcity.com**), a store specializing in consumer electronics, appliances, audio and video, has effectively integrated its online and offline entities. CircuitCity has tied its offline stores to its online store, allowing customers to order online and pick up at their local stores, though shipping is still available.

The Web has created such great opportunities for some companies that they have abandoned their bricks all-together. **Egghead.com** (**www.egghead.com**) started out as a company that sold computers and peripherals through small brick-and-mortar stores. Many of their competitors were catalog businesses that often underpriced them. The Web gave Egghead the opportunity to abandon unnecessary property overhead and access a global market.

SUMMARY

- An e-business can offer personalized service, high-quality customer service, and improved supply chain management.
- An e-business is defined as a company that has an online presence. e-Businesses that have the ability to sell, trade, barter and transact over the Web can be considered e-commerce businesses.
- A combination of a company's policy, operations, technology and ideology define its business model.
- The storefront combines transaction processing, security and information storage to allow merchants to sell their products on the Web.
- The banking industry uses Electronic Funds Transfer (EFT) to transfer money between accounts.
- Many companies also use Electronic Data Interchange (EDI), in which business forms, such as purchase orders and invoices, are standardized so that companies can share information with customers, vendors and business partners electronically.

- E-commerce allows companies to conduct business 24-by-7 worldwide.
- B2C stands for business-to-consumer.
- The merchant server is the data storage and management system employed by the merchant.
- A database is a part of the merchant server designed to store and report on large amounts of information. Databases also store customer information, such as names, addresses, credit-card information and past purchases.
- Online shopping malls present consumers with a wide selection of products and services. Consumers can search and shop for a variety of products, and, rather than making several separate purchases, they can use the mall's shopping-cart technology to purchase items from many stores in a single transaction.
- Forrester Research reveals that an estimated $3.8 billion will be spent on online person-to-person auctions this year alone. This number is dwarfed by the $52 billion that is projected to be spent on business-to-business auctions in 2002.[4]
- Reverse auctions, or auctions that allow the buyer to set a price as sellers compete to match or even beat it, are becoming more popular.
- An faster option is available when the buyer sets a reserve price. A reserve price is the lowest price that the seller will accept in any type of auction.
- eBay uses a database to manage the millions of auctions that it offers. This database evolves dynamically as sellers and buyers enter personal identification and product information.
- High-availability computing attempts to minimize down time; continuous-availability computing attempts to eliminate it completely.
- For example, every crucial piece of hardware—processors, disks and communications channels—has one or more levels of backup, so, in a failure, the system simply shifts from a failed component to a backup component. The system keeps running while the failed component is fixed or replaced.
- Portal sites give visitors the chance to find everything they are looking for in one place. They often offer news, sports and weather, as well as the ability to search the Web.
- Search engines are horizontal portals, or portals that aggregate information on a broad range of topics and help the user find what they are looking for.
- Vertical portals offer a large amount of information in one subject area.
- Community sites create customer loyalty by allowing visitors to contribute to the sites, chat with friends and find information specifically targeted to them. Vertical portals tend to find repeat visitors.
- In the past, bargain hunters had to search out deals by visiting numerous local retailers and wholesalers. Today, a few mouse clicks is all you need to find the lowest price available.
- Buying in bulk has always driven prices down, and there are now sites on the Web that allow you to lower the price by waiting for others to purchase the product at the same time.
- Another pricing strategy used by many e-businesses is to offer products and services for free.
- Bartering and offering rebates are other ways companies are keeping prices down on the Internet.
- The name-your-price business model empowers customers by allowing them to choose their price for products and services.
- Shopping bots are often used to scour data contained within a single database or across the Web to find answers to specific questions.
- The comparison pricing model allows customers to poll merchants and find a desired product or service at the lowest price. These sites often take their revenue from partnerships with merchants.
- The Web has allowed customers to demand better, faster service at cheaper prices. It has also empowered buyers to shop in large groups to achieve a group rate.

- The concept behind the demand-sensitive pricing business model is that, the more people who buy a product in a single purchase, the lower the cost-per-person becomes.
- Selling products individually can be expensive because the vendor must price a product so that it covers the selling and overhead cost while still generating a small profit.
- Another popular method of conducting e-business is Bartering, or offering an item you do not want or need in exchange for something for which you have a need.
- Rebates are a good way to attract customers to your site. Many companies offer everyday low prices and specials to keep customers coming back.
- B2B e-commerce is defined as buying, selling, partnering, bartering or trading conducted between two or more businesses. Goldman Sachs has estimated that B2B e-commerce will generate as much as 1.5 trillion dollars in revenues by 2004, with some estimates running even higher.[13]
- The B2B marketplace is one of the fastest growing segments of e-commerce. Industry leaders have begun using B2B marketplaces and exchanges to improve their business methods on the Web.
- Procurement, or acquiring goods or services, and effective supply chain management can be a difficult and costly aspect of running a business.
- ItoI stands for Industry to Industry.
- B2B service providers make business-to-business transactions on the Internet easier. These e-businesses help other businesses improve policy and procedure, customer service and general operations.
- Due to the popularity of online trading, many brokerages have established a presence on the Web.
- Online lending is a growing segment of e-commerce. You might find a loan with a lower rate online than through traditional lending channels.
- Recruiting and job searching can be done effectively on the Web. Whether you are an employer or a job seeker, the Internet can improve your ability to recruit or find a job.
- As we move into the information age, there is no question that the Web will play a major role in the publishing and news industries.
- Web surfers can search for and arrange all of their travel and accommodations online. The Web gives people access to much of the same information previously accessible only by travel agents.
- Whether or not you actually make your final arrangements for the purchase of a new vehicle online, many of the preliminary steps can be completed.
- Online auto sites provide users with the ability to explore options more efficiently than traveling among dealerships.
- A number of companies have set up energy exchanges where buyers and sellers come to communicate, buy, sell, and distribute energy. These companies sell crude oil, electricity and the products and systems that help to distribute them.
- Companies who wish to buy patents and other intellectual property can now do so online.
- Artwork and supplies can be expensive. However, you can often find discounts on the Web. Shopping-cart technology and shipping allow you to have your supplies within a few days of your order.
- The e-learning industry is growing rapidly as the number of individuals with access to a computers and hand-held devices increases.
- There are companies on the Web that aggregate information on the e-learning products and services available from companies around the World. As technology increases and audio and video quality on the Web improves, so will the quality and frequency of e-learning programs
- Many of the leading corporate training organizations use the Web to train their customers.
- Brick-and-mortar companies who wish to bring their businesses to the Web must determine the level of cooperation and integration the two separate entities will share.

- A company that can offer its services both online and offline can add value to the customer's experience.
- One of the major issues in e-commerce today is how to integrate the Internet into offline businesses.

TERMINOLOGY

1-Click^{SM} system
24-by-7 basis
B2B
B2C
bartering
brick-and-mortar business
business-to-business
client/server application
comparison pricing model
continuous-availability computing
database
demand collection system
e-books
e-business
e-commerce
Electronic Funds Transfer (EFT)
Electronic Data Interchange (EDI)
fault-tolerant systems
high-availability computing
horizontal portal
intelligent agent
ItoI
merchant server
name-your-price model
Pez®
procurement
redundancy
reserve price
reverse-auction model
search engine
shopping bot
shopping cart
Toolbook
vertical portal

SELF-REVIEW EXERCISES

3.1 State whether the following are true or false. If the answer is false, explain why.

a) A shopping cart allows customers to continue to browse after selecting each item they wish to purchase.
b) In a reverse auction the seller sets a price and customers make individual bids to buy the item.
c) A reserve price is the highest bid a customer is willing to make.
d) In the demand-sensitive pricing model, the price decreases as more people buy.
e) The name-your-price model is an auction-based model.
f) Brick-and-mortar companies are businesses that build the infrastructure of an e-commerce Web site.
g) Web-based training is not yet possible, but will be when streaming audio and video technology improve.
h) **`Priceline.com`** employs the name-your-price model.
i) B2B exchanges are e-businesses that facilitate the sale, purchase and exchange of goods and services between one or more companies.
j) High-availability computing refers to the minimization of downtime for a company.

3.2 Fill in the blanks in each of the following:

a) A business that has a presence off but, not on the Web is described as a _____ company.
b) The _____ model is designed to bring prices down by increasing the number of customers who buy a particular product at once.
c) Customers can shop for products and store them for later purchase using a _____.
d) Reserve prices are set by a buyer in an _____.
e) The two types of portals are called _____ and _____.

f) iVillage, WebMD and **Bolt.com** can be described as horizontal portals or _____ sites.
g) Auctions that allow the buyer to set a price and have the merchants compete for the best deal are called _____.
h) _____ are designed to help businesses buy, sell and barter their products and services to other businesses over the Internet.
i) E*trade and Charles Schwab are companies that offer _____.
j) The e-businesses that allows customers to find the lowest price on a particular item are called _____ pricing sites.

ANSWERS TO SELF-REVIEW EXERCISES

3.1 a) True b) False. This is the concept of a true auction. c) False. A reserve price is the lowest price a seller will accept in an auction. d) True e) False. The name-your price model allows customers to get a lower price by clearing the price with a number of vendors. This does not involve an auction. f) False. Brick-and-mortar business are offline businesses. This term is often associated with companies who have both and online and offline presence. g) False. Web-based training is currently used by organizations around the world. h) True i) True j) True

3.2 a) Brick-and-mortar b) Demand sensitive pricing model c) shopping cart d) auction e) vertical, horizontal f) community g) reverse auctions h) B2B exchanges i) online trading j) comparison shopping

EXERCISES

3.3 Categorize each of the following items as it best relates to the storefront model, the auction model or dynamic pricing models:

a) reserve price
b) liquidprice
c) shopping cart
d) catalog
e) mercata
f) bottomdollar

3.4 Define each of the following terms:

a) Web-based training
b) name-your-price model
c) shopping cart
d) reverse auction
e) redundancy
f) high-availability computing
g) merchant server

3.5 Have a brainstorming session to discuss potential e-business concepts. List the technologies that would be necessary in order to implement these concepts. Which business model would you implement? Why?

3.6 E*Trade offers a stock and options trading simulation at **www.etrade.com**. Each player is allocated an initial $100,000 in order to make his or her trades. As the round progresses, a player's stocks will gain or lose value, reflecting the actual stock market activity. Players compete to earn the greatest return on their investment (i.e., profits) for the round. Each new round begins on the first day of each month. At the end of the month, all portfolios are compared, and the thirty-two highest finishers each receive a prize! The E*TRADE game is free for your use and gives potential investors a chance to see how their stock picks would perform without actually putting their money at risk.

For this exercise, the class will be divided into teams. Each team should decide on a name and use it to register for the "stock trading only" version of the game. This exercise will let the teams compete over a period of three days to see which can create the most valuable stock portfolio. Each team should begin the game on the same day. Teams should be aware that investing all of the available funds will not necessarily give you a more profitable portfolio. A market downturn could spell disaster for a fully invested team! (Note: E*TRADE automatically resets the game at the end of each month. Be sure to start this exercise at least three days prior to the end of the month, so that you do not lose your data.)

In order to begin trading, you should complete the following tasks. Good luck! Please let us know if you win a prize!

a) Create a written log of your stock choices.
b) Record the initial purchase value of each stock.
c) If a stock is sold, make a note of its sale in the log. How much was it sold for?
d) Record the value of your portfolio at least twice a day. Include the time it was recorded.
e) Record the final value of each stock and of the overall portfolio at the end of three days.
f) How did your stocks perform?
g) What rank did your portfolio achieve in the competition?

3.7 If you were to start your own e-business, which models would you employ and why? Discuss the pros and cons of each approach you choose.

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