

# E-commerce Survey

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**Funredes**

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## Introduction

### *What is E-commerce*

Most people think that e-commerce means online shopping - workaholics pointing their browsers to Amazon.com to order an emergency present because they forgot someone's birthday again.

But Web shopping is only a small part of the e-commerce picture. The term also refers to online stock and bond transactions and buying and downloading software without ever going near a store. In addition, e-commerce includes business-to-business connections that make purchasing easier for big corporations. And many people hope that so-called microtransactions will let people pay small amounts - a few cents or a few dollars - to access online content or games.

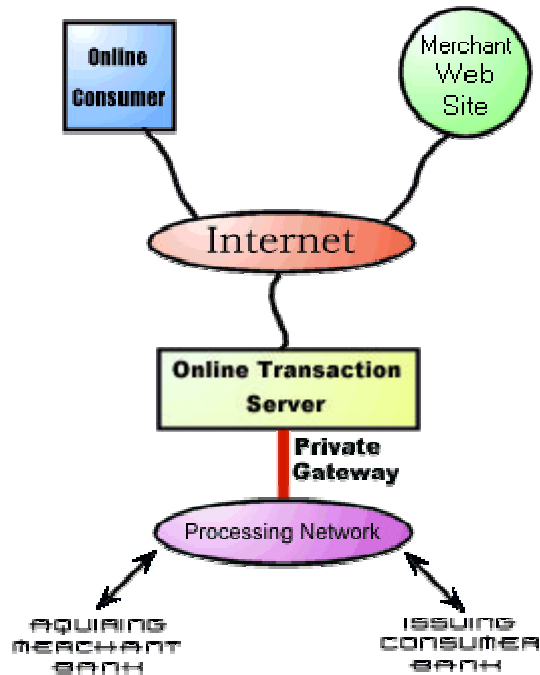
QVC, the shopping channel whose Web subsidiary iQVC opened last September, argues that it has been doing electronic commerce for the past 11 years by broadcasting on cable TV and taking orders over the phone. But the kind of e-commerce that everyone is interested in right now refers to systems that let money change hands over the Internet.

### *Driving Forces behind the E-commerce*

Arthur Andersen, one of the biggest consultancy in the world, gave first example of "virtual office": private offices just for a day. No family photographs, shields and soon - with which businessmen like to decorate their offices. Laptops have become cabinets where employees stuff their papers, while a vast on-line database containing the company's accumulated wisdom, available to Andersen people anywhere in the world seven days a week (provided, of course, they can get their laptops to connect). The transformation of telecommunications networks, brought about mainly by a marriage with computers, is simultaneously driving down the cost of communicating and driving up the amount of information that can be exchanged. Where once people had to go to a particular place - a telephone box, a computer - to communicate, now communications come to them, in the form of a pager, a mobile telephone, or a laptop with a phone jack.

This IT revolution and telecom liberalisation enabled the constant increase in the number of people who now have access to the Net, up 35 percent since January 1998 to more than 60 million, according to a Ziff-Davis technology-user profile. Internet-connected work PCs have increased by 52 percent to 24 million, and 28 million consumer PCs, in a third of U.S. households, now reach out and touch the Internet.

## Infrastructure



### *Technical Standards*

In addition to the alphabet soup of standards that govern the Internet, e-commerce employs several of its own standards, most of which apply to business-to-business transactions.

Electronic Data Interchange (EDI): created by the government in the early 1970s and now used by 95 percent of Fortune 1,000 companies, EDI is a common document structure designed to let large organizations transmit information over private networks. EDI is now finding a role on corporate Web sites as well.

Open Buying on the Internet (OBI): this standard, created by the Internet Purchasing Roundtable, is supposed to ensure that all the different e-commerce systems can talk to one another. OBI, which was released by the OBI Consortium this June, is backed by leading technology companies such as Actra, InteliSys, Microsoft, Open Market, and Oracle.

The Open Trading Protocol (OTP): due for publication this summer, OTP is intended to standardize a variety of payment-related activities, including purchase agreements, receipts for purchases, and payments. It was created as a competing standard to OBI by a group of companies, including AT&T, CyberCash, Hitachi, IBM, Oracle, Sun Microsystems, and British Telecom.

The Open Profiling Standard (OPS): a standard backed by Microsoft and Firefly, OPS lets users create a personal profile of preferences and interests that they want to share with merchants. The idea behind it is to help consumers protect their privacy without banning online collection of marketing information.

Secure Sockets Layer (SSL): this protocol is designed to create a secure connection to the server. SSL uses public key encryption, one of the strongest encryption methods around, to protect data as it travels over the Internet. SSL was created by Netscape but has now been published in the public domain.

Secure Electronic Transactions (SET): SET encodes the credit card numbers stored on merchants' servers. This standard, created by Visa and MasterCard, enjoys wide support in the banking community. The first SET-enabled commerce is already being tested in Asia.

### *Tools*

From cheap and simple to expensive and complex, there's a wide range of products designed to get e-commerce site up and selling in a matter of days or weeks.

Small businesses may not have to look beyond their local Internet service providers for a bare-bones solution. For example, Brooklyn's Forman Interactive offers Internet Creator for less than \$150. The software uses a series of wizards to help create secure pages for selling product.

However, most e-commerce development tools targeted at small and mid-sized businesses cost \$5,000 to \$10,000. They generally include templates for online catalogs and databases, so it's easy to change items and prices. Dynamic database searches can serve different information when an item is out of stock or on special, and can be hooked up to existing back-end systems for order fulfillment and a range of automatic payment options. A partial list of tools in this category includes:

- Tango Merchant from EveryWare Development ([www.everyware.com](http://www.everyware.com))
- Net.Commerce Suite from IBM ([www.ibm.com](http://www.ibm.com))
- Electronic Commerce Suite from iCat ([www.icat.com](http://www.icat.com))
- Online from Intershop ([www.intershop.com](http://www.intershop.com))
- CatSmart from Isadra ([www.isadra.com](http://www.isadra.com))
- WebCatalog and WebMerchant from Pacific Coast Software ([www.pacific-coast.com](http://www.pacific-coast.com))
- Cat@log from The Vision Factory ([www.thevisionfactory.com](http://www.thevisionfactory.com))
- Domino.Merchant from Lotus ([www.lotus.com](http://www.lotus.com))
- SoftCart from Mercantec ([www.mercantec.com](http://www.mercantec.com))
- Site Server from Microsoft ([www.microsoft.com](http://www.microsoft.com))

Companies that have a high volume of sales - especially those that deliver soft goods such as articles, reports, software, or music over the Net - require industrial-strength

solutions costing anywhere from \$10,000 to \$100,000, or more. A partial list of products in this category includes:

Dynamo Retail Station from Art Technology Group ([www.atg.com](http://www.atg.com))  
One-To-One from BroadVision ([www.broadvision.com](http://www.broadvision.com))  
Commerce Exchange from InterWorld ([www.inetrworld.com](http://www.inetrworld.com))  
Transact from Open Market ([www.openmarket.com](http://www.openmarket.com))  
Internet Commerce Server from Oracle ([www.oracle.com](http://www.oracle.com))

Of course, the software sticker price is only a small fraction of what it costs to run an e-commerce site. Many high-end e-commerce products are used by third-party companies to provide services for individual merchants.

Most companies take advantage of e-commerce hosting services run by the likes of AT&T ([www.att.com](http://www.att.com)), MCI ([www.web.mci.com](http://www.web.mci.com)), and GTE's BBN Planet ([www.bbn.com](http://www.bbn.com)). "This is a low-risk, low-cost way of finding out how to do it," says Karl Lewis, vice president of production at Proxicom. Proxicom is a Web consulting company that recently set up an e-commerce site for Day-Timer and an extranet for Mobil Oil and its distributors.

AT&T is a typical e-commerce host. The company uses a high-end Open Market and Oracle system to provide complete end-to-end transaction processing, as well as extras such as automated tax and shipping tables. Basic service costs \$395 per month and includes the first 500 transactions. Additional transactions cost \$3 each (less with quantity discounts).

If one is looking for a high-volume, mission-critical, business-to-business e-commerce solution, then he will need something even more powerful. Systems from Connect ([www.connectinc.com](http://www.connectinc.com)) and Actra ([www.actracorp.com](http://www.actracorp.com)) (a joint venture between Netscape and General Electronic Information Services) are good examples of this type of tool.

## Actuality

### *How Big is E-commerce?*

According to a survey from IntelliQuest's Worldwide Internet/Online Tracking Service, only 15 percent of Netizens use e-commerce. The research firm Computer Intelligence recently interviewed 40,000 U.S. businesses, and found that less than 2 percent of the country's 4.8 million computerized business locations are involved in some form of electronic commerce.

However, according to Forrester Research, consumers and businesses will funnel a total of \$8.5 billion through e-commerce sites this year. And in an October 1996 report, Forrester predicted that by the year 2000, more than \$70 billion will be spent online - and the organization is currently revising that number upward.

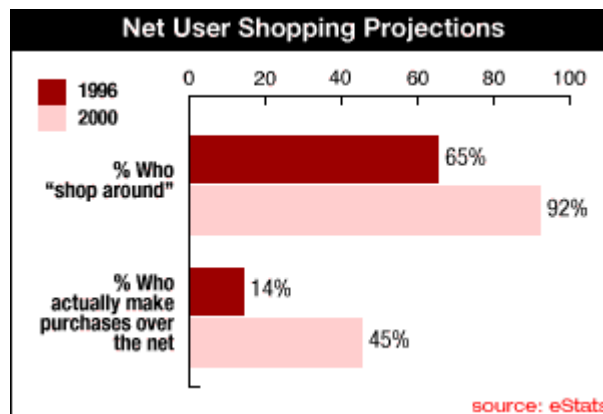
### *E-commerce Growth Pace*

The incredible idea of exponential growth for things Internet seems almost like old hat these days, and according to the Dec. 11 Internet Daily, exponential growth is now spreading to e-commerce.

"We continue to see virtually exponential growth in online purchasing penetration, from barely 1 percent a year ago to 4 percent last spring and now to 10 percent," said Craig Johnson, a partner at Marketing Corp. of America, regarding a recent company survey.

Ten percent of U.S. consumers doing *anything* is significant, and coupled with exponential growth, this gives a good hint as to where the next bull market may be.

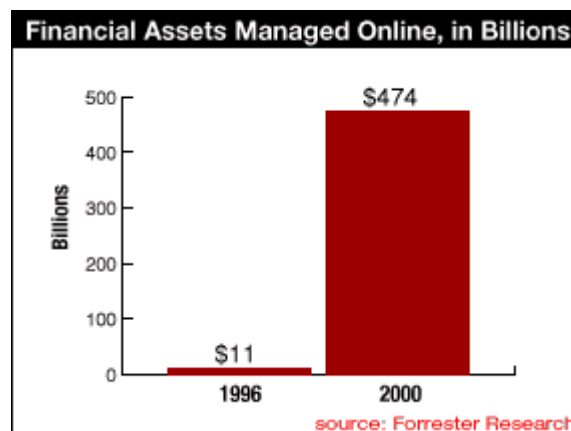
Of course, that's just one survey, so let's look at another by IntelliQuest, cited in the Nov. 30 eMarketer. This Nov. 19 study found of 10,000 Internet users surveyed, 81 percent intend to shop or buy online during the next year, 63 percent have already shopped online, and 22 percent have made purchases online within the past three months. And there will be more: "Overall, there are three to five times more people intending to shop or buy than are currently shopping," eMarketer says.



### *Where it Matters*

Outside the technology sector, the effects of electronic commerce are being felt most keenly - for good or ill - in the following industries:

- **Financial services.** Universal access to information is hitting hard here. This is a classic example of how the Internet can open up an existing infrastructure - the financial markets' computerised information feeds - to all comers and thus transform an industry. Now that investors can get advice and market information from many sources other than full-service brokers, they are less willing to pay a premium just to trade. Forrester estimates that assets worth \$111 billion are already managed online, and that the figure will rise to \$474 billion by 2000. Already more than 30 discount brokers are offering online trading accounts at rates that match or undercut e.Schwab, according to CS First Boston, an investment bank. The challenge is already clear: survive on razor-thin margins, or find some way to add value.



- **Sex.** Virtually every modern personal media technology, from photography to the videotape, has won many of its first converts from among the grubby-mac set. The Internet, which in effect brings the world's adult bookstores and video shops to home computers, is following the same pattern. Forrester reckons that erotic content accounted for sales of \$52m on the Internet last year, one-tenth of all retail business on the Web. One sex firm, the Internet Entertainment Group, based in Seattle, claims to have 50,000 paying subscribers online, nearly as many as the Wall Street Journal.

- **Travel.** The Internet, by providing an easy-to-use direct link to consumers, is giving the airlines an opportunity to erode the place of the middleman. They are doing this in two ways. The first is by selling seats on their own Web sites and together on Sabre's Travelocity, American Airlines' booking service. The second, led by Northwest and Continental, is by cutting the fees they pay to online travel agencies to 5%, on the ground that costs are far lower than in the physical world because customers find and book the flights themselves.

- **Retailing.** It is easy to see why the mall was the first image that sprang to mind when people started to think about electronic commerce on the Internet. The most obvious

advantages of online shops are that their costs are lower and they are less constrained for space than their physical counterparts.

- **Music.** When Amazon's Jeff Bezos was first scouting for retail sectors in which to work his online magic, he considered music, but decided against it. And effectively, most of on-line music shops are losing money: online sales reached a mere \$20m last year, and industry-wide gross profits were just \$200,000, according to the Red Herring, a technology magazine. Moreover, it seems to have weak prospects: Jupiter Communications, predicts that online music sales will increase to \$186m by 2000, still less than 2% of all recordings sold.

- **Books.** This market is no longer a one-horse race now that America's two largest booksellers, Barnes & Noble and Borders, have gone online, along with such international competitors as Britain's Internet Bookshop and a host of smaller outfits. Optimists think online book sales will reach 8% of the market by 2000. Pessimists reckon there will be a bloody battle for just the bottom 1-2%.

### *E-shopper profile*

Forrester Research says consumers rang up \$530 million in online transactions in 1996, and it predicts \$7.17 billion in sales by the year 2000. Cowles/Simba, another research outfit, pegs Internet consumer sales at \$733.1 million in 1996, growing to \$4.27 billion by the year 2000.

The typical e-commerce customer is a 30-something white male earning \$76,000 per year, according to a survey of more than 1,000 online shoppers conducted by Binary Compass Enterprises. Men comprise the vast majority of e-commerce buyers, between 69 and 79 percent, depending on the survey.

Online Shopper Profile		
	Male	Female
	79%	21%
• Average Purchase	\$176	\$93
• Average Income	\$76K	\$60K
• Average Age	38.9	37.3
• Master's Degree +	42%	34%

source: Binary Compass Enterprises

### *Business-to-Business Transactions*

However, when historians will look back at the Internet revolution, they won't focus on portals or push or even IPO madness. That's all the stuff at the front end, the stuff that's easy for everybody to see.

Instead, they'll write about the quiet revolution that's taking place in the back end of the Internet, the stuff that's largely invisible to outsiders - and is profoundly changing how business works. They'll write about *business-to-business transactions* or, simply, *e-business*. They'll write about how e-business turned "vendors" and "customers" into "partners". They'll write about how it pushed companies into massive re-engineering projects focused on collaborating across different enterprises - and, ultimately, on locking in key relationships. And they'll write about how e-business created a whole new industry of technology-integration products and services to fuel this phenomenon.

Forrester expects that Net-based business-to-business transactions will reach \$8 billion this year and a whopping \$66 billion by the year 2000. And General Electric, the U.S.'s largest and most profitable corporation, expects to do \$1 billion worth of business this year all by itself on its Trading Process Network Web site, which is designed to tighten relationships with its component companies.

For most businesses, e-commerce is not about online catalogs, credit cards, or ordering sweaters. It's not really about selling at all, but about improving relationships among suppliers, distributors, and customers.

For example, e-commerce could make it easier for a corporate customer to buy a new paper shredder from a stationery supply company. Typically, a corporate office worker must get approval for a purchase that costs more than a certain amount. That request then goes to the purchasing department, which has to procure the goods from the sales rep of the approved vendor. Business-to-business e-commerce automates that entire process. Employees can go directly to their company's extranet, find the item at the stationery store's site, and get what they need at a price prenegotiated by their company. If approval is required, the boss is notified automatically.



Or consider the case of Fruit of the Loom. The underwear manufacturer supplies plain white T-shirts to distributors who, in turn, sell the shirts to designers who add logos touting colleges and other organizations. Fruit of the Loom's e-commerce system, built on Connect's high-end e-commerce application, automatically ships T-shirts to distributors at the negotiated price, whenever stocks run low. However, this is not the whole story.

*E-business is not a simple extranet*

Companies have been relying on technology for their key internal processes for years. With the acceptance of Internet technology, intranets and extranets have become commonplace as extensions of traditional corporate communications systems. This is all to be applauded, but it's hardly the stuff of revolution. It's clever incrementalism.

E-business goes much, much further, allowing companies to actually mix, collocate, and redistribute their processes with those of their customers and vendors.

Take for example the outsourcing of procurement services. EDS pioneered outsourcing of the procurement business process in a 10-year deal it struck with Hilton Hotels Corp.'s equipment subsidiary in 1996. EDS calls its system and service SupplySource, and says it has four other customers, with more in the works. In the Hilton deal, EDS took over management of the more than 1,000 suppliers of bed linens and 14,000 other goods needed for the hotel chain's 60,000 rooms. It also manages the Oracle database, accounts receivable, and general ledger applications supporting the process.

As with the IBM system for United Technologies, Hilton's purchase requests are accessed with a Web browser. Another similarity is that both EDS and IBM are working under risk-reward contracts, where their compensation increases along with their customers' savings.

As more companies move to online purchasing, the market for Internet-based procurement products will skyrocket. Giga Information Group expects the procurement market to grow from \$25 million last year to \$375 million in the year 2000. Large companies that have begun online procurement in the past year include Bristol-Myers Squibb, Boehringer Ingelheim, Federal, Express, PG&E, and Visa International. Another large deployment is rolling out at the County of Los Angeles, the largest county government in the United States, with 80,000 employees and a yearly purchasing budget of \$700 million.

The biggest purchaser of all, the US government, is also moving online. Approximately 50 government contractors are expected to participate in the test by year's end, with a full-scale rollout scheduled by the year 2000. Officials involved in the pilot expect it to handle around 1,000 payments a day, representing as much as \$1 million.

From this we can see that we're not talking here about a technology for technology's sake. The opportunities are unparalleled - for companies learning to work in new ways, for

vendors that can deliver their products and services with higher accuracy and lower costs, and for vendors and integrators that can help manage this unprecedented flow of mission-critical information. E-business is creating deep relationships, new efficiencies, and significant strategic advantages for the companies that are getting it right.

## **Future of E-commerce**

Rest assured, there is a future for e-commerce. Once the details of online commerce are worked out, it and the Internet in general could reshape the structure of the business world.

The huge growth of virtual communities - people getting together in ad hoc interest groups online - promises to shift the balance of economic power from the manufacturer to the consumer. At least, that's the view of John Hagel and Arthur Armstrong, a pair of analysts at McKinsey & Company, an international management consulting firm.

These virtual communities are already making their presence felt. Motley Fool, an investment site formed on America Online and now living on the Web as well, lets members exchange investment advice without the benefit of a stockbroker. ParentsPlace is a meeting ground for parents that gives smaller vendors an avenue to reach potential customers for products such as baby food and shampoo.

Virtual communities erode the marketing and sales advantages of large companies. A small company with a better product and better customer service can use these communities to challenge larger competitors - something it probably couldn't do in the real world.

In *Net Gain: Expanding Markets Through Virtual Communities*, published by the Harvard Business School Press, Hagel and Armstrong argue that rather than fight the trend, smart companies will help build such communities and use them to reach customers.

### *Barriers to E-commerce*

According to a survey conducted in March by CommerceNet, shoppers don't trust e-commerce, they can't find what they're looking for, and there's no easy way to pay for things. Other than that, it's smooth sailing.

Clearly, e-commerce for consumers is in its early stages.

Customers are worried about credit card theft, the privacy of their personal information, and unacceptable network performance. Most shoppers still aren't convinced that it's worthwhile to hook up to the Internet, search for shopping sites, wait for the images to download, try to figure out the ordering process, and then worry about whether their credit card numbers will be filched by a hacker. Even worse, many shopping sites, such as L.L. Bean's, don't sell everything online that you can get from the company's printed catalog. So why bother?

To convince consumers, e-merchants will have to do a lot of educating. However, Gail Grant, the president and CEO of GLG Consulting and the head of CommerceNet's financial research arm, predicts that most buyers will be won over in just a few years.

Grant says that if Web pages were labeled with tags giving product and pricing information, it would be easier for search engines to find stuff to buy online. That hasn't happened yet, she adds, because merchants want people to find their products but not their competitors' - especially if another company's goods are cheaper.

Grant feels that the forthcoming SET standard will help cure shoppers' confusion regarding payment schemes. But she says the industry must also standardize its invoices, possibly with OBI.

As for business-to-business systems, the issues are less emotional but still serious. Businesses do not yet have good models for setting up their e-commerce sites, and they have trouble sharing the orders and information collected online with the rest of their business applications. Many companies continue to grapple with the idea of sharing proprietary business information with customers and suppliers - an important component of many business-to-business e-commerce systems.

The key to solving the business model is for merchants to stop relying on fancy Java applets and to restructure their operations to take advantage of e-commerce, says GLG's Grant. "E-commerce is just like any automation - it amplifies problems with their operation they already had".

### *Regulation Issues*

Is the US Government going to regulate e-commerce? Not if President Clinton has his way.

"The Framework for Global Electronic Commerce", a White House position paper released in July, makes it clear that the Clinton administration doesn't want any new taxes or regulations imposed on cyberspace.

Congress seems likely to go along. One bill, introduced by Sen. Ron Wyden (D-Oregon) and Rep. Christopher Cox (R-California), proposes a temporary ban on new state and local Internet taxes, at least until all parties agree on a uniform way to define Net taxes.

While the feds favor no additional taxes, state governments are grappling with the issue individually. Texas not only taxes Internet access charges, but also all the money collected when content providers sell online subscriptions, as well as the fees charged by Web developers for building sites. On the other hand, New York decreed in January that Internet access charges are not subject to state sales or telecommunications taxes.

Most states still don't know what to do, according to the accounting and consulting firm Deloitte & Touche, which recently published a comprehensive guide called "Taxation in Cyberspace".

For now, e-commerce providers such as AT&T are treating Web purchases much like mail-order sales. The providers collect taxes if the merchant has a significant presence in the state where the buyer resides. "There are lots of gray areas," acknowledges James Kwock, a Web services marketing director with AT&T Networked Commerce Service, "but I don't feel any from tax lawyers yet".

There's another problem with Net taxes: the Internet crosses international borders as easily as it skips over state lines. President Clinton wants to turn the Internet into a free-trade zone within the next 12 months. Japan agrees, but other countries have already indicated a willingness to regulate the Net. For example, France has long tried to mandate the use of French on Web sites, while Germany has attempted to stamp out both pornography and neo-Nazi materials online. While neither country has addressed the question of Net taxes yet, they may be more willing to regulate the Net economically as well.

## Appendix 1

### Business Examples of On-line Money Makers

Cisco Systems is selling products from its web site at the rate of \$1 billion each year -- 11% of its total sales are online. This year, Cisco expects to make 30% of its sales (\$2 billion worth) through its web site (Economist, 1997).

In fact, Cisco alone accounted for 10% of all business done on the net in 1996.

General Electric is saving a fortune by buying \$1 billion-worth of its goods from 1,400+ suppliers online (Economist, 1997).

Dell Computers is selling \$1 million-worth of Pcs a day on the web (Economist, 1997).

Although Amazon.com is hailed as a hugely successful money-maker online, it has yet to make a profit. But profit isn't everything, says Amazon.com president, Jeff Bezos:

"We are not profitable. We could be. It would be the easiest thing in the world to be profitable. It would also be the dumbest. We are taking what might be profits and reinvesting them in the future of the business. It would literally be the stupidest decision any management team could make to make Amazon.com profitable right now."

## Appendix 2

### E-commerce vocabulary

E-commerce is rife with buzzwords and catchphrases. Here are some of the current terms people like to throw around:

Digital or electronic cash: also called e-cash, these terms refer to any of several schemes that allow a person to pay for goods or services by transmitting a number from one computer to another. The numbers, just like those on a dollar bill, are issued by a bank and represent specified sums of real money. One of the key features of digital cash is that it's anonymous and reusable, just like real cash. This is a key difference between e-cash and credit card transactions over the Internet. For more information, see PC Webopaedia or DigiCash's e-cash FAQ.

Digital money: a grab-bag term for all the various e-cash and electronic payment schemes on the Internet. Yahoo lists 28 companies offering a form of digital money.

Disintermediation: the process of cutting out the middleman. When Web-based companies bypass traditional retail channels and sell directly to the customer, traditional intermediaries (such as retail stores and mail-order houses) may find themselves out of a job.

Electronic checks: currently being tested by CyberCash, electronic checking systems such as PayNow take money from users' checking accounts to pay utility and phone bills.

Electronic wallet: a payment scheme, such as CyberCash's Internet Wallet, that stores your credit card numbers on your hard drive in an encrypted form. You can then make purchases at Web sites that support that particular electronic wallet. When you go to a participating online store, you click a Pay button to initiate a credit card payment via a secure transaction enabled by the electronic wallet company's server. The major browser vendors have struck deals to include electronic wallet technology in their products.

Extranet: an extension of a corporate intranet. It connects the internal network of one company with the intranets of its customers and suppliers. This makes it possible to create e-commerce applications that link all aspects of a business relationship, from ordering to payment.

Micropayments: transactions in amounts between 25 cents and \$10, typically made in order to download or access graphics, games, and information. Pay-as-you-go micropayments were supposed to revolutionize the world of e-commerce. One early scheme, for example, let visitors to ESPN SportsZone use their CyberCash CyberCoin accounts to buy a \$1 day pass to the site's premium content, without having to spring for a full month's subscription. But many potential customers have been unwilling to play along with micropayments.

## Appendix 3

### E-commerce Resources

#### *E-commerce Daily/weekly News Services*

C|NET E-Commerce News ([www.cnet.com](http://www.cnet.com))  
CIO Web Business ([www.webbusiness.cio.com](http://www.webbusiness.cio.com))  
E-Commerce Times ([www.ecommercetimes.com](http://www.ecommercetimes.com))  
E-Commerce Today ([www.ectoday.com](http://www.ectoday.com))  
E-Commerce World ([www.ediworld.com/content/magazine](http://www.ediworld.com/content/magazine))  
E-Commerce Guide ([www.ecommerce.miningco.com](http://www.ecommerce.miningco.com))  
E-Business Magazine ([www.e-com.internet.com](http://www.e-com.internet.com))  
Industry Standard E-Commerce News ([www.internetnews.com/ec-news](http://www.internetnews.com/ec-news))  
Webmonkey ([www.hotwired.com/webmonkey](http://www.hotwired.com/webmonkey))  
ZDNet E-Business ([www.zdnet.com/icom/e-business](http://www.zdnet.com/icom/e-business))

#### *Wire Services*

All E-Commerce News ([www.allIEC.com](http://www.allIEC.com))  
Competence Network E-Commerce ([www.commerce.net/news/ec\\_today.html](http://www.commerce.net/news/ec_today.html))  
E-Commerce NewsNow ([www.cnec.org](http://www.cnec.org))  
Web Commerce ([www.businessjournal.netscape.com](http://www.businessjournal.netscape.com))

#### *Government Programs*

- US  
Advisory Commission on Electronic Commerce ([www.ecommercecommission.org](http://www.ecommercecommission.org))  
Federal Electronic Commerce Program Office ([www.ec.fed.gov](http://www.ec.fed.gov))  
U.S. Government E-Commerce Policy Website ([www.ecommerce.gov](http://www.ecommerce.gov))
- Europe  
European Community Reports on Electronic Commerce ([www.oecd.org/dsti/sti/it/ec](http://www.oecd.org/dsti/sti/it/ec))

#### *Reports*

First Annual Report ([www.doc.gov/ecommerce/E-comm.pdf](http://www.doc.gov/ecommerce/E-comm.pdf))  
1998 Declaration on Electronic Commerce ([www.ustr.gov/agreements/gec/gec\\_en.pdf](http://www.ustr.gov/agreements/gec/gec_en.pdf))  
The Emerging Digital Economy ([www.ecommerce.gov/emerging.htm](http://www.ecommerce.gov/emerging.htm))

#### *Conferences*

Internet Commerce Expo ([www.iceexpo.com](http://www.iceexpo.com))

#### *Research Centers*

Agent Mediated E-Commerce | MIT Media Lab ([www.ecommerce.media.mit.edu](http://www.ecommerce.media.mit.edu))  
Center for Information and Communication Research ([www.erim.org/cec/index.htm](http://www.erim.org/cec/index.htm))  
Electronic Markets Journal ([www.electronicmarkets.org](http://www.electronicmarkets.org))  
Harvard Information Infrastructure Project ([www.ksg.harvard.edu/iip](http://www.ksg.harvard.edu/iip))  
Institute for eCommerce ([www.euro.ecom.cmu.edu](http://www.euro.ecom.cmu.edu))  
Lab for Computer Science ([www.lcs.mit.edu](http://www.lcs.mit.edu))  
Wharton Forum on EC ([www.ecom.wharton.upenn.edu/ec](http://www.ecom.wharton.upenn.edu/ec))

### *Miscellaneous*

CommerceNet ([www.commerce.net](http://www.commerce.net)) is an industry association dedicated to promoting electronic commerce. Launched in April 1994 in Silicon Valley, it now includes more than 500 companies and organizations worldwide. Members include banks, telecommunications companies, Internet service providers, online services, software and service companies, and real, live customers.

The Internet-Sales Discussion List ([www.mmqco.com/isales.html](http://www.mmqco.com/isales.html)) was started in November 1995 to provide a forum for merchants to discuss online sales issues. The group compiles postings from its subscribers into the I-Sales Digest, which is sent for free every day to 5,500 subscribers from more than 65 countries.

The World Wide Web Consortium (W3C) ([www.w3.org](http://www.w3.org)) is an online standards body active in many fields, including ways to make the growing variety of payment methods on the Web interoperable. This project is called the Joint Electronic Payments Initiative, or JEPI.