

INDEX

Bold page numbers indicate where a key term is defined in the text.

1-800-Flowers, 112
24/7 operations, **552**
3DES, **466**
3PL providers. *See* third-party logistics providers
43 Things, 296
802.11a, 802.11b, 802.11g, 802.11n protocols, **90**
911Gifts.com, 165–166
1996 Nobel Prize in Economics, 267

A

Abilene project, 92
About.com, 117
Accel Partners, 114
acceptance, **318**
access, flat-rate system, **39**
access control, 440, 444, 478–479
access control lists (ACLs), **479**
accessibility, Web site, 147–148
accessing
 corporate information, 429
 electronic commerce Web sites, 150
account aggregation, **129**
account managers, **558**
Accredited Standards Committee X12 (ASC X12), **231**
ACH. *See* Automated Clearing House
ACLs. *See* access control lists
ACLU. *See* American Civil Liberties Union
ACM Digital Library. *See* Association for Computer Machinery, Digital Library
acquiring bank, **501**
acquisition
 cost, **181**
 customer, 181–182, 183–184
active ads, **189**
active content, **447–448**
Active Server Pages (ASP), **359**
active wiretapping, **461**
ActiveX controls, **450**
activities
 described, 6
 primary, supporting, **26, 26–28**
 purchasing, 219–222
 support, **26**
AdAge.com, 191
ad-blocking software, **189**
AdDesigner.com, 185
addressable media, **152**
addressing, IP, **63–64**
Adleman, Leonard, 465
Adobe PDF files. *See* PDF files
Advanced Encryption Standard (AES), 467
Advanced Research Projects Agency (ARPA), 54
advertising. *See also* Web marketing
 banner ads, **185–189**
 combining content with, 192
 connecting with customers, 151–154
 contextual, **203**
 CPM rates in various media, 187
 effectiveness of online, 190–191
 market segmentation, 171–176
 localized, **204**
 online, growth of, 12–13, 117
 regulation, 329–331
 site sponsorships, 190
 spam. *See* spam
 targeted classified sites, 119–120
 Web, 184–191
advertising-subscription mixed revenue models, **121–122, 133–134**
advertising-supported revenue model, **117–120, 133–134, 296–299**
ad view, **187**
AES. *See* Advanced Encryption Standard
AES Algorithm (Rijndael) Web site, **467**
affiliate
 commissions, 199
 marketing, **198**
 marketing strategies, 198–199
 program brokers, **199**
age regulations, Internet, 339–340
airlines, online travel agency businesses, 122–124
Albertsons, 18
Alertbox, 150
algorithms
 encryption, **464–465**
 hash, **465**
 routing, **60**
Alibaba.com (case study), 303–304
Alis Technologies, 34
Alliance Entertainment, 139
AlliedSignal, 536–537
Allstate, 126
Al Qaeda, 458
AltaVista, 118, 201
Amazon.com
 1-Click feature, 178
 affiliate marketing strategies, 200
 case study, 43–45
 communication on the Web, 152
 conditions of use page, 321, 322
 costs of branding, 197
 digital certificate, 456, 457
 ethics and Web business policies, 334
 first-wave company, 13
 general consumer auctions, 274–275
 payment methods, 511, 513
 strategic alliances, 138
 web catalog revenue model, 110
American Bankers Association Check 21 Resource Center, 520

- American Civil Liberties Union (ACLU), 144–145
- American Express, 498
- American National Standards Institute (ANSI), 231
- American Packaging Machinery (case study), 257–259
- American Red Cross, 144
- American Registry for Internet Numbers (ARIN), 63
- Ameritrade, 125
- Amnesty International, 144
- Analog, 380
- analysis, SWOT, 30, 30–31
- anchor tags, using, 75
- Andale, 285, 286
- Andreessen, Marc, 58
- angle brackets (<>) and HTML tags, 70
- animated GIFs, 185
- Anonymizer, 461
- anonymous electronic cash, 507
- anonymous FTP, 380
- ANSI. *See* American National Standards Institute
- Answer Financial, 125
- Anti-phishing Working Group, 523
- antispam tactics, 369–370
- antivirus software, 451–455, 452
- AOL, 118, 201
- Apache, 365
 - Cocoon Project, 359–360
 - HTTP Server, 365–366
- APNIC. *See* Asia-Pacific Network Information Center
- Apple Computer, 12, 108, 320, 324
- applets, 448
- application, 408
- application integration, 408
- application program, 408
- applications, enterprise integration, 408–410
- application servers, 408
- application service providers (ASPs), 399
- application software, 408
- applications specialists, 558
- AreaEx, 281
- architecture
 - client/server, 66
 - Internet's router-based, 61
 - open, on the Internet, 62, 240
 - proprietary, 62
 - server, 384
 - three-tier client/server, 362–363
 - two-tier client/server, 361–362
 - Web server hardware, 384–387
- Ariba online auction, 282
- ARIN. *See* American Registry for Internet Numbers
- Whois page, 63
- ARPA. *See* Advanced Research Projects Agency
- ARPANET, 54, 62
- Art.com, 205
- ascending-price auction, 265
- ASC X12. *See* Accredited Standards Committee X12
- Asia-Pacific Network Information Center (APNIC), 63
- ASP. *See* Active Server Pages; application service providers
- Association for Computer Machinery (ACM), 116
- Digital Library, 116
- Association for the Study of International Business (case study), 159–160
- As *Time Goes By* (Freeman and Lourçã), 11
- asymmetric connections, 85
- asymmetric digital subscriber line (ADSL), 86
 - asymmetric encryption, 465–466, 467
- asynchronous transfer mode (ATM), 88
- Atlantic Monthly*, 57
- attachments, e-mail, 367, 448, 450, 451–452
- AuctionBytes, 285, 286, 287
- auction consignment services, 288
- AuctionDrop, 288
- auctioneers, 265
- Auctionguide.com, 285
- AuctionHawk, 285
- auctions, 264–265. *See also* online, auctions
 - consignment services, 288
 - directory and information services, 285
 - Dutch, 266–267
 - English, 265–266
 - escrow services, 284–285
 - first-price sealed-bid, 267
 - online — and related businesses, 269–288
 - open-outcry double, 267–268
 - origins, 265
 - related services, 284–288
 - reverse (seller-bid), 268–269
 - sealed-bid double, 268
 - second-price sealed-bid, 267
 - software, 285–288
 - types, 265–269
 - virtual communities and Web portals, 288–299
- Auction Universe, 272
- audio watermarks, 327
- Audit Bureau of Circulations, 190
- audits, postimplementation, 560
- authentication, 444, 478–479
- authority to bind, 321
- authority to form contracts, 321
- Authorize.Net, 503
- Autobyte online, 2–4, 16
 - online sites, revenue model, 124
- Automated Clearing House (ACH), 241, 502
- automobile sales, online revenue model, 124–125
- AutoTrader.com, 119
- Autoweb.com, 124
- AvantGo, 139, 290, 291
- Avendra, 252
- Aventail, 84
- awareness and customer relationship, 180

B

- Baan, 414
- backbone routers, 61
- backdoors, 460
- BAI Check 21 Resource Center, 520
- bandwidth, 85
- BandX, 281
- banking. *See also* banks
 - Internet technologies and, 520–525
 - merchant, 501
 - online sites, revenue model, 127–129
 - trust issues on the Web, 32–33
- BankOne.com, 128
- banks. *See also* banking
 - customer issuing, 500
 - EDI. *See* electronic data interchange
 - value-added, 241
- banner ads
 - cookies, 338
 - described, 185
 - measuring cost and effectiveness, 186–189
 - placement, 185–186

- banner advertising network, **186**
- banner exchange network, **185**
- bar codes and materials-tracking, **246**
- bargainers, site visitor type, **178**
- BarnesandNoble.com, **110, 197**
- Barron's, **115**
- base 2 number system, **63**
- BATF. *See* Bureau of Alcohol, Tobacco, Firearms
- Bayesian filters, **372–374**
- Bayesian revision, **372**
- BEA Systems, **407, 408**
- bebe, **111**
- Beenz, **496–497**
- Be Free, **199**
- behavioral segmentation, **177**
- Bell and Howell, **115**
- benchmarking, **383**
- benefits, e-commerce
 - comparing — to costs, **547**
 - measuring, **539–540**
- Berkman Center for Internet & Society, **317**
 - UDRP Opinion Guide, **326**
- Berlitz, **34**
- Berners-Lee, Tim, **57, 58**
- Best Book Buys, **290**
- Best Buy, **109, 178, 464**
- Bezos, Jeff, **43–45, 110, 152, 325**
- Bibliofind (case study), **487–488**
- BIB NET, **247**
- bidders, **265**
- BidPay, **512**
- bids, **265**
- BidShift, **283**
- BigStep, **418–419**
- Billings, Hilary, **166**
- bill presentment, **129**
- binary number system, **63**
- biometric security devices, **458–459**
- BitPass, **504**
- BIZNET Internet Services, **404**
- BizRate.com, **150**
- BlackBoard, **291**
- black hat hackers, **442**
- black list spam filters, **370**
- Blackwell's, **110**
- blade server, **383**
- blocking cookies, **445**
- blog, **173, 294–295**
- Blogus, **37**
- Bluefly, **173, 294–295**
- Blue Mountain Arts, **199–200**
- Blue Spike, **327**
- Bluetooth protocol, **89**
- BoatTrader.com, **119**
- Boeing, **244–245**
 - PART, **244**
- Boisot, Max, **551**
- Bol.com, **36**
- boldface HTML tag, **70–71**
- BookBrowser, **154**
- Booklist, **154**
- books
 - Amazon.com online sales, **43–45**
 - copyright, **323**
 - obtaining online information about, **154**
 - software agents, **290**
 - Web catalog sales, **110**
- Books-A-Million, **110**
- border routers, **60**
- Borders, **138**
- borders, jurisdiction, **311**
- Bossidy, Larry, **536–537**
- Boston College, **335**
- bots
 - described, **201**
 - and intelligent software agents, **290**
- BotSpot, **290–291**
- brackets, angle. *See* angle brackets
- brand image, **140**
- branding
 - costs of, **197–198**
 - elements of, **195–196**
 - emotional vs. rational, **196–197**
- brand leveraging, **197**
- brands
 - consolidation strategies, **197**
 - creating and maintaining on the Web, **195–200**
 - described, **167**
- breach of contract, **315**
- BrightPlanet, **59**
- Britannica.com, **135, 136**
- broadband connections, **86**
- Broadvision, **407**
 - One-To-One Commerce, **424**
- brokers
 - insurance. *See* insurance brokers
 - liquidation, **279**
 - mortgage loan. *See* mortgage loan brokers
 - real estate. *See* real estate brokers
 - search engine placement, **202**
 - stock. *See* stockbrokers
 - URL, **206**
- browsers, **177**
 - cookies, **445**
 - keywords, **179**
- B2B. *See* business-to-business
- B2C. *See* business-to-consumer
- B2G. *See* business-to-government
- buffer, **470**
- buffer overflow, **470**
- buffer overrun, **470**
- Bugbear, **452**
- bugs, Web, **447**
- bulk mail, **67**. *See also* spam
- Bunnyfoot Universality, **189**
- Bureau of Alcohol, Tobacco, Firearms (BATF), **331**
- Bush, Vannevar, **57**
- business communication modes, models, **152–154**
- businesses
 - EDI compatible, **229–230**
 - hierarchical, **20**
 - planning e-commerce initiatives, **537–548**
 - related to online auctions, **269–288**
- business logic, **408**
- business managers, **558**
- business models, **14**
- business policies, **334**
- business processes
 - described, **7**
 - focusing on, **14**
 - patent, **325**
 - suitability to e-commerce, **15–16**
- business-to-business (B2B)
 - auctions, **279–284**
 - described, **5, 7**

EDI, 229–230
 electronic marketplaces, portals, 248–253
 marketplace characteristics, 253
 sales growth, actual and estimated, 10
 strategies, 217–262
 business-to-consumer (B2C), **5**, 7, 10, 413, 424
 business-to-government (B2G), **7**, 8
 business unit, **23**
Business Week online, 121
 Buy.com, 113
 BuyDomains.com, 206
 buyers, 177–178
 BuyUSA.com, 39
 bytes, **63**

C

Caesar, Julius, 440
 Calabash Music, 130
 CAL-Buy Web site, 7, 8
 Caldera, 364
 California
 one-stop portal site, 227
 online governmental transactions, 7
 callback systems, security, 478–479
 call centers, **559**
 Calomiris, Michael, 38
 Calyx & Corolla, 112
 cannibalization, **137**
 CAN-SPAM law, 374–375
 capital investments, **547**
 capital projects, **547**
 CAPTCHA Project, 371
 car buying, 2–4. *See also* automobile sales
 card not present transactions, **498**
 cards
 purchasing, **223**
 stored-value, **517**–519
 cards, payment, **497**–503
 CareerBuilder.com, 119
 Carnegie Mellon University, 63
 Intelligent Software Agents Lab, **290**
 Cars.com, 205
 CarsDirect.com, 124, 125, 554
 CartIT!, 404
 Cart32 shopping cart, 460
 CAs. *See* certificate authorities
 Cascading Style Sheets (CSS), **76**
 cash, electronic, **503**–512
 cashers, **524**
 Castells, Manuel, 25
 catalog, **401**
 catalog display, 401–402
 catalog model, **108**. *See also* Web catalog revenue model
 Catchings, Bill, 337
 category managers, **138**
 cause marketing, 198
 CBOT. *See* Chicago Board of Trade
 CDnow, 110, 138
 CD Universe, 110, 111
 Celent Communications, 501
 cell phones, third-generation (3G), **91**
 cellular telephone networks, 91
 censorship of Internet content, 37
 Center for Education and Research in Information Assurance and Security (CERIAS), 482

Center for Internet Security, 482
 Center for Responsive Politics, 144
 centralized architecture, **384**
 CERIAS. *See* Center for Education and Research in Information Assurance and Security
 CERN and hypertext development, 57
 CERT (Computer Emergency Response Team), 482
 certificate authorities (CAs), **456**
 certificates, digital, **455**–456
 challenge-response content filtering, **371**
 Chambers, John, 51, 52
 change management, **541**
 channel
 communication, security, 459–473
 conflict, **137**
 cooperation, **138**
 distribution management, strategic alliances and, 138–139
 distribution managers, **138**
 characters, uppercase, lowercase, 71
 chargebacks, **501**
 charge cards, **498**
 Charles Schwab, 125
 Check Clearing for the 21st Century Act. *See* Check21
 CheckFree, 509
 check processing, 520
 Check21, **520**
 ChemConnect, 249
 Chemdex, 248
 Cheviot, Ohio, web site, 228
 Chicago Board of Trade (CBOT), 267, 281
 child elements (XML), 80
 children, Web site communications with, 339–340
 Children's Internet Protection Act (CIPA), 339
 Children's Online Privacy Protection Act of 1998 (COPPA), 339–340
 China
 censorship issues, 37
 software piracy issues, 390–392
 choice, offering customers, 176
 ChoicePoint, 335
 Christie's, 265
 CICA. *See* Context Inspired Component Architecture
 Cigarbid.com, 276
 CIO E-business Research Center on ROI, 548
 CIPA. *See* Children's Internet Protection Act
 cipher text, **464**
 Circuit City, 109, 138
 circuit switching, **60**
 circuits, **60**
 Cisco Systems
 online sales, 17
 return on investment, 548
 technology infrastructure, 51–53
 VPNs, 84
 Citibank Online, 127
 Claritas, segment marketing databases, 181
 Clark, James, 58
 classified advertising Web sites, targeted, 119–120
 Classified Ventures, 272
 Clearing House, The, 502
 click, **187**
 Clickshare, 510–511
 clickstream, **193**
 click-throughs, **187**

- client computer security, 444
 - active content, 447–448
 - ActiveX controls, 450
 - cookies, 444–447
 - digital certificates, 455–458
 - graphics and plug-ins, 450–451
 - Java applets, 449
 - JavaScript, 449
 - physical security for clients, 458–459
 - steganography, 458
 - viruses, worms, antivirus software, 451–455
 - Web bugs, 447
- client-level filtering, 370
- client/server architectures, 66, 356–358, 361–363
- client-side
 - electronic wallets, 513
 - scripting, 76
- Clinton, Bill, 473
- closed architecture, 62
- closed loop systems, 500
- closing tags, 70
- clothing retailers, online revenue model, 111–112
- CNN, profitability of, 132
- Coase, Ronald, 21
- Coca Cola, 140
- Code Red worm, 452
- Cold Fusion project, 359
- Coldwater Creek, 286
- Coldwell Banker, 127
- collectors, 524
- collision, 465
- collocation, 399
- co-location, 399
- colon hex. *See* colon hexadecimal notation system
- colon hexadecimal notation system (colon hex), 64
- COM. *See* Microsoft Component Object Model
- ComicLink.com, 119
- Commercenet, 470
- Commerce Server 2002. *See* Microsoft
- commerce service providers (GSPs), 399, 415–419
- commerce sites, 357, 366, 367, 384
- commercial uses of Internet, 55
- Commission Junction, 199
- commitment and customer relationship, 180
- commodities
 - items, 16
 - transaction costs, 24
- common law, 325
- Common Markup for Micropayment Per-Fee-Links, 515
- Common Object Request Broker Architecture (CORBA), 409
- communication
 - channel security, 459–473
 - children and, 339–340
 - internal Web portals, 299
 - market segments and, 171–176
 - modes, 152
 - supply chain management, 244, 247
 - Web client/server, 361
- communities
 - early Web, 292–294
 - virtual. *See* virtual communities
- companies
 - described, 20
 - virtual, 24
- Compaq, 31
- Competitive Advantage* (Porter), 26, 28
- component-based application system, 409
- Component Object Model. *See* Microsoft Component Object Model
- component outsourcing, 551
- CompUSA, 280
- CompuServe, 55
- Computer Emergency Response Team. *See* CERT
- computer forensics, 483
- computer forensics experts, 483
- computers, routing, 60
- computer security, 441
- computer viruses, 368
- computer web catalog sales, 108–109
- Computerworld*
 - ROI Knowledge Center, 548
 - Total Cost of Ownership Quickstudy, 541
- ComScore, 190
- ComStock, 414
- concerts
 - online, 130–131
 - online sites, revenue model, 127
- Conferences on Email and Anti-Spam, 523
- configuration tables, 60
- conflict of laws, 317–318
- Connect, 129
- connections
 - asymmetric, symmetric, 85
 - broadband, leased-line, 88
 - Internet options, 85–92
 - stateless, 444
 - voice-grade telephone, 86
 - wireless, 88–92
- connectivity, overview of, 85–86
- connectors, site visitor type, 178–179
- consideration, 318
- consignment services, auction, 288
- consolidation, Web communities, 294
- consolidation strategies, brand, 197
- constructive notice, 314
- consumer auctions
 - general, 270–275
 - reverse auctions and group purchasing sites, 276–279, 277
 - specialty, 276
- ConsumerReports.org, 122
- consumer-to-business, 269
- consumer-to-consumer (C2C), 5, 7, 8
- content
 - active, 447–448
 - combining with advertising, 192
 - creators, 559
 - delivery sites, 357
 - editors, 559
 - filtering, e-mail, 370–371, 371–374
 - management software, 428–429
 - managers, 559
 - Web site, legal issues, 322–325
- Context Inspired Component Architecture (CICA), 240
- contextual advertising, 203
- contracting and contract enforcement, 318–322
- contract purchasing, 222
- contracts
 - authority to bind, 321
 - authority to form, 321
 - described, 314
 - elements of, types of, enforcement, 318–322
 - service agreements, terms of, 321
 - warranties, 320
 - written, 319
- controls, ActiveX, 450

- Convention on Contracts for the International Sale of Good (CISG), 319
- Convergence Center at Syracuse University, 65
- conversion cost, 182
- conversion of customers, 181–182, 183–184
- conversion rate, 191
- Cookie Crusher, 446
- Cookie Pal, 445
- cookies, 338, 444–447
- COPPA. *See* Children's Online Privacy Protection Act of 1998
- copy control, 327
- copyright, 323
- copyright infringement, 323–324
- CORBA. *See* Common Object Request Broker Architecture
- Costco, 114
- cost per thousand (CPM), 186
- costs
 - acquisition, retention, conversion, 181–184
 - branding, 197–198
 - domain names, 206
 - of electronic commerce, 15–16
 - ERP software, 414
 - international trade paperwork, 39
 - managing e-commerce, 540–546
 - measuring banner ad, 186–189
 - operating expenses, small Web business, 420–421
 - opportunity, 541–542
 - payment card fees, 499
 - phishing expeditions, 462
 - price element of marketing mix, 167
 - public vs. private networks, 83–84
 - retention, 182
 - server computers, 382
 - site, for Web businesses, 542–546
 - transaction. *See* transaction, costs
- countermeasure, 441
- countries
 - list data marked with HTML tags, 77–78
 - list data marked with XML tags, 79–80
- Covad (case study), 98–99
- Covisint, 252, 395
- CPA Directory, 131
- CPM. *See* cost per thousand
- Cracker Project, 466
- crackers, 441–442
- craigslist, 295
- Crate&Barrel, 197
- crawler, 201
- creating
 - brands on the Web, 195–200
 - e-commerce with network effects, 26
 - effective Web presence, 140–145
- credit card associations, 500
- Credit Card Management*, 501
- credit card number theft, 460
- credit cards, 498
- Cricket Sniping Software, 285
- crime, online, 331–333
- CRM. *See* customer relationship management
- Crutchfield consumer electronics Web store, 109, 178
- cryptography, 464, 493–494
- CSO Online, 482–483
- CSPs. *See* commerce service providers
- CSS. *See* Cascading Style Sheets
- C2C. *See* consumer-to-consumer
- culture
 - described, 35
 - e-commerce issues, 34–36
 - government and, 36–38
 - legal environment and, 311–312
- CUNA Mutual Group, 411
- customer-based marketing strategies, 170–171
- customer behavior and relationship intensity, 176–184
- customer-centric Web site, creating, 151
 - and market segmentation, 173–176
 - offering choice on the Web, 177
 - retention of, 181–184
 - stages of loyalty, 180
 - trust and loyalty, 149–150
- customer issuing banks, 500
- customer life cycle, 181
- customer orientation in supply chain management, 247
- customer portal, 251
- customer relationship intensity and life-cycle segmentation, 179–181
- customer relationship management (CRM)
 - described, 193
 - software, 426–428
 - source of value in marketspace, 193–195
 - technology-enabled, 193–195
- customers, connecting with, 151–154
- customer service, 150, 559
- customer value, 167
- Cyberian Outpost, 113–114
- cybersquatting, 326
- cybervandalism, 462
- CycleTrader.com, 119

D

- data
 - analysis software, 380
 - bandwidth and, 85
- database administration, 559
- database manager, 409
- databases
 - described, 201
 - enterprise solutions, 408–410
 - threats to, 475
- database servers, 361
- Data Encryption Standard (DES), 466
- data-grade lines, 86
- Data Interchange Standards Association (DISA), 231
- data mining, 419
- data type definitions (DTDs), 80
- Davis Humanics, 565–566
- dead link, 381
- debit cards, 498
- DEC. *See* Digital Equipment Corporation
- decentralized architecture, 384
- deceptive trade practices, 329
- decryption, 464
- decryption programs, 464
- dedicated hosting, 399
- defamation, 328
- defamatory, 328
- Defense Logistics Agency, 9
- delay threat, 462
- delivery protocols, 66
- Dell, Michael, 536
- Dell Computers
 - advertising, 309–311
 - commerce implementation successes, 536
 - customer choice, 177
 - e-commerce, 7

- supply chain efficiencies, 245
- SWOT analysis, 30–31
- Web catalog revenue model, 108–109
- Web server hardware, 382
- demographic
 - information, **117**
 - segmentation, **174**
- denial-of-service (DoS) threats, **462**
- denial threat, **462**
- Department for Work and Pensions, 227
- Department of Homeland Security (DHS) and Internet technologies, 227
- Department of Transportation (DOT), 331
- DES. *See* Data Encryption Standard
- Descartes VAN Services, 238
- descending-price auctions, **266**
- design of customer-centric Web sites, 151
- development sites, 356
- DHS. *See* Department of Homeland Security
- dictionaries, online sites, revenue model, 135
- dictionary attack programs, **474–475**
- Digi-Key, 223
- Digimarc, 328
- digital certificates, **455–458**, 468–469, 471
- digital content revenue model, **115–116**
- Digital Equipment Corporation (DEC) and branding, 196
- Digital River, 407
- digital signatures, transaction integrity, **472–473**
- Digital Subscriber Line (DSL), **86**
- digital watermarks, **327**, 458
- DirecPC, 89
- direct connection EDI, **237**
- Direct Marketing Association (DMA), 335
- direct materials, **222**
- direct materials purchasing, 222–223
- DirectNIC.com, 206
- directory and information services, auction, 285
- DIRECTWAY, 89
- DISA. *See* Data Interchange Standards Association
- disabling cookies, **445**
- disclaimer, warranty, **320**
- discount retailers, online sites, revenue model, 113–115
- Disco Virtual, 18
- disintermediation, **122**
- disk storage space, online sites, revenue model, 133
- Disney Online, 339
- distributed architecture, **384**
- distributed database systems, **409**
- distributed information systems, **409**
- distribution (“place”), **168**
- Ditech, 127
- DMA. *See* Direct Marketing Association
- DNSs. *See* domain name servers
- DoCoMo I-Mode service, 139
- DocumentMail, 225
- Documentum, 429
- domain name hosting, **206**
- domain name ownership change, **327**
- domain name parking, **206**
- domain names
 - buying, selling, leasing, 205–206
 - changing, 326
 - described, **64**, **64–65**
 - ownership, disputes, 326–327
 - sponsored top-level, **65**
 - stealing, 326
 - top-level, **65**
- domain name servers (DNSs), **462**
- Domain Notes, 206
- Donnelley Marketing, 181
- DoS threats. *See* denial-of-service threats
- DOT. *See* Department of Transportation
- dot-com bust, 4, 9–10
- dotted decimal, **63**
- double auctions, **268**
- double-spending, **505**, 508
- DoubleClick banner advertising, 186, 338
- Dove Bid, 281
- Dow Jones, 115
- downlink bandwidth, **85**
- download, **85**
- downloading e-mail, 67–68
- downstream
 - bandwidth, **85**
 - business strategies, **538–539**
- Dr. Andrew Weil’s Self Healing, 131
- Dreamweaver Web authoring program. *See* Macromedia Dreamweaver
- Drudge Report*, 117
- DSL (Digital Subscriber Line), **86**
- DSW Shoe Warehouse, 335
- DTDs. *See* data type definitions
- due diligence procedures, **516**
- Duke University, 55
- Dun & Bradstreet, 398
- Dutch auction, **266–267**
- dynamic catalog, **401**
- dynamic content, **358–360**
- dynamic Web pages, **358**
 - future of, 359–360
 - generation technologies, 359

E

- early outsourcing, **551**
- Eastman Kodak, 150
- eavesdropper, **441**, 443, 460, 468, 469
- eBay
 - customer-to-customer electronic commerce, 8
 - ethics and Web business policies, 334
 - first wave company, 13
 - general consumer auctions, 270–275
 - mall-style CSP, 418
 - origins of, 263–264
 - payment system, 495
 - Web servers, 385
- e-bizNYS, 228
- EBSCO Information Services, 115
- e-business. *See* electronic business and electronic commerce
- ebXML initiative, 80, 240
- e-cash, 503. *See also* electronic cash
- Eccles, David, 285
- EC/EDI, 238
- eCharge, 505
- ECIG. *See* World Wide Web Consortium, Electronic Commerce Interest Group
- ECML standard. *See* Electronic Commerce Modeling Language
- e-commerce. *See* electronic commerce
- economic organization, network model of, 228–229

- economics
 - financial services. *See* financial services
 - network model of economic organization, 228–229
- ECRCs. *See* Electronic Commerce Resource Centers
- Eddie Bauer, 136–137
- eDeposit, 284
- EDI. *See* electronic data interchange
- EDI-capable banks, **241**
- EDI compatible, **229**
- EDIFACT. *See* EDI for Administration, Commerce, and Transport
- EDI for Administration, Commerce, and Transport (EDIFACT; UN/EDIFACT), **321**
- editors, HTML, 81–82
- Edvinsson, Leif, 550–551
- EFF. *See* Electronic Frontier Foundation
- effectiveness
 - banner ad cost, 186–189
 - online advertising, 190–191
 - Web presence, **140–145**
- effects, and laws, **313**
- efficiency, increasing supply chain, 244–245
- EFTs. *See* electronic funds transfers
- e-government, **220, 226–228**
- EJBs. *See* Enterprise JavaBeans
- Electronic Arts, 130
- electronic business and electronic commerce, **5**
- electronic cash, **503–504**
 - advantages and disadvantages, 506–507
 - holding, 505
 - micropayments and small payments, **504**
 - privacy and security, 504–505, 507–508
 - systems, 508–512
 - using, 507
- electronic commerce (e-commerce), **5**
 - advantages, disadvantages of, 17–20
 - categories of, 5–8
 - creating with network effects, 25–26
 - contracting and contract enforcement, 318–322
 - cultural issues, 35–38
 - development and growth of, 8–9
 - dot.coms, 9–10
 - economic forces, 20–26
 - electronic business, 5
 - identifying opportunities, 26–31
 - international nature of, 31–40
 - legal environment of, 311–322
 - managing implementation, 555–560
 - materials-tracking technologies, 245–246
 - planning for, 536–568
 - product/process suitability to, 15–16
 - second wave, 11–13, 294–296, 539, 548
 - taxation and, 340–343
- Electronic Commerce Interest Group. *See* World Wide Web Consortium, Electronic Commerce Interest Group
- Electronic Commerce Modeling Language (ECML) standard, **515–516**
- Electronic Commerce Resource Centers (ECRCs), 9
- Electronic Communications Privacy Act of 1986, 335
- electronic customer relationship management (eCRM), **193**
- electronic data interchange (EDI)
 - business-to-business strategies, 229–230
 - described, 8–9
 - EDI-capable banks, **241**
 - financial, 241
 - history of, 230–231
 - indirect connection EDI through VAN, 238
 - on the Internet, 239–241
 - purchasing process, 232–237
 - standards, 231–232
 - using materials-tracking technologies with, 245–246
 - value-added networks (VANs), 237–239
- Electronic Frontier Foundation (EFF)
 - Cracker Project, 466
- electronic funds transfers (EFTs)
 - described, **8**
 - financial EDI, 241
 - online payments, 495–497
- electronic mail. *See* e-mail
- electronic marketplaces, 248–253, 283, 289, 290
- electronic marketplaces, portals, 248–253
 - elements of, 6
 - growth, development of, 8–10
 - HTML links, use of, 73–76
 - implementations, managing, 555–560
 - infrastructure issues, 38–40
 - international nature of, 31–40
 - introduction to, 2–5, **5**
 - language issues, 33–34
 - legal environment of, 311–322
 - linking business objectives to strategies, 538–539
 - materials-tracking technologies, 245–246
 - payment systems. *See* payment systems
 - planning initiatives, 537–548
 - products/process suitability to, 15–16
 - rating Web sites, 150
 - return on investment (ROI), **547–548**
 - second wave of, 4, 11–13, 294–296, 539, 548
 - security. *See* security
 - site setup costs, 542–546
 - software for large businesses, 423–429
 - software for midsize, large businesses, 421–423
 - software for small, midsize companies, 415–421
 - software functions, 400–415
 - staffing for, 557–560
 - strategies for developing Web sites, 548–555
 - taxation and, 340–343
 - transaction processing, **407**
- Electronic Payments Network, 502
- Electronic Signatures in Global and National Commerce Act, 473
- electronic wallets
 - described, **513–514**
 - ECML standard, **515–516**
 - Microsoft .NET Passport, 514
 - W3C micropayment standards, 515
 - Yahoo! Wallet, 514–515
- electronics web catalog sales, 108–109
- Ellasaurus (case study), 348–349
- E-Load, 386
- E-LOAN, 127
- Elsop LinkScan, 381
- e-mail
 - attachments, and security, 448, 450–455
 - benefits, 367
 - client server, **66**
 - content filtering, 370–371, 371–374
 - described, **66**
 - downloading, 67–68
 - drawbacks, 367–368
 - marketing, 191–193
 - origins of, 54
 - outsourcing processing, 192–193
 - phishing attacks, 521–525
 - protocols, 66–67
 - secrecy, 459–461
 - servers, **66**
 - spam, 368–377
 - unsolicited, 67–68
- eMarketer, 191
- eMarketplace, *The* (Raisch), 253

emotional branding, 196
 employment search, online revenue model, 119, 120
 eMusic.com, 130
 EMV standard, 500
 encapsulation, 84
 encryption, 464
 encryption program, 464
 encryption solutions, 464
 algorithm, 464–465
 asymmetric, 465–466, 467
 hash coding, 465
 Secure HTTP, 470–471
 Secure Sockets Layer protocol, 468–470
 symmetric, 466–467
Encyclopædia Britannica, 134–136
 Engelbart, Douglas, 57
 English auction, 265–266
 enterprise application integration, 408–410
 enterprise-class software, 424
 Enterprise Edition, 412
 Enterprise JavaBeans (EJBs), 409
 enterprise resource planning (ERP) software, 413–415, 414
 Entertainment Software Association, 130
 entity body, 362
 Entopia, Quantum, 429
 Entrust, 457
 e-procurement, 5
 e-procurement software, 251
 Equifax Secure, 457
 eRealty, 127
 Ericsson extranet, 225–226
 ERP software. *See* enterprise resource planning software
 eS-Books, 36
 eScrip, 496
 Escrow.com, 284
 escrow services, auction, 284–285
 e-sourcing, 221
 ESPN Web site, 121, 132
 Etherlinx, 91
 ethical hackers, 483
 ethical hacking, 483
 ethical issues, 333
 communications with children, 339–340
 privacy rights and obligations, 334–337
 relationship with laws and culture, 311–312
 Web business policies, 334
 E*TRADE, 125
 Eudora, 66
 European Union
 digital signature laws, 473
 Directive on the Protection of Personal Data, 336
 Value Added Tax (VAT), 343
 event tickets, online revenue model, 126–127
 Evian, 110
 e-wallets. *See* electronic wallets
 Excite, 118, 197, 201
 Mail, 196
 Exostar, 252
 Expedia, 122
 exploration and customer relationship, 180
 eXtensible Business Reporting Language (XBRL), 80
 Extensible Hypertext Markup Language. *See* XHTML
 eXtensible Markup Language. *See* XML
 Extensible Stylesheet Language. *See* XSL
 extensible systems, 515
 extensions, HTML, 70

extranets
 described, 82
 using, 82–85, 357
 VPNs, 84
 e-zine, 133

F

Factiva, 115
 Failure of Corporate Websites (Nielsen), 146
 fair use, 323
 false positives in spam filters, 370
 familiarity customer relationship, 180
 fast venturing, 554–555
 FDA. *See* Food and Drug Administration
 FedACH, 502
 Federal Express (FedEx)
 freight-tracking Web pages, 224–225
 Ship Manager, 83
 Federal Reserve Bank Check 21 Services, 520
 Federal Trade Commission (FTC), 329–331, 335
 CAN-SPAM law, 374–376
 Spam information pages, 375–376
 FedEx. *See* Federal Express
 FEDI. *See* financial EDI
 fee-for-service revenue model, 130–131
 fee-for-transaction revenue model, 122–130
 File Transfer Protocol (FTP), 379–380
 films, online revenue model, 130–131
 filtering e-mail content, 370–371, 371–374
 financial EDI (FEDI)
 described, 241
 online sites, revenue model, 127–129
 payment systems. *See* payment systems
 financial services, online revenue models, 127–129
 financial VANs (FVANS), 241
 fingerprints, digital, 457, 458–459, 465, 469
 Finger utility, 378
 firewalls, 479–481
 firms, 20
 First Data, 502
 First Internet Bank of Indiana, 127, 529–530
 first-mover advantage, 12
 first-party cookies, 445
 first-price sealed-bid, 267
 Fisher, Marshall, 243
 fixed-point wireless, 91
 Flash. *See* Macromedia
 Flash: 99% Bad, 148
 Flash Usability Challenge, 148
 flat-rate access system, 39
 float, 511
 Flooz, 496–497
 flowers, online revenue model, 112
 Flypaper, 173, 294–295
 Food and Drug Administration (FDA), 331
 forms-based ordering, 403–404
 forum selection clauses, 315
 four Ps of marketing, 167
 Fox, 197
 fractional T1, 88
 frame relay, 88
 Freedom Forum Online, 464–465
 Freedom House, 37
 Freeman, Chris, 11
 FreeMarkets, 282

freight
 bar code shipping label, 246
 FedEx. *See* Federal Express
 Transportation Data Coordinating Committee (TDCC) , 230
 FreshDirect, 18–19
 Friendster, 295
 FrontPage. *See* Microsoft
 Fry's Electronics, 114
 FTC. *See* Federal Trade Commission
 FTP. *See* File Transfer Protocol
 fulfillment managers, **138**
 full-privilege FTP, **380**
 Fundació n Invertir Web site, 39
 funnel model of customer acquisition, conversion, retention, 183–184
 FVANS. *See* financial VANS

G

gambling online, 331–332
 games, online, 130
 GAO. *See* General Accounting Office
 Gap, 111
 Garmin, 289
 Gateway, 108, 382
 gateway computers, **60**
 gateway servers, **480**
 GB RetailExchange, 281
 GEICO, 126
 General Accounting Office (GAO), 438–439
 general consumer auctions, 270–275
 General Electric (GE)
 business-to-business strategies, 217–219
 EDI, 9
 GE Lighting, 217–219
 purchasing and acquisitions, 217–219
 Generalized Markup Language. *See* GML
 General Magic, 263
 General Motors, 35, 347
 geographic segmentation, **174**
 Georgia Institute of Technology, 9
 Georgia Tech Electronic Commerce Resource Center, 9
 Getwireless.net, 91
 Ghawi, Dima, 283
 Gibson Research Shields Up!, 481
 GIF files, animated ads, 185
 gifts
 911Gifts.com, 165–166
 online revenue model, 112
 RedEnvelope, 166–167
 Global Computer Supplies, 223
 global positioning satellite (GPS) and FedEx, 225
 Global Positioning Service (GPS), PDA mapping service, 289–290
 Global Reach Web site, 33
 Global Trust and Culture, **35**
 GML (Generalized Markup Language), **69**
 Go.com, 197
 Godin, Seth, 191–192
 Godiva, 112
 Golf Classified, The, 119
 Golf Club Exchange, 276
 Gollent, Manfred, 553
 Gomez.com site rating service, 150
 Good Guys!, The, 109

Google
 AdSense, 203
 AdWords, 203
 Answers site, 292, 293
 Directory of Web Host Directories, 400
 Local, 204
 portal, 118
 search engine, 201
 Gordon Brothers Group, 280
 governments. *See also* e-government
 culture and, 36–38
 local, online information access, 228
 GPAS, 238
 GPS. *See* Global Positioning Service
 Graham-Cumming, John 372
 Grainger.com, 7
 Grand Haven, Michigan, 90
 graphical user interface. *See* GUI
 graphics and electronic commerce security, 450–451
 graphics designers, Web, **559**
 GreatDomains, 206
 greeting cards, 199–200
 Grocery Gateway, 18
 Gross, Bill, 563–565
 group purchasing sites, 276–279, **277**
 GUI (graphical user interface), **58**
 Gump's, 197

H

hackers, **441–442**
 hacking, ethical, **483**
 Haggle Online, 276
 Hal's Hardware, Inc. (case study), 45–47
 Handleman Company, 138
 hardware for Web servers, 381–387
 Harley-Davidson (case study), 256–257
 Harry and David Web catalog sales, 112, 113
 Harvard Business School, 193
 Harvard Law School. *See* Berkman Center for Internet & Society
 hash algorithm, **465**
 hash coding, **465**, 471–472
 hash value, **465**
 HDSL (high-speed DSL), **86**
 health information, online revenue model, 131, 132
 Hewlett-Packard, 108, 382
 hexadecimal (base 16) numbering system, **64**
 Hickory Farms, 112
 hierarchical businesses organizations, **20**, 22–23
 hierarchical hyperlink structure, **74**
 high-speed DSL (HDSL), **86**
 holding e-cash, 505
 HomeGrocer, 18, 19
 home pages, **74**
 Honeywell, 536–537
 Hong Kong Citybus, 518
 HostCompare.com, 553
 HostIndex, 400
 hosting
 domain name, **206**
 services, selecting, 553
 using commerce service providers (CSPs), 415–419
 Web, alternatives to, 398–400
 Hotel Discount Reservations, 122
 Hotels.com, 122

- Hotmail, 66, 196
 - hot spots, 90
 - HowStuffWorks, 117
 - HREF. *See* hypertext reference
 - HTML (Hypertext Markup Language)
 - content filtering and, 372
 - described, 58, 70
 - difference from XML, 76–79
 - editing programs, 81–82
 - extensions, 70
 - links, using, 73–76
 - payment card processing, 503
 - scripting languages and style sheets, 76
 - tags. *See* HTML tags
 - Web services, 411
 - HTML pages
 - dynamic content, 358
 - plug-ins, 450
 - HTML tags, 58, 70–73
 - HTTP. *See* Hypertext Transfer Protocol
 - HTTP requests, security and, 460, 468, 474
 - Human Rights Watch, 36
 - hyperlinks
 - described, 58
 - inserting into e-mail, 192
 - hypertext
 - elements of, 57, 70
 - graphical interfaces, 58
 - link, 58
 - Hypertext Markup Language. *See* HTML
 - hypertext reference (HREF), 75
 - hypertext servers, 57
 - Hypertext Transfer Protocol (HTTP), 66
-
- IAB. *See* Interactive Advertising Bureau
 - IANA. *See* Internet Assigned Numbers Authority
 - IAPs. *See* Internet access providers
 - IBackup, 133
 - IBM
 - competitors, 32
 - electronic business, 5
 - Global Services, 238
 - Home Page Reader, 147
 - Lotus Discovery Server, 429
 - server hardware, 355
 - Tivoli Systems, 407
 - WebSphere Commerce Professional Edition, 422–423, 424
 - ICANN. *See also* Internet Corporation for Assigned Names and Numbers
 - UDRP Proceedings, 326
 - Watch, 65
 - Web site, 65
 - Ice.com, 295
 - ICVERIFY, 502
 - idea-based networking, 296
 - idea-based virtual communities, 296
 - Idealab (case study), 554, 563–564
 - identifying
 - customers, business unit function, 27
 - e-commerce opportunities, 26–31
 - Web presence goals, 140–145
 - identity theft, 523–524
 - IETF. *See* Internet Engineering Task Force
 - IIS. *See* Microsoft, Internet Information Server
 - ILOVEYOU virus, 451
 - IMAP. *See* Interactive Mail Access Protocol
 - Connection Web site, 67
 - implied contracts, 318
 - impressions, 187
 - IMU. *See* interactive marketing unit ad formats
 - income taxes, 341
 - incubators, 554
 - independent exchanges, 248
 - independent industry marketplaces, 248–251
 - indexes, 201
 - indexing programs, 380
 - Indiana University, 92
 - indirect connection EDI, 237
 - indirect materials, 222
 - indirect materials purchasing, 222–223
 - industry
 - consortia-sponsored marketplaces, 252–253
 - marketplaces, 248
 - value chains, 28, 28–30
 - IndyMac Bank Home Lending, 127, 128
 - information
 - auction services, 285
 - flow in paper- vs. EDI-based purchasing, 232–235
 - models of, and trust, 172
 - organizational goal, 142–143
 - promotion, 168
 - Information Security Policy World site, 444
 - information services, auction, 285
 - information technology (IT) personnel, 557–560
 - InformationWeek/Accenture* survey, 333
 - infrastructure issues of electronic commerce, 38–40
 - Ingersoll-Rand Club Car Division (case study), 433–432
 - Ingram Micro, 279–280
 - initiatives, planning e-commerce, 537–548
 - InOne, 223
 - Inside Supply Management*, 222
 - Institute for Supply Management (ISM), 222
 - Institute of Practitioners in Advertising (IPA), 190
 - insurance brokers, online revenue model, 125–126
 - Insurance.com, 125
 - Insure.com, 125
 - InsWeb, 125
 - integrated security, 442–444
 - Integrated Services Digital Network (ISDN), 86
 - integrity, 442
 - integrity threats, 461–462
 - integrity violation, 471
 - intellectual property
 - described, 322
 - issues, and the Internet, 12
 - protecting online, 327–328
 - use and protection in online businesses, 322–331
 - IntelligentCRM, 195
 - intelligent software agents, 290–291
 - Interactive Advertising Bureau (IAB), 185, 190
 - Interactive Mail Access Protocol (IMAP), 67
 - interactive marketing unit (IMU) ad formats, 185
 - interface, building flexible Web site, 150
 - Interland Web hosting services, 416
 - Intermarket Group, 197
 - internal e-commerce project team, 550–551
 - Internal Revenue Service (IRS), 341–342
 - internal Web portals and virtual communities, 299
 - international
 - commerce, jurisdiction in, 316–317
 - control of online crime, 331–333

- nature of e-commerce, 31–40
- trade portals, 37, 39
- International Data Corporation, 33
- International Organization for Standardization (ISO), 69
- International Securities Exchange (ISE), 281
- Internet. *See also* Web; World Wide Web
 - access providers (IAPs), 85
 - backbone, 61
 - banking and, 520–525
 - commercial use of, 55
 - connection options, 85–92
 - described, 53
 - EDI on, 239–241
 - growth, and effects on society, 10
 - growth of, 56–57
 - hosts, 56
 - legal jurisdiction on, 311–317
 - online sales. *See* electronic commerce
 - open architecture of, 240
 - origins of, 54
 - protocols, 62–68
 - router-based architecture, 61
 - supply chain management using the, 242–248
 - threats to physical security, 453
 - uses for, 54–55
 - utility programs, 377–381
- Internet access providers (IAPs), 85
- Internet Assigned Numbers Authority (IANA), 63
- Internet Corporation for Assigned Names and Numbers (ICANN), 65, 206
- Internet EDI, 240
- Internet Engineering Task Force (IETF), 64
- Internet Explorer. *See* Microsoft
- Internet Governance Project, 65
- Internet hosts, 56
- Internet Information Server. *See* Microsoft
- Internet Programming* (Kalata), 76
- Internet Protocol (IP), 62
 - version 4 (Ipv4), 63
 - version 6 (Ipv6), 64
- Internet Public Library Online Newspapers, 118
- InternetSecure, 501–502
- Internet Security Alliance, 482
- Internet service providers (ISPs)
 - 24/7 operations, 552
 - described, 56
 - Web hosting, 398–399
- Internet2 and semantic Web, 92–93
- interoperability, 407
- interoperable software, 509
- Intershop Enfinity MultiSite, 422
- interstitial ads, 189
- Intertainer, 130
- intranets, 82–85, 357
- intrusion detection systems, 481
- Intuit TurboTax software, 17
- investments, capital, 547
- IP. *See* Internet Protocol
- IPA. *See* Institute of Practitioners in Advertising
- IP addresses
 - described, 63, 63–64
 - private, 64
 - usage, assigning, 63–64
- IP tunneling, 84
- IP wrappers, 84
- IPv4. *See* Internet Protocol, version 4
- Ipv6. *See* Internet Protocol, version 6
- IRS. *See* Internal Revenue Service
- ISDN. *See* Integrated Services Digital Network
- ISE. *See* International Securities Exchange
- ISM. *See* Institute for Supply Management
- ISO. *See* International Organization for Standardization
- ISPs. *See* Internet service providers
- iTunes, 12, 324
- i2 Technologies, 428
- Ivory Soap, 195

J

- Java applets, 449
- Java sandbox, 449
- JavaScript, 449
- Java Security Page, 449
- JavaServer Pages (JSP), 359
- Java servlets, 359
- J.B. Hunt, 224
- job seekers, online revenue model, 119, 120
- Journal of the Hyperlinked Organization*, 146
- J.P. Morgan Chase, 411
- J&R Music World, 109
- JSP. *See* JavaServer Pages
- judicial comity, 317
- Juniper Networks, 92
- jurisdiction
 - international commerce and, 316–317
 - Internet, 311–317, 312
 - online gambling, 331–332
 - personal, 315–316
 - subject-matter, 315
- JustBeads.com, 276

K

- Kalata, Kathleen, 76
- Kanoodle, 203
- KDD Communications (KCOM), 509
- Kela, 133
- Keylime Software, 380
- Keynote Systems, 553
- keys, 456
- keywords, using, 179
- Kleinschmidt, 238
- KM. *See* knowledge management
- Kmart, 114, 545–546
- KMWorld Web site, 226
- knowledge management (KM), 226
 - software, 429
- Kozmo delivery service, 183

L

- Lands' End, 111–112, 354–356
- language issues, 33–34
- LANs. *See* local area networks
- late outsourcing, 551
- law of diminishing returns, 25
- Law on the Web, 131
- laws, conflict of, 317–318
- leased-line connections, 88
- leased lines, 83
- leasing computers, 309–310
- Lee Jeans FitFinder, 148, 149

- legal issues
 - copyright, **323–324**
 - electronic commerce, 19, 311–322
 - intellectual property and online businesses, 322–331
 - online crime, terrorism, 331–333
 - online professional services, 131
 - spam solutions, 374–376
- LegalXML, 80
- legitimacy, legal, **313–314**
- LetsBuyIt.com, 278
- Levchin, Max, 494–495
- Level 3, 476
- Levi Strauss & Company, 137
- LexisNexis, 115
- life-cycle segmentation, **179–181**
- line break tag (
), 71
- linear hyperlink structure, **74**
- link checker, **380**
- link-checking utilities, 380–381
- LinkedIn, 295
- links, HTML, 73–76
- LinkShare, 199
- Linux open source operating system, 364
- LinxCop, 381
- liquidation brokers, **279**
- List, The, 399, 553
- lists in HTML, 77
- Literary Machines* (Nelson), 57
- L.L. Bean, 111
- load-balancing switch, **386**
- load-balancing systems, 386–387
- Loadrunner, 386
- local area networks (LANs), packet creation, **60**
- localization, **34**
- localized advertising, **204**
- lock-in effect, **275**
- Locke, Christopher, 146
- log files, Web, **380**
- logical security, **441**
- logistics
 - activities, 223–225
 - support activities, 225–226
- logs, Web, 294–295
- Lonely Planet (case study), 157–159
- long-arm status, **316**
- LookSmart, 202
- Los Angeles Times*, 121
- Lourçã, Francisco, 11
- lowercase letters, HTML tag, 71
- loyalty
 - advertising, 184
 - stages of customer, 180
 - Web presence, 149–150
- luxury goods, Web catalog sales, 110
- Lycos, 118, 201
- magnetic strip cards, 517
- Mail (Pegasus), **66**
- Mail Abuse Protection System, 370
- mail bombs, **476**
- mailing lists, **55**
- mail order model, **108**
- maintenance, repair, and operating (MRO), **223**
- Malaga, Michael, 87–88
- mall-style commerce service providers, 418–419
- managed service providers (MSPs), **399**
- Mandrake, 364
- man-in-the-middle exploits, **442**
- Manugistics SCM produce, 428
- many-to-many communication model, **154**
- many-to-one communication model, **154**
- mapping, and Global Positioning Service (GPS), 289–290
- maps, site, **74**
- Marckini, Frederick, 202
- marketing. *See* advertising; Web marketing
- marketing mix, **167**
- marketing strategy, **167**
- marketplaces, electronic, 248–253, 286–290
- markets
 - described, **20**
 - form of economic organization, 22
 - hierarchies and, 22–23
- market segmentation
 - communicating with different segments, 173–175
 - customer behavior, intensity, 176–184
 - described, **173**
 - online auctions, 276
 - on the Web, 175–176
- marketspace, **193–195**
- markup languages and the Web, 68–82
- markup tags, **68**
- masquerading, **462**
- mass media
 - books. *See* books
 - business communication mode, 153
 - described, **152**
- MasterCard, 19, 197, 498
- MasterCard International, 500
- Materials Equipment (case study), 489–490
- materials-tracking technologies, 245–246
- MathML, 80
- Matsushita Electric, 554
- Maytag, 137, 150
- McAfee antivirus software, 452
- McCool, Rob, 365
- m-commerce. *See* mobile commerce
- McDonald's, 90
- MCI Mail, 55
- McKinsey & Company, 178, 543
- McMaster-Carr, 223
- measuring
 - banner ad cost, effectiveness, 186–189
 - business benefits from e-commerce, 539–540
 - popularity of Web sites, 297
- media. *See also* mass media
 - addressable, **152**
 - choice, and trust, 172–173
- medical information, online revenue model, 131, 132
- meetups, **294**
- Memex, 57
- Mercata, 278
- merchandising, **15**
- merchant accounts, **501**

M

- Ma, Jack, 303
- machine translation, **34**
- Macromedia
 - Dreamweaver, 82, 381, 421
 - Flash, 148
- macro virus, **451**
- Macy's, 197
- magazine sites, costs, 543–544

- merchant banks, **501**
- Merrick, Phillip, 397
- Merrill Lynch, 125
- mesh routing, 91
- message digests, **472**
- MessageLabs, 374
- messages
 - encrypting, decrypting, **464**
 - request, **361**
 - sending and receiving digitally signed, 473
- Messenger, **66**
- meta languages, **68**
- MetalSite trading exchange, 250–251
- metrics, **540**
- Metropolitan Transportation Commission, 518
- Michaels Photography Studio, 38
- Michelin North America, 247
- micromarketing, **174**
- Micon Electronics (MPC Computers), 309–311
- MicroPatent, 332–333
- micropayments, **504**, 515
- Microsoft
 - bCentral, 186
 - Commerce Server 2002, 423
 - Component Object Model (COM), 409
 - FrontPage, 82, 421
 - Internet Explorer, **59**, 450
 - Internet Information Server (IIS), 366, 455
 - MSN Games by Zone.com, 130
 - .NET, 412
 - .NET Framework, 360
 - .NET Passport, 514
 - online travel agency businesses, **122**
 - Outlook, **66**
 - Project, 556
 - Security Pages, 455
 - Security Research Group, 482
 - server products, 364
 - SharePoint Technologies, 429
 - software piracy in China (case study), 390–392
 - Visual Studio .NET, 421, 423
- middleware, **407**
- MIME. *See* Multipurpose Internet Mail Extension
- minimum bid, **265**
- minimum bid increment, **270–271**
- Minneapolis Web site, 228
- Mirror Words Technologies, Scopeware, 429
- MIT Media Lab Software Agents Group, 290
- mix, strategies, 167
- mixed-revenue model, Web portals and virtual communities, 298–299
- Moai Technologies, 279
- mobile business, 290
- mobile commerce (m-commerce)
 - described, **91**
 - online sites, revenue model, 139–140
- mobile communications technology, 289–290
- mobile phones and cellular telephone networks, 91
- models
 - affiliate commission, 199
 - business, **14**
 - communication, 153–154
 - customer acquisition, retention, conversion, 181–184
 - network, of economic organization, 228–229
 - revenue. *See* revenue models
 - trust in information dissemination, 172
- monetizing, **298**
- money laundering, **506**
- Monster.com, 119, 120
- Montana Mountain Biking, 212–213
- Montgomery Ward, 108
- Monty Python, 67
- Moodle, 292
- Moose Hut, The, 530–531
- mortgage loan brokers, online revenue model, 127
- Mosaic program, 58
- motivations of Web site visitors, 147
- Motley Fool, The, 298
- Motorola, 222
- MovieLink site, 131
- Mozilla, 445
 - Firefox, 445, 446
 - Thunderbird, **66**
- MPC Computers, 309
- MRO. *See* maintenance, repair, and operating
- Mrs. Fields Cookies, 112
- MSN
 - Autos, 124
 - Games by Zone.com, 130
 - Money, 129, 413, 414
 - Music, 129
 - portal, 118
 - search engine, 201
- MSPs. *See* managed service providers
- Multipurpose Internet Mail Extension (MIME), **67**
- multivector viruses, **452**
- music
 - online sales and distribution, 12, 17
 - online sites, revenue model, 129–130
- music, Web catalog sales, 110
- Musicians Buy-Line, 119
- my.ca.gov, 227
- My Conversation with Jeff Bezos, 325
- MyDocOnline, 131
- MyNYC.gov, 228
- MySAP CRM, 426
- MySQL, 409, 410
- My Virtual Model, 112

N

- NACHA—The Electronic Payments Association, 502
- naïve Bayesian filter, **372**
- name changing, **326**
- names
 - domain, **64**
 - stealing, **326–327**
 - trade, **325**
- name stealing, **326–327**
 - naming Web sites, 204
 - buying, selling and leasing domain names, 205–206
 - URL brokers and registrars, 206
- NAPs. *See* network access points
- Napster Web site, 129, 323–324
- NAT. *See* Network Address Translation device
- National Building Society, 411
- National Center for Supercomputing Applications (NCSA), **365**
- National Conference of State Legislatures, 343
- National Governor's Association, 343
- National Infrastructure Protection Center (NIPC), 483
- National Institute of Standards and Technology (NIST), 466
 - AES Algorithm (Rijndael) Web site, **467**
- National Science Foundation (NSF) and commercial use of Internet, 55, 56
- Nationwide Building Society, 411

- navigation via HTML links, 73–74
- NCP. *See* Network Control Protocol
- NCSA. *See* National Center for Supercomputing Applications
- necessity, **442**
- necessity threats, **462–463**
- Neiman Marcus, 197
- Nelson, Ted, 57
- net bandwidth, **85**
- NetBank, 516–517
- Netcraft, 364, 367
- Netcraft Surveys, 364
- NetMechanic, 381
- Netscape Communications, 59
 - Messenger, **66**
 - Navigator, 59, 445
 - portal, 118
- network access points (NAPs), **56**
- network access providers, **56**
- Network Address Translation (NAT) device, **64**
- Network Control Protocol (NCP), **62**
- Network Economics, 229
- network economic structures, **24, 24–25**
- network effects, using e-commerce to create, **25, 25–26**
- networking, social, **295**
- network model of economic organization, 228–229
- network operations staff, **559**
- networks
 - banner advertising, **186**
 - banner exchange, **185**
 - cellular telephone, 91
 - intranets, extranets, 82–85
 - local area. *See* local area networks
 - packet-switched, 60–61
 - personal area (PANs), **89**
 - public, private, **83**
 - value-added. *See* value-added networks
 - virtual private. *See* virtual private networks
 - wide area. *See* wide area networks
- Network Security Library, 444
- network specifications, **90**
- network traffic on World Wide Web, 55, 57
- Newmark, Craig, 295
- New Orleans Web site, 228
- New Pioneers, The* (Petzinger), 25
- newsgroups, **55**
- newspaper publishers
 - online content, revenue model, 118
 - Web sites, 548
- New York City, post-9/11 information access improvements, 228
- New Yorker* magazine, 32
- New York Review of Books, The*, 154
- New York State Citizen Guide, 228
- New York Stock Exchange (NYSE), 268, 281
- New York Times*, 121, 334, 451
- nexus, **341**
- Nielsen, Jakob, 146, 148, 150
- Nielsen/NetRatings, 190, 201, 296–297
- Nike Football, 36
- Nimda, 452
- Nine West, 112
- NIPC. *See* National Infrastructure Protection Center
- Nissan Motor, Computer companies (case study), 346–348
- NIST. *See* National Institute of Standards and Technology
- Nobel Prize in Economics, 267
- nonrepudiation, **239**
- Nordisk Aviation, 552–553
- Nortel Networks, 92
- Northern Light, 134
- NorthPoint Communications, 87–88
- notation systems
 - dotted decimal, **63**
 - colon hexadecimal, **64**
- not-for-profit organizations, achieving Web presence goals, 144–145
- notice, legal, **314**
- NSF. *See* National Science Foundation and commercial use of Internet
- n-tier architecture, **362**
- NTT's DoCoMo I-Mode, 139
- NYSE. *See* New York Stock Exchange

O

- objectives
 - identifying business, 538
 - linking — to business strategies, 538–539
- obligations and privacy rights, 334–337
- occasion segmentation, **177**
- octets, **63**
- Octopus smart card, 518–519
- OECD. *See* Organization for Economic Cooperation and Development
- offers, **318**
- Office Depot, 223
- offline cash, 505
- Old Metamora (case study), 304–305
- Olim, Jason, 110
- Olim, Matthew, 110
- Omidyar, Pierre, 263
- one-to-many, communication models, **153**
- one-to-one communication models, **154**
- one-to-one marketing, **176**
- one-way functions, **472**
- online
 - advertising, 12–13, 190–191
 - auctions — and related businesses, 269–288
 - car buying, 2–4
 - cash, 505
 - crime, 331–333
 - games, 130
 - payment systems. *See* payment systems
 - privacy issues, 334–337
 - security, overview of issues, 440–444
 - stalking, 332
 - warfare and terrorism, 333
- Online Benefits, 225
- online community, **291**. *See also* virtual communities; Web communities
- Online Publishers Association, 191
- ontology, **93**
- open architecture of the Internet, **62, 240**
- open auctions, **265**
- open EDI, **240**
- opening tags, **70**
- open loop systems, **500**
- open-outcry auction, **265**
- open-outcry double, **267–268**
- Open Relay Database, 370
- open sessions, **444**
- open source, **409**
- Open Source Initiative, 364
- open-source software, **364**
- Opera, 445

- operating systems for Web servers, 364
 - opportunity cost, 541–542
 - optical fiber, 88
 - optimization search engine, 202
 - opt-in, 336
 - opt-in e-mail, 191
 - opt-out, 336
 - Oracle, 397, 414
 - CRM, 426
 - E-Business Suite, 424
 - Orange Book. *See* *Trusted Computer System Evaluation Criteria*
 - Orbitz travel site, 123
 - ordering methods, 400–407
 - O'Reilly, Tim, 325
 - Organization for Economic Cooperation and Development (OECD), 38
 - Statements on Information and communications Policy, 38
 - organizations
 - computer security, 481–483
 - described, 20
 - hierarchical form, 23
 - market form, 22
 - network form of economic, 25
 - not-for-profit. *See* not-for-profit organizations
 - profit-driven, Web presence, 141–143
 - organized crime, 523–524
 - orphan file, 380
 - Ottawa Wireless, 90
 - Outpost.com, 114
 - outsourcing
 - described, 549–550
 - early, 551
 - e-mail processing, 192–193
 - late, 551
 - partial, 551–553
 - vs. internal development, 549–553
 - Overstock Auctions, 275
 - Overstock.com, 275
 - Overture, 202–203, 554
 - Ovid, 115
 - Owens Corning, 283
 - ownership, total cost of, 541
 - Oxfam (case study), 210–212
- P**
- Pace University School of Law CISG, 319
 - Pacific Exchange, 281
 - packet-filter firewalls, 480
 - Packet Internet Grouper utility. *See* Ping utility
 - packets, routing, 60, 60–61
 - packet-switched networks, 60, 60–61
 - page-based application systems, 409
 - page view, 187
 - paid placement, 202
 - pain.com, 131
 - Panera, 90
 - PANs (personal area networks), 89
 - paper-based purchasing, 232–235
 - paragraph tag (<p> ... <p>), 71
 - parsers, XML, 81
 - partial outsourcing
 - described, 551–553
 - fast venturing, 554–555
 - incubators, 554
 - participatory journalism, 295
 - parties involved in international trade transaction, 40
 - partnerships
 - fast venturing, 554–555
 - strategic, 24
 - passwords
 - private stores, 251
 - security of, 474–475
 - patches, 365
 - patent, 324
 - patent infringement, 324–325
 - PayFlow Link, 503
 - Pay.gov, 226
 - PayMaxx, 225
 - payment cards, 497–501
 - processing online, 401–503
 - Payment Online, 497
 - payment processing service providers, 501–502
 - payment systems
 - basics of, 493–497
 - electronic cash, 503–512
 - electronic wallets, 513–517
 - Internet technologies and banking, 520–522
 - partial outsourcing, 551–553
 - payment cards, 497–503
 - stored-value cards, 517–519
 - PayPal, 493–495, 511–512
 - pay-per-click model, 199
 - pay-per-conversion model, 199
 - p-cards, 223
 - PC Magazine*, 365
 - PC Week*, 337
 - PC World*, 376
 - PDF files on Web sites, 148, 359
 - PDG Software, 406
 - Peapod online grocer, 18
 - peer-to-peer (P2P) payment system, 511
 - Pegasus Mail, 66
 - PeopleSoft, 414
 - People's Republic of China (case study), 390–392
 - Peppers, Don, 192
 - Performics, 199
 - Pepsi, 35, 140
 - performance evaluation, Web server, 383–384
 - perimeter expansion, 481
 - permission marketing, 191–192
 - Permission Marketing* (Godin and Peppers), 192
 - per se defamation, 328
 - persistent cookies, 445
 - personal area networks (PANs), 89
 - personal contact, business communication mode, 152, 153
 - personal digital assistants (PDAs). *See also* mobile commerce
 - cellular telephone networks, 91
 - electronic commerce, 5
 - Web page displayed on, 289
 - wireless connections, 89
 - personal firewalls, 481
 - personal jurisdiction, 315–316
 - personal shoppers, 112
 - Pets.com, 19–20
 - Petzinger, Thomas, 25
 - Pew Internet & American Life Project, 10
 - PGP. *See* Pretty Good Privacy
 - PGP Corporation, 466
 - PGP International, 466
 - pharming attack, 524
 - Phillips Lighting, 539

- phishing
 - attacks, 521–525
 - expeditions, 462
- PHP: Hypertext Preprocessor (PHP), 359
- physical security, 441
- piconets, 89
- Picture it Sold, 288
- Pilot Network Services, 477–478
- Ping (Packet Internet Grouper) utility, 378
- piracy, software, 390–392
- place (distribution), 168
- placement of banner ads, 185–186
- plain old telephone service (POTS), 86
- plain text, 464
- planning electronic commerce initiatives, 537–538
 - comparing benefits to costs, 547
 - identifying objectives, 538
 - linking objectives to business strategies, 538–539
 - managing costs, 540–546
 - measuring benefits, 539–540
 - return on investment, 547–548
- plug-ins and electronic commerce security, 450–451
- political parties' Web sites, 144
- POP. *See* Post Office Protocol
- pop-behind ad, 189
- POPFile, 372–374
- pop-up ads, 189
- pornography and e-commerce, 331, 374, 523
- Portable Fun Instruments (case study), 100–101
- portals. *See also* Web portals
 - described, 117–118
 - electronic marketplaces, 248–253
 - internal Web, 299
- Porter, Michael, 14, 26, 28
- portfolio management, 557
- positioning search engine, 201–206
- postaudit review. *See* postimplementation audits
- postimplementation audits, 560
- PostMasterDirect, 192
- Post Office Protocol (POP), 67
- POTS (plain old telephone service), 86
- PotteryAuction.com, 276
- Powell's Books, 110
- power and legal jurisdiction, 312–313
- presence, Web, creating effective, 140–145
- Pretty Good Privacy (PGP), 466
- price, 167. *See also* costs
- Priceline.com, 276–277
- PriceSCAN, 285
- Price Watch, 285
- primary activities, 26, 26–28
- Primavera Project Planner, 556
- privacy
 - described, 459
 - electronic cash, 504–505, 507–508
 - pretty good (PGP), 466
 - rights and obligations, 334–337, 459
- Privacy Council, 459
- Privacy Rights Advocacy Groups, 337
- private company marketplaces and supply chain management, 251–252
- private IP addresses, 64
- private-key, 465
- private-key encryption, 466
- private networks, 83
- private stores, 251
- private valuations, 265
- PRIZM marketing database, 181
- ProAct Technologies, 125
- processes
 - business, 7
 - steps in typical business purchase, 221
- Procter & Gamble, 195
- procurement. *See also* purchasing
 - described, 5
 - e-procurement, 5, 251
- product-based marketing strategies, 168–170
- product disparagement, 328
- products
 - consumer auctions, 270–275
 - described, 167
 - ideal for group purchasing, 276–279
 - shipping profiles, 16
 - suitability to e-commerce, 15–16
- professional services, online revenue model, 131–132
- profit-driven organizations, achieving Web presence goals, 141–143
- Proflowers.com, 112, 199, 200
- programs. *See* software
- Progressive Insurance, 126
- ProHosting.com, 416
- project management and e-commerce, 555–557
- Project Management Institute, 557
- project management software, 555
- project managers, 558
- project portfolio management, 557
- projects, capital, 547
- promotion, 168
- property
 - intellectual. *See* intellectual property
 - taxes, 340
- proprietary architecture, 62
- ProQuest, 115
- prospecting, 152
- protocols. *See also specific protocol*
 - delivery, 66
 - described, 62
 - electronic mail, 66–67
 - FTP, 379–380
 - Internet, 62–68
 - Telnet, 379
- proxy bids, 271–272
- proxy server firewalls, 481
- Prudential, 127
- PSINet, 476
- psychographic segmentation, 174
- P2P payment system. *See* peer-to-peer payment system
- Public Broadcasting System, 144
- public image and Web presence, 140
- public key, 465
- public-key encryption, 465
- public marketplaces, 248
- public networks, 83
- Purchasing*, 283
- purchasing
 - activities, 219–222
 - direct vs. indirect materials, 222–223
 - e-government, 226–228
 - EDI, 232–237
 - GE's experience, 217–219
 - information flow in EDI-based, 235
 - information flow in paper-based, 234
 - logistics activities, 223–225
 - network model of economic organization, 228–229
 - support activities, 225–226
- purchasing cards, 223

Q

Qpass, 315
 Quaker Oats, 142–143
 Qualcomm Eudora, 66
 QuickDrop, 288
 Quotesmith, 125, 126
 Qwest, 92

R

racketeering, 523
 radio frequency identification (RFID) devices, 11, 245–246
 Radio Shack, 109
 Raisch, Warren, 253
 Random Walk Shoes (case study), 393–394
 ranking
 Nielsen/NetRatings, 190, 201, 296–297
 search engines, 202
 rating electronic commerce Web sites, 150
 rational branding, 196
 Rayport, Jeffrey, 193
 Real Age, 131
 Real Arcade, 130
 real estate brokers, online revenue model, 127
 RealNetwork, 130, 131, 451
 RealOne SuperPass, 131
 RealPlayer, 451
 Music Store, 129
 Realtor.com, 127
 RedEnvelope, 166–167
 Red Hat, 364
 Red Hat Linux Buffer Overflow Attacks Web Page, 476
 refdesk.com, 118
 registrars, domain name, 206
 regulation of advertising, 329–331
 reintermediation, car buying, 122, 125
 relationship intensity and customer behavior, 176–184
 remote server administration, 381
 repeaters, 91
 repeat visits, 187
 replenishment purchasing, 222
 request header, 362
 requesting Web pages, 66
 request line, 362
 request message, 361
 requests
 encrypting HTTP, 468–471
 XML page processing, 81
 Reséaux IP Européens, 63
 reservations, travel, online, 122
 reserve, 265
 reserve price, 265
 resource description framework (RDF), 93
 Respond.com, 276
 response header field, 362
 response header line, 362
 response message, 362
 response time, 383
 retailers, discount, Web catalog sales, 113–115
 retained customers, 182
 retention costs, 182
 retention of customers, 181–182, 183–184
 return on investment (ROI), 19, 547–548
 Reuters, 115

revenue models
 advertising-subscription mixed models, 121–122
 advertising-supported, 117–120
 described, 14
 digital content, 115–116
 fee-for-service, 130–131
 fee-for-transaction, 122–130
 in transition, 132–136
 virtual communities, 296–299
 Web catalog, 108–115
 Web portal, 117–118, 296–299
 revenue strategy issues, 136–140
 reverse auctions (seller-bid)
 business-to-business (B2B), 279–284
 group purchasing sites and, 276–279, 277
 described, 268–269
 reverse bids, 276
 reverse link checkers, 381
 reviews, book, obtaining online information about, 153
 RFID devices. *See* radio frequency identification devices
RFID Journal, 246
 Rheingold, Howard, 291
 rich media ads, 185, 189
 Richter, R. Gene, 283
 rights, privacy, 334–337
 risk management, 441–442
 Rivest, Ronald, 465
 roaming, 90
 robots, 201
 software, 290
 Roebuck, Alvah, 108
 ROI. *See* return on investment
 RosettaNet, 80
 router computers, 60
 routers, 60
 route-tracing programs, 378
 routiners, site visitor type, 179
 routing algorithms, 60
 routing computers, 60
 routing packets, 60–61
 routing tables, 60
 Roxio's acquisition of Napster, 324
 Royal Ahold, 18
 RSA Public key Cryptosystem, 465
 Rubric, Ltd., 34
 Ryder System, 224

S

Sabre Holdings, 170–171
 Sabre travel agent system, 122
 SafeBuyer.com, 284
 Safeway, 18
 SalesCart, 404–405
 Salesforce.com, 426
 sales taxes, 342
Salon.com, 133, 292
 Salot, Doug, 276
 Sam Goody, 110
 Sanriotown, 340
 SANS Institute, 482
 SAP, 414
 satellite Internet connections, 89
 scalable solutions, 400
 scaling problem, 84
 ScanSoft, 34

- Schneider Logistics' Track and Trace system, 224
- Schneider National, 224
- Scrip, 495–496
- scripting, server-side, 359
- scripting languages, 76, 448
- SciQuest, 249
- SDMI. *See* Secure Digital Music Initiative
- sealed-bid auction, 267
- sealed-bid double auction, 268
- search engines
 - described, 201
 - Northern Light, 134
 - optimization, 202
 - paid — inclusion and placement, 202–204
 - placement brokers, 202
 - positioning, 202
 - positioning for marketing, 201–206
 - ranking, 202
 - Web directories and, 201–202
- Search Engine Watch, 203
- searching IP address, 63
- searching utility programs, 381
- search term sponsorship, 202
- search utility, 201
- Sears, Richard, 108
- Sears, Roebuck & Company, 9, 108, 168, 354–356
- second-price sealed-bid auction, 267
- second wave of electronic commerce, 4, 11–13, 294–296, 539, 548
- secrecy, 442
- secrecy threats, 459–461
- Secure Digital Music Initiative (SDMI), 328
- secure envelope, 471
- Secure HTTP (S-HTTP), 467, 470–471
- Secure Hypertext Transfer Protocol. *See* Secure HTTP
- Secure Sockets Layer (SSL), 467, 468–470
- security, 438–440
 - client computers, 444–459
 - classifications, 442
 - communication channel, 459–473
 - computer, physical, security, 441
 - electronic cash, 504–505, 507–508
 - federal government's status, 438–439
 - firewalls, 479–481
 - online issues, overview, 440–444
 - organizations that promote computer, 481–483
 - policies, 442–444
 - requirements for secure e-commerce, 443
 - server computers, 474–481
 - VPNs, 240
 - wireless networks, 463–464
- segments, market, 173. *See also* market segmentation
- self-hosting, 398
- seller-bid auctions, 268
- Semantic Web project, 92–93
- separation and customer relationship, 181
- server architecture, 384
- server computers, 381–383
- server farms, 384
- ServerIron, 386
- server-level filtering, 370
- servers
 - computers, 381–383
 - costs, 382
 - database, 361
 - described, 360–361
 - domain name (DNSs), 462
 - e-mail, 66
 - gateway, 480
 - hypertext, 57
 - proxy firewalls, 481
 - security for, 474–481
 - virtual, 383
 - Web, 57. *See also* Web servers
- server-side
 - electronic wallets, 513
 - includes, 359
 - scripting, 359
 - technologies, 359
- server software, 360
- service agreements, terms of, 321
- service marks, 325
- services, professional, online revenue model, 131–132
- session cookies, 445
- session keys, 469
- sessions, establishing SSL, 470
- SGML. *See* Standard Generalized Markup Language
- Shamir, Adi, 465
- shared hosting, 399
- Sharper Image, The, 109
- shill bidders, 265
- shipping profile, 16
- shoppers, motivating to buy, 178–179
- shopping cart, 179, 403–406
- ShopSite, 406
- Shop Smart!, 197
- short message service (SMS), 91
- S-HTTP. *See* Secure HTTP
- Siebel Systems, 426
- signatures, 319
- signed message/code, 456
- Silicon Graphics, 58
- Silkperformer, 386
- Simple Mail Transfer Protocol (SMTP), 67
- Simple Object Access Protocol. *See* SOAP
- simplifiers, site visitor type, 178
- single-use cards, 498
- SINGOV, 227
- site maps, 74
- site sponsorships, 190
- site visitors. *See* visitors, Web site
- Skandia Group, 550
- skyscraper ads, 188
- Slate* magazine, revenue model of, 133
- small payments, 504
- SmartBargains.com, 281
- Smart Card Alliance, 519
- smart cards, 11, 518–519
- Smith Barney, 125
- Smithsonian Global Sound, 130
- SMTP. *See* Simple Mail Transfer Protocol
- sniffer programs, 460
- snipe, 285
- sniping software, 285
- SOAP (Simple Object Access Protocol), 412
- social networking, 295
- Softbank, 36
- software
 - ad-blocking, 189
 - agent, 92
 - antivirus software, 451–455
 - application, 408
 - auction, 285–288
 - cookie-blockers, 445
 - customer relationship management (CRM), 426–428

- development and value chains, 29–30
- e-commerce for large companies, 423–429
- e-commerce for midsize, large companies, 421–423
- e-commerce for small, midsize companies, 415–421
- e-procurement, **251**
- electronic commerce, advanced functions, 407–415
- electronic commerce, basic functions, 400–407
- encryption, decryption, **464**
- enterprise-class, **424**
- ERP, **424**
- firewalls, **479–481**
- indexing programs, 380
- interoperable, **509**
- knowledge management (KM), **429**
- open-source, **364**
- piracy, 390–392
- project management, **555**
- robots, **290**
- route-tracing programs, 378
- searching utility programs, 380
- server, **360**
- sniffer, **460**
- sniping, **285**
- supply chain management, **428**
- translation, **34**
- Web client, **66**
- Web hosting alternatives, 398–400
- Web server, 363–367, 364–367
- Web site and Internet utility, 377–381
- Sohu.com, **37**
- Solaris, 364
- SonicWall, 84
- Sony, 129, 130
- Sotheby's, 265, 275
- sourcing, **221–222**
- spam, 67–68, **368–369**
 - content filtering, 370–371, 371–374
 - challenge-response content filtering, 371
 - individual user antispam tactics, 369–370
 - legal solutions, 374–376
 - technical solutions, 376–377
- Spamhaus Project, 370
- specialty consumer auctions, 276
- specifications, network, **90**
- speed and bandwidth, 85
- spend, **222**
- spiders, **201**
- sponsored top-level domain (sTLD), **65**
- sponsorship, **202**
- spoofing, **462**
- sportsters, site visitor type, 179
- spot markets, **222**
- spot purchasing, **222**
- Square Trade, 284
- SSL. *See* Secure Sockets Layer
- SSUTA. *See* Streamlined Sales and Use Tax Agreement
- staffing for e-commerce, 557–560
- stakeholders, **140**
- stalking, online, 332
- Standard Generalized Markup Language (SGML), **68, 69**
- standards, EDI, ASC X12, **231–232**
- Staples, 168–169
- StarBand, 89
- Starbucks, 90
- start pages, **74**
- State Farm Insurance, 126
- state government Web services (case study), 434–435
- stateless connections, **444**
- stateless systems, 405
- static catalogs, **401**
- static pages, **358**
- Station.com, 130
- Statute of Frauds, **319**
- statutory law, **325**
- steganography, **458**
- Sterling Information Broker, 238
- Steve Madden, 112, 175
- stickiness of Web sites
 - described, **117**
 - Nielsen/NetRatings, 297
- sticky, **117**
- sTLD. *See* sponsored top-level domain
- stockbrokers online revenue model, 125
- storage online revenue model, 133
- stored-value cards, **517–519**
 - magnetic strip cards, 517
 - smart cards, **518–519**
- strategic
 - alliances and channel distribution management, **24, 138–139**
 - business units, **23, 26–27**
 - partners, **24**
- strategies
 - brand consolidation strategies, 197
 - business, downstream and upstream, 538–539
 - business-to-business, 217–262
 - customer-based marketing, 173–176
 - developing e-commerce Web sites, 548–555
 - product-based marketing, 168–170
 - revenue, 136–140
 - viral marketing, **199–200**
 - Web marketing, 167–171
- Streamlined Sales and Use Tax Agreement (SSUTA), 343
- strengths, weaknesses, opportunities, and threat. *See* SWOT analysis
- StrongNumbers, 285
- structures
 - hyperlink, 74
 - network economic, 24–25
 - StubHub, 276, 277
 - style sheets, 76
 - Cascading Style Sheets (CSS), **76**
- StubHub, 127, 276, 277
- style sheets, 76
- subject-matter jurisdiction, **315**
- subnetting, **64**
- subscription mixed revenue models, advertising, **121–122, 133–134**
- Sullivan, Danny, 203
- Sumner, Gordon, 326
- Sun Java System Web Server (Sun JSW), 366–367
- Sun Java 2 Platform, 412
- Sun JSW. *See* Sun Java System Web Server
- Sun Microsystems, 108, 355, 364, 382
- supply alliances, **242**
- supply chain, **220, 283–284**
- Supply Chain Council, 243
- supply chain management
 - advisability of reverse auctions, 276–279
 - creating customer orientation in, 247
 - described, **242**
 - increasing efficiencies, 244–245
 - materials-tracking technologies, 245–246
 - software, **428**
 - trust, building and maintaining, 247–248
 - value creation, 242–244

supply management, **5**
 supply web, **229**
 support activities, **26**
 surfers, site visitor type, **178**
 surfing Web sites, **124**
 SuSE, **364**
 Sviolka, John, **193**
 SWOT analysis, **30, 30–31**
 Symantec antivirus software, **452**
 symmetric connections, **85**
 symmetric encryption, **466–467**
 Syracuse University, Convergence Center at, **65**
 system administrators, **559**

T

tables
 configuration, **60**
 routing, **60**

tags
 described, **68**
 HTML, **58, 70–73**
 XML, **76–81**

Talbots, **111, 175**

Target, **114**

targeted classified advertising sites, **119–120**

taxation and electronic commerce, **340–343**

TCO. *See* total cost of ownership

TCP/IP (Transmission Control Protocol/Internet Protocol)
 described, **62, 62–63**
 EDI and, **239**
 intranets, extranets, **82–85**
 transaction integrity, **473**

TDCC. *See* Transportation Data Coordinating Committee

technology-enabled customer relationship management, **193–195**

technology-enabled relationship management, **193**

technology infrastructure and Cisco Systems, **51–53**

teergrubing, **377**

telecommunications providers and flat-rate access, **39**

telecommuting, **7**

television
 advertising-supported revenue model, **117**
 advertising types, **175**
 online concerts and films, **130–131**

telework, **7**

Telnet program, protocol, **379**

Teresshchuk, Myron, **332–333**

terms of service (ToS), **321**

territorial borders, jurisdictional issues, **311–317**

terrorism, online, **333**

Tesco, **18**

testing Web site usability, **150**

text
 limitations in HTML, **79**
 markup languages, **68**

text editors for editing HTML and XML, **82**

Thaler, William, **266**

Thawte, **457**

TheGlobe.com, **293**

TheStreet.com, **298**

third-generation (3G) cell phones, **91**

third-party assurance provider, **270**

third-party cookies, **445**

third-party logistics (3PL) providers, **225**

threat
 database, **475**
 described, **441**
 integrity, **461–462**
 necessity, **462–463**
 physical security of Internet communication channels, **453**
 secrecy, **459–461**
 Web server, **474–475, 476**
 wireless networks, **463–464**

three-tier client/server architecture, **362–363**

throughput, **383**

Thunderbird. *See* Mozilla

TicketMaster, **126**

tickets, event, online revenue model, **126–127**

Tickets.com, **126, 554**

TicketsNow, **127**

TicketWeb, **126**

tier one supplier, **242**

tier three supplier, **242**

tier two supplier, **242**

Tiffany & Co.
 brand consolidation, **197**
 branding, **195**
 Web catalog sales, **110**

Time Warner's AOL Web portal, **298**

TLD. *See* top-level domain

Tomlinson, Ray, **367**

T1, T3 lines, **88**

Tool Crib of the North, **138**

tools, online sales, **138**

TopHosts.com, **417**

top-level domain (TLD), **65**

torts, **315**

ToS. *See* terms of service

total cost of ownership (TCO), **541**

touchpoint consistency, **179**

touchpoints **179**

Tower Records, **110**

Toyota site, **141**

Toys R Us, **44–45, 138**

Trace Center, **147**

TRACE RouTe program. *See* Tracert program

Tracert (TRACE RouTe) program, **378–379**

tracking technologies
 early development of, **11**
 EDI and e-commerce, **245–246**
 project management software, **555**

trademark, **325**

trademark dilution, **329**

trademark infringement, **325**

trade names, **325**

trade practices, deceptive, **329**

trading partners, **9**

transaction-processing sites, **357**

transactions
 costs, reducing with e-commerce, **21, 24**
 delivery, guaranteeing, **473**
 described, **6**
 ensuring integrity of, **471–463**
 parties involved in international trade, **40**
 payment methods, **502**
 processing, **407**
 processing payment **502**
 sets, **231**

transaction taxes, **340**

transceivers, **91**

translation software, **34**

Transmission Control Protocol. *See* TCP/IP
 Transparent Language, 34
 Transportation Data Coordinating Committee (TDCC), 230
 travel agents online revenue model, 122–124
 Travelocity, 122–123, 170, 171
 TreasuryDirect, 226
 trial visits, 187
 Tribe.net, 295
 trigger words, 177
 Triple Data Encryption Standard (3DES Triple DES), 466
 Triple DES. *See* Triple Data Encryption Standard
 Tripod, 293, 298
 Trojan horses, 448
 T. Rowe Price, 150
 trust
 building, maintaining in supply chain, 247–248
 issues of, 32–33
 media choice, 172–173
 Web presence, 149–150
Trusted Computer System Evaluation Criteria (Orange Book), 440
 TRUSTe, 270
 trusted networks, 480
 TurboTax software, 17
 two-tier client/server architecture, 361–362

U

uBid, 276
 UCC. *See* Uniform Commercial Code
 UCE. *See* unsolicited commercial e-mail
 UCLA Institute for Cyberspace Law and Policy, 317
 UDDI specification. *See* Universal Description, Discovery, and Integration specification
 UDRP. *See* Uniform Domain Name Dispute Resolution Policy
 ultimate consumer orientation, 247
 Ultra Wideband (UWB), 89
 UMI. *See* University Microfilms International
 UN/EDIFACT. *See* EDI for Administration, Commerce, and Transport
 Uniform Commercial Code (UCC), 318
 Uniform Domain Name Dispute Resolution Policy (UDRP), 326
 Uniform Resource Locator (URL), 66
 Union of Concerned Scientists, 144
 United Nations, 39, 144, 313
 Universal Description, Discovery, and Integration (UDDI) specification, 412
 University Microfilms International (UMI), 115
 University of Illinois, 58
 Center for Supercomputing, 494
 University of Maryland Human-Computer Interaction Lab, 150
 University of North Carolina, 55
 University of Texas Crash Course in Copyright, 323
 UNIX and Web servers, 364
 unsolicited commercial e-mail (UCE), 67, 67–68, 368. *See also* spam
 untrusted Java applets, 449
 untrusted networks, 480
 upload bandwidth, 85
 uPortal, 292
 uppercase letters, HTML tag, 71
 upstream bandwidth, 85
 upstream business strategies, 538–539
 Urchin Web Analytics, 380
 URL. *See* Uniform Resource Locator
 URL brokers, 206

usability, 146–147
 customer-centric design, 151
 meeting site visitor needs, 147–149
 rating sites, 150
 testing, 150
 trust and loyalty, 149–150
 usage-based market segmentation, 177
USA Today, 548
 U.S. Commercial Service, 39
 U.S. Department of Defense, 9, 54–55, 440
 U.S. Department of Justice Cybercrime site, 332, 483
 use taxes, 341
 Usenet, 55
 usernames, security of, 478–479
 User's News Network, 55
 U.S. Federal Trade Commission. *See* Federal Trade Commission
 U.S. income taxes, 341
 U.S. Office of Scientific Research and Development, 57
 utility programs, 377–381
 UWB (Ultra Wideband), 89

V

VABs. *See* value-added banks
 Valista, 504
 value-added banks (VABs), 241
 value-added networks (VANs), 9, 237–239
 Value Added Tax (VAT), 343
 value chains
 described, 26
 industry, 28–30
 strategic business unit, 27
 ValueClick, 186
 value creation in supply chain, 242–244
 value system, 28
 ValueWeb, 416
 Vanguard Group, 105–106
 Van Name, Mark, 337
 VANs. *See* value-added networks
 VAT. *See* Value Added Tax
 Vendio, 285
 vendors and supply chain management, 247–248
 venture capital financing, 554
 Verance, 327
 Vera Wang, 111
 Verio Security Services, 476
 VeriSign, 457, 503
 Versace, 110
 vertical integration, 22
 vertical ports, 248
 VetteFinders, 119
 vicarious copyright infringement, 324
 Vickrey auction, 267
 Vickrey, William, 267
 video, online sales revenue model, 17, 110, 131
 video streams, online films, 131
 Vignette, 429
 Villars, Richard, 230
 viral marketing strategies, 199–200
 virtual communities
 described, 17, 291–292
 e-commerce, 290
 idea-based, 296
 Web portals, 288–299
Virtual Community, The (Rheingold), 291
 virtual companies, 24
 virtual hosts, 383

virtual learning communities, **291**
 virtual model, **112**
 virtual private networks (VPNs), and security, **84, 240**
 virtual servers, **383**
 Virtual Vineyards, **35**
 viruses
 described, **368**
 Trojan horses, **448**
 types, preventing, **451–455**
 Visa, **498**
 visitors, Web site
 meeting the needs of, **147–148**
 opt-in, opt-out choices, **336**
 types of, **178–179**
 visits, **186**
 Visual Studio .NET. *See* Microsoft
 VisualRoute route-tracing programs, **378**
 voice-grade lines, **86**
 voice-grade telephone connections, **86**
 V-ONE, **84**
 vortals, **248**
 VPNs (virtual private networks), **84, 240**

W

wallets. *See* electronic wallets
Wall Street Journal
 network economic structures, **25**
 profitability of e-commerce, **548**
 revenue model of, **115, 121**
 WSJ.com, **548**
 Wal-Mart, **7, 9, 114–115, 129, 138, 550**
 Walton, Sam, **114**
 WannaSurf, **124**
 WANs. *See* wide area networks
 WAP (wireless access point), **90**
 WAP. *See* Wireless Application Protocol
 warchalking, **463**
 Ward, Montgomery, **108**
 wardrivers, **463**
 warfare, online, **333**
 warranties on the Web, **320**
 warranty disclaimer, **320**
Washington Post, **121**
 watermark, digital, **327, 458**
 WaveHunters.com, **124**
 Web, the. *See also* Internet; World Wide Web
 advertising on, **184–191**
 business communication mode, **152, 153**
 communication on, **152–154**
 described, **53**
 marketing on, **165–216**
 market segmentation on, **175–176**
 markup languages and, **68–82**
 platform neutrality of, **357, 358**
 trust issues, **32–33**
 warranties on, **320**
 written contracts on, **319**
 Web browser
 described, **58**
 software, **66**
 Web bugs, **447**
 Web businesses, site costs, **542–546**
 Web business policies, **334**
 Webby Awards, **151**
 Web catalog revenue model, **108–115**
 Web client computers, **66, 357–358, 361**
 Web client software, **66**
 Web communities. *See also* virtual communities
 consolidation, **294**
 described, **291**
 early, **292–294**
 second wave of e-commerce, **294–296**
 WebCT, **291**
 Web directories and search engines, **117–118, 201–202**
 Web EDI, **240**
 WebGenie Software, **404**
 Web graphics designers, **559**
 Web hosting alternatives, **398–400**
 Web log files, **173, 294–295, 380**
 Web marketing
 advertising on the Web, **184–191**
 communication with different segments, **171–176**
 customer behavior and relationship intensity, **176–184**
 creating and maintaining brands, **195–200**
 e-mail, **191–193**
 search engine positioning, **201–206**
 strategies, **167–171**
 technology-enabled customer relationship management,
 193–195
 WebMD, **131, 132**
 WebMergers, **9**
 webMethods, **429**
 Web pages
 active content, **447–448**
 requesting, **66**
 Web portals
 described, **117–118**
 revenue models, **117–118, 296–299**
 virtual communities, **288–299**
 Web presence, creating effective, **140–145**
 Web programmers, **558**
 Web servers
 basics of, **356–363**
 client/— communication, **361**
 described, **57**
 hardware, **381–387, 384–387**
 load-balancing switches, **386–387**
 operating systems, **364**
 performance evaluation, **383–384**
 physical security threats, **476**
 processing XML page, **81**
 security providers and, **474–481**
 software for, **363–367, 364–367**
 threats, **474–475**
 Web clients and, **357–358**
 Web services, **410–415**
 Web Services Description Language (WSDL), **412**
 Web Side Story, **380, 446, 447**
 Web Site Garage, **381**
 Web sites. *See also specific Web sites*
 content, and intellectual property, **322–325**
 costs of, **542–546**
 development tools for, **421–423**
 HTML information, **73–76**
 ICANNWatch, **65**
 IMAP Connection, **67**
 naming issues, **204–206**
 rating electronic commerce, **150**
 sticky, **117**
 strategies for developing, **548–555**
 types of, **356–357**
 usability. *See* usability
 utility programs, **377–381**
 XML information, **76–82**
 WebSphere Commerce Professional Edition. *See* IBM

WebTrends, 380
 WebVan, 18, 19
 WebWasher, 445
 WeddingChannel.com, 197
 WELL, the, 292
 Wet Seal, 111
 Wherify Wireless, 290
 white hat hackers, **442**
 white list spam filter, **370**
Whole Earth Review, 292
 wide area networks (WANs), packet creation on, **60, 60–61**
 Wi-Fi, **90**
 Wilderness Trailhead (case study), 488–489
 Williamson, Oliver, 22
 Williams-Sonoma, 197
 Winebid.com, 276
 Wine.com, 35
 Wingspan, 127
 winner's curse, **266**
 WIPC. *See* World Intellectual Property Association
 wire transfers, 8
 wireless
 access points (WAPs), **90**
 connections, 88–92
 Ethernet (Wi-Fi), **90**
 networks, threats to, 463–464
 Wireless Application Protocol (WAP), **289, 463**
 World Intellectual Property Association (WIPC), 326
 Worldpoint Interactive, 34
 World Wide Web. *See also* Internet; Web
 described, **53**
 emergence of, 57–59
 growth of, 59
 HTML and, 58–59
 World Wide Web Consortium (W3C), **68**
 Electronic Commerce Interest Group (ECIG), 515
 Getting Started with HTML, **71**
 HTML page, **70**
 micropayments standards, 515
 Security FAQ, 474
 Semantic Web pages, 93
 SOAP Page, 412
 Web Accessibility Initiative, 147
 Web Services Activity, 412
 XHTML Version 1.0 Specification, **68**
 XML Pages, 81
 worms, preventing, **451–455**
 writing (contract), **319**
 written contracts, 319
 WSDL. *See* Web Services Description Language
 W3C. *See* World Wide Web Consortium
 Wu, Juliet, 391

W.W. Grainger, 223, 224
 www, meaning of, 65

X

Xanadu project, 57
 XBRL. *See* eXtensible Business Reporting Language
 Xdrive Technologies, revenue model of, 133
 XHTML (Extensible Hypertext Markup Language), **68**
 XML (eXtensible Markup Language)
 described, **68**
 development of, tags, 76–81
 editing programs, 82
 parsers, **81**
 tags, ontology and, 93
 Web services, 409–413
 XML Registry, 81
 XML vocabulary, **81**
 XSL (Extensible Stylesheet Language), **81**

Y

Yağ, 504
 Yahoo!, 192
 Auctions and Shopping Web page, 272, 273
 Bill Pay, 509–510
 first wave company, 13
 Games, 65
 GeoCities, 293
 Mail, **66, 196**
 Music, 129, 324
 Overture and, 202–203
 search engine, 201
 Small Business Merchant Solutions, 417, 418
 Wallet, 514–515
 Web portal, 117
 Yankee auctions, **265–266**
 yesmail.com., 192
 YouDecide.com, 125
 Young and Rubicam, 195
 YoYoDyne, 191

Z

Zeus, 366
 Zhivago Marketing Partners, 151
 zipRealty.com, 127
 zombie, **448**
 zombie farm, **524**
 ZoneAlarm, 481