

# Index

## • Numerics •

1xRTT wireless WAN service, 313  
100BaseT network, 14  
802.1x security standard, 177–178  
802.3af (Power over Ethernet standard), 105  
802.11 standard, 44–45  
802.11a standard  
  about, 20  
  advantages over 802.11b, 45–46  
  channels used with, 121, 330–331  
  signal range, 333  
802.11b standard, 20, 45–46  
802.11g standard  
  about, 20  
  AirPort Express compatibility with, 149  
  channels used with, 121, 122, 330  
  as current standard, 46  
  enhanced, comparison with 802.11n, 319  
  sample network budget, 93  
  signal range, 333  
  video streaming, adequacy for, 225–226  
802.11i standard, 106, 168. *See also* Wi-Fi Protected Access  
802.11n draft standard  
  802.11g enhanced, comparison with, 319  
  about, 20  
  AirPort compatibility with, 144–145  
  Apple computers supporting, 145–146  
  channels used with, 121, 122, 329, 331  
  device drivers, 134  
  equipment certification under, 98  
  equipment supporting, 100  
  features and improvements in, 47–48  
  impetus for, 226  
  range, of access points using, 107  
  sample network budget, 93  
  signal range, 333  
  Wi-Fi Ethernet bridges, 210  
802.11x networking, 21  
802.15 standard, 282

802.15.4 standard, 66  
911 calls (on VoIP), 245  
1000BaseT (gigabit Ethernet), 14

## • A •

access point (base station)  
  adding, to improve coverage, 334–335  
  AirPort Express. *See* AirPort Express  
  antenna. *See* antenna  
  Bluetooth, 294  
  as bridge, 30  
  choosing, 24–25, 76–77, 95–110  
  cost of, 90, 92, 96  
  firmware upgrades, 126  
  installation. *See* access point installation (Windows)  
  interference from, 79–80  
  locating, 77–83, 329, 331  
  managing, 108–109  
  modem combination, 77  
  network identification, 37–38  
  operating modes, 39–40  
  operational features, 104–105  
  parameters, 119–120, 120–124  
  print server bundled with, 104  
  purpose, 36  
  radio signal. *See* radio signal  
  receive sensitivity, 41  
  router. *See* router  
  security, 38, 77, 106–107  
  transmission power, 40–41  
  wall mounted, 78  
  Wi-Fi Ethernet bridge as, 210  
access point installation (Windows)  
  about, 113–114  
  configuration, changing, 120–124  
  preparation for, 115–117  
  process for, 117–120  
Activision wireless guitar, 348  
ad hoc mode, 39–40

- adapter. *See also* network interface adapter;
  - Universal Serial Bus (USB) adapter
  - analog telephone adapter (ATA), 243, 251
  - cost of, 25, 92
  - internal, 34
  - link test function, 141–142
  - media adapter, 226, 227, 228–231
  - memory card wireless adapter, 36
  - Peripheral Component Interconnect (PCI/PCiX) adapter, 26, 35, 132–133
  - telephone adapter, 243
- Add Printer Wizard, 194–195
- Administrators group, 189
- Advanced Encryption System (AES), 38, 167
- Affinity hot tub (Jacuzzi), 340, 341
- AIBO robotic dog (Sony), 278–280, 352
- airlink security, 93, 162–163
- AirPort Admin Utility (Apple), 149–150, 153, 156, 173
- AirPort card (Apple), 34, 144–145, 146, 154–155
- AirPort Disk (Apple), 147
- AirPort Express (Apple)
  - configuring, 150–152
  - features, 147–149, 233
  - media adapter, 226
- AirPort Extreme (Apple)
  - 802.11n Enabler for Mac, 145
  - computers supporting, 145–146
  - configuring, 150–152
  - ease of use, 95, 115
  - 802.11n compatibility, 144
  - features, 147
  - setup software, 124
- AirPort hardware. *See also* AirPort Extreme
  - about, 144
  - AirPort card, 34, 144–145, 146
  - AirPort Express, 147–149, 150–152
  - base stations, 147
- AirPort system
  - additional computers, connecting, 153–154
  - AirPort Setup Assistant, 150–152
  - Bonjour, automatic networking with, 202
  - configuring, 149–152
  - firmware, upgrading, 153–154
  - non-Apple computers, adding, 156–157
- AiTunes (Apple), 149
- AL-1 audio system, 264
- always-on Internet connection, 87
- Amazon.com, online music store, 240
- Ambient Devices, 346
- analog telephone adapter (ATA), 243, 251
- antenna (of access point). *See also* radio signal
  - about, 40–42
  - changing, to improve throughput, 332–333
  - detachability, 105
  - gain, 41, 42
  - moving, to improve throughput, 330
  - networking cards' use of, 146
  - signal shape, 83
  - signal strength, 41, 79–82, 142
  - types, 41
- antivirus software, 93, 129, 161
- AOL (America Online), 150, 151, 247
- Apple. *See also* entries beginning “AirPort”;
  - Macintosh computer
  - AppleTV, 149
  - iPhone, 287
  - iPod, 259
- appliance, wireless-enabled, 344–345
- application-triggered port forwarding, 219
- Applied Digital Solutions, 354
- ATA (analog telephone adapter), 243, 251
- ATI, Radeon HD 3850 gaming card, 205
- attenuation. *See* radio signal strength
- Audex Bluetooth-enabled jackets, 352
- audio files, bandwidth requirements for
  - distributing, 225–226
- audio systems, Bluetooth-enabled, 290–291
- audio throughout house, 16
- AudioReQuest music server, 195, 233
- Audiovox Terk, 239
- AuraGrid Wireless Extension system, 63
- authentication (pairing). *See* encryption and authentication
- automatic network connection, with Wireless Zero Configuration, 136
- automobiles. *See* car-based wireless system
- AutoNet Mobile, 265
- AVR-4308CI Advanced 7.1 Channel Home Theater/MultiMedia A/V Receiver (Denon), 347



- backpack-based portable hot spot, 265–266
- Baldwin Piano, 348–349

- bandwidth. *See* throughput
  - bandwidth monitor, 130
  - base station. *See* access point; AirPort Express; Airport Extreme; router
  - bathroom, wireless equipment in, 340–341
  - battery life, of Wi-Fi- VoIP phones, 249, 251
  - Belkin
    - Bluetooth Access Point with USB Print Server, 294
    - N1 Vision access point, 115
  - benefits, of home networking
    - audio throughout house, 16
    - file sharing, 10–11
    - home arcades, 15
    - home wireless cam accessibility, 16
    - Internet connection sharing, 12–15
    - peripheral sharing, 12
    - phone calling for free, 15
    - printer sharing, 11
    - wireless on the go, 16
  - BL-C30A wireless network camera (Panasonic), 273, 274
  - blocking utilities, 106
  - Blu-ray, 207
  - Bluetooth
    - about, 52–53
    - access points, 294
    - adapters, 60, 292–293
    - audio systems, 290–291
    - Bluetooth profile, 54–55
    - connection types, 55
    - frequency bands, 56–57
    - gaming controllers' use of, 204
    - integration into wireless network, 58–60
    - keyboards and mice, 291
    - mobile phones, 285–286
    - for motorcycle helmets, 273
    - name, origin of, 282
    - network speed, 57, 61
    - overview, 282–284
    - pairing and discovery, 293–295
    - personal digital assistants, 286–289
    - piconets, 54–55
    - print server, 294
    - printers, 289–290
    - product examples, 52–53
    - products Web site, 58
    - purpose, 53
    - security, 56
    - standards, 57
    - throughput, 55–56
    - ultra wideband, 61
    - uses, 284
    - versions, 57
    - Wi-Fi, comparison with, 53–54
    - Wibree, comparison with, 356
  - Bluetooth Special Interest Group (SIG), Inc., 52
  - Boingo Wireless, 303, 306–307, 309
  - Bonjour (Rendezvous, Apple networking system), 202
  - bridge (for network)
    - about, 30, 208
    - access point as, 30
    - powerline networking, 63
    - Wi-Fi Ethernet bridge, 207–210, 216, 233–234
  - Briere, Danny (author)
    - Home Theater For Dummies*, 235
    - Smart Homes For Dummies*, 281
    - Wireless Hacks and Mods For Dummies*, 178
  - broadband (high-speed) Internet service, 12, 87–88
  - broadband router, 76, 102–103
  - broadband wireless modem, 13
  - budget for wireless network. *See also* cost
    - access points, pricing, 90, 92
    - sample, 93
    - wireless network adapters, 92–93
  - Buffalo Technology, LinkStation Network Storage Center, 29
  - building materials, influence on signal strength, 82
- C •
- cable, for network connection, 14
  - cable/digital subscriber line (DSL) router, 14, 77
  - cable modem, 13, 14
  - camera, 16, 60, 280
  - camera phone, 285
  - capacity. *See* bandwidth; throughput
  - captive portal, 248, 313
  - car-based wireless system
    - Bluetooth in, 58–59
    - equipment for, 270–271, 342–344
    - hands-free cell phone use, 286
    - HD Radio, 260–261

- car-based wireless system (*continued*)
  - navigation system, networking of, 268–270
  - PCs for, 266–267
  - stereo, synching with home network, 262–264
  - synching with devices in, 259, 261–262
  - wireless connections with, 258–259
- Car Profile Working Group (Bluetooth SIG), 58–59
- CarCPU Web site, 267
- carputer, 266–267
- Category 5e/6 UTP cable, 14
- CD server, virtual, 195–196
- CDMA phones, 254
- Cell Fusion DECT 6.0 phone (GE), 255
- cell (mobile) phone
  - about, 241–242
  - Bluetooth-enabled, 58, 59, 285–286
  - extenders, 254
- Cellular Jewelry, 354
- cellular router, 264–265
- certification of equipment, 97–99
- Chambers, Mark L. (author)
  - Mac OS X All-in-One Desk Reference For Dummies*, 181–182
- channel bonding, 100, 122
- channel (for network)
  - about, 38
  - automatic selection, in access point, 104
  - changing, to improve throughput, 330
  - data speed maximization, 122
  - 802.11a standard, 121, 330–331
  - 802.11g standard, 121, 122, 330
  - 802.11n draft standard, 48, 121, 122, 329, 331
  - frequency bands, relationship to, 44
  - with multiple access points, 334–335
- child safety systems, 353
- cipher. *See* encryption and authentication
- client adapters. *See* AirPort card; PC Card
- client computer, 28, 29–30
- clothing, wireless-enabled, 352–354
- coaxial cable, 63
- Code M wireless-enabled shoes, 352
- codec (encoder/decoder), 243, 250
- community local area network, 303
- compatibility
  - of equipment, 99
  - of network standards, 75
- computer. *See* Macintosh computer; PC
- ConcertMaster (Baldwin Piano), 348–349
- connection sharing, 12–15, 88–89
- connection type (Bluetooth), 55
- construction materials, influence on signal strength, 79, 82
- control module, 67
- control networking, 51, 64–67
- Control4 home controller, 276–277
- convergence, computer-entertainment, 223
- cordless phone, 337
- cost
  - 802.11n equipment, 48–49
  - access point, 90, 92, 96
  - equipment, 21
  - Ethernet cables, 73
  - gaming adapter, 209
  - gaming consoles, 206
  - network interface adapter, 25, 92
  - price comparison Web sites, 109
  - print server, 86
  - router, 89
  - wired network, 17
  - wireless compared with wired network, 27
- coverage (of radio signal). *See* radio signal range and coverage
- cracker (hacker), 160
- Creative Technologies, 205
- Crestron touch panel system, 276
- customer and technical support, for equipment, 110



#### D-Link

- DCS-5300G wireless camera, 30
- DCS-G900 security camera, 273
- DDNS service, 274
- DGL-3420 wireless 108AG, 209
- DGL-4500 Wireless Gaming Router, 215
- DWL-G820 Wireless Ethernet Bridge, 233
- Gamer-Lounge Web site, 209
- IP surveillance program, 272
- powerline Ethernet adapters, 63
- SecuriCam products, 272
- Dada Footwear, 352
- Dash Express (Dash Navigation), 269
- data services (EV-DO), 264–265

- data speed (throughput). *See also* speed (of network)
  - advertised speeds, comparison with, 329
  - Bluetooth, 55–56, 57, 61
  - with combination a/b/g/n access points, 92
  - DS2 Powerline network, 62
  - 802.11a standard, 45
  - estimating, 48
  - HomePlug network, 62
  - improving, 327–337
  - maximizing through channel use, 122
  - network standards, relationship to, 21, 75
  - powerline link, 62
  - for video streaming, 225–226
  - Wi-Fi, comparison with Bluetooth, 52, 53, 56
  - wired network, comparison with wireless network, 16, 18
  - Z-Wave networks, 66
  - ZigBee networks, 66
- DCS-5300G wireless camera (D-Link), 30
- DCS-6620G Wireless G 10x Optical Zoom Internet Camera (D-Link), 272
- DCS-G900 security camera (D-Link), 273
- DDNS (dynamic DNS service), 274
- dead zones, 77. *See also* radio signal range and coverage
- decryption. *See* encryption and authentication
- DECT (Digital Enhanced Cordless Telecommunications) technology, 251–252
- Deep Surplus Web site, 117
- default settings, 170–171, 325
- Delphi
  - home-car integration devices, 263
  - XM Sky Fi3 receiver, 260
- demilitarized zone (DMZ, for gaming), 220–221
- Denon home theater equipment, 347
- desktop (of computer), themes, choosing, 183
- Details view (Windows Vista), 183
- device driver, installing, 128–130. *See also* print driver
- devices. *See* equipment
- Devicescape, 249
- DGL-3420 wireless 108AG gaming adapter (D-Link), 209
- DGL-4500 Wireless Gaming Router (D-Link), 215
- DHCP (Dynamic Host Configuration Protocol) server
  - about, 24
  - choosing, 101–102
  - description, 29
  - as feature of access point, 76
  - use in access point setup, 116
- dial-up modem, 13
- Digital Enhanced Cordless Telecommunications (DECT), 251–252
- Digital Music System (Sonos), 234–235
- digital rights management (DRM), 231, 240
- digital video recorder (DVR), 237
- dipole (omnidirectional) antenna, 40, 41
- directional antenna, 41
- directory services (VoIP), 244
- DirecTV, 238
- discoverable settings (Bluetooth), 293
- display, of media player/adapters, 230
- DisplayPort adapter, 131
- distance. *See* radio signal range and coverage
- diversity antenna system, 40
- DMA 2200 Media Center Extender (Linksys), 237, 238
- DMX-NVI BRAVIA Internet Video Link (Sony), 346
- DMZ (demilitarized zone, for gaming), 220–221
- DNS (Domain Name System) service, 115
- docking cradle, 287
- document viewing, with navigation system, 270
- dog, robotic, 278–280, 352
- domain, comparison with workgroup, 184
- domain controller, 184
- Domain Name System (DNS) service, 115
- dongle, 292
- driver software, sharing, 193
- DRM (digital rights management), 231, 240
- Drucker, Peter (management expert), 71
- DS (Nintendo), 214
- DS2 powerline networking, 62–63
- DSL (cable/digital subscriber line) router, 14, 77
- DSL modem, 13
- dual-band equipment, 100
- dual-band interference, 331–332

- DualPhone 3088, 252
  - DVD player, 207, 270
  - DVR (digital video recorder), 237
  - DWL-G820 Wireless Ethernet Bridge (D-Link), 233
  - dynamic DNS service (DDNS), 274
  - Dynamic Host Configuration Protocol (DHCP) server
    - about, 24
    - choosing, 101–102
    - description, 29
    - as feature of access point, 76
    - use in access point setup, 116
  - DynDNS, 274
- E •**
- e-mail server, 29
  - E911 (Enhanced911), 245
  - EAP (Extensible Authentication Protocol), 98
  - EG router, 264–265
  - 802.1x security standard, 177–178
  - 802.3af (Power over Ethernet standard), 105
  - 802.11 standard, 44–45
  - 802.11a standard
    - about, 20
    - advantages over 802.11b, 45–46
    - channels used with, 121, 330–331
    - signal range, 333
  - 802.11b standard, 20, 45–46
  - 802.11g standard
    - about, 20
    - AirPort Express compatibility with, 149
    - channels used with, 121, 122, 330
    - as current standard, 46
    - enhanced, comparison with 802.11n, 319
    - sample network budget, 93
    - signal range, 333
    - video streaming, adequacy for, 225–226
  - 802.11i standard, 106, 168. *See also* Wi-Fi Protected Access
  - 802.11n draft standard
    - about, 20
    - AirPort compatibility with, 144–145
    - antenna range of access points using, 107
    - Apple computers supporting, 145–146
    - channels used with, 121, 122, 329, 331
    - device drivers, 134
    - 802.11g enhanced, comparison with, 319
    - equipment certification under, 98
    - equipment supporting, 100
    - features and improvements in, 47–48
    - impetus for, 226
    - sample network budget, 93
    - signal range, 333
    - Wi-Fi Ethernet bridges, 210
  - 802.11x networking, 21
  - 802.15 standard, 282
  - 802.15.4 standard, 66
  - emergency calls (on VoIP), 245
  - eMusic, 240
  - encryption and authentication
    - Bluetooth, 56, 293–295
    - enabling, 171–173
    - encryption methods for WPA2, 122
    - key (passphrase), 38, 123, 164, 171–172, 177
    - overview, 163–166
    - Wi-Fi Ethernet bridge, configuring, 208
  - energy management, 355
  - Enhanced 911 (E911), 245
  - Enhanced Data Rate (EDR), 56
  - entertainment system
    - equipment, choosing, 232–235
    - equipment, with built-in Wi-Fi, 234–235
    - Internet content for, 238–240
    - media, moving from computers to A/V equipment, 228–231
    - as network client, 30
    - networked PC, adding to home theater, 235–237
    - proprietary systems, 239
    - security protocols for, 228
    - Wi-Fi Ethernet bridge, 233–234
    - Wi-Fi Multimedia (WMM), 231
    - wireless-enabled, 346–348
    - wireless networking of, 223–228
  - equipment. *See also* access point; router; server; switch
    - bundled functionality, 101–104
    - certification and standards support, 97–99
    - channel bonding, 100
    - choosing, 24–26, 95–110
    - compatibility, 99
    - cost, 21
    - for different network standards, 21
    - dual-band, 100
    - 802.11g enhanced, 319
    - 802.11n support, 100, 319

- for entertainment. *See* entertainment system
- form factor, 99–101, 250
- manufacturers' Web sites, 366
- outdoor use, 101
- "pre-N," 99
- price comparison Web sites, 109
- security certification, 97–98
- setup, user interfaces for, 108–109
- wall-mountability, 101
- warranties, 110
- Wi-Fi certified, 74, 97, 98
- WPA support, 167
- error correction, 55
- ESSID (extended service set identifier), 37
- Ethernet
  - benefits, 16
  - cables, 73, 117, 153
  - description, 14
  - use in access point setup, 115
  - Wi-Fi Ethernet bridge, 207–210, 216, 233–234
  - wireless standard, 44
- EVA8000 Digital Entertainer HD (NETGEAR), 30
- evil twin attack, 310
- Evolution-Data Only (EV-DO) data service, 264–265
- Explorer (Microsoft Windows), network resources, 186–187
- express card, 26, 34
- extended service set identifier (ESSID), 37
- extended service warranties, 110
- Extensible Authentication Protocol (EAP), 98
- Eye-Fi, wireless SD memory card, 280

## ● F ●

- Faraday cage, 162
- fast data plan (cell phone), 59–60
- Federal Communications Commission (FCC), 44, 80, 334
- femtocell technology, 254
- fiber-optic modem, 13
- file formats, for audio/video, 230
- file sharing
  - about, 10–11
  - audio/video file transfer, 225–226
  - using Bluetooth, 284

- permissions, setting, 189–191
- security, importance of, 182
- setting up, in Windows Vista, 196–200
- setting up, in Windows XP, 187–191
- shared files, accessing, 191
- synchronization, 11, 59, 285
- firewall
  - about, 32, 76
  - in access point, 77, 93
  - Network Address Translation, comparison with, 322
  - Network Address Translation as, 218
  - personal, importance, 161
  - in router, 161–162
- firmware, 109, 128, 153–154, 322–323
- fixed mobile convergence (FMC), 254–256
- flash memory card, 36
- FloodCam (X10), 275
- FM modulator, 271
- FMC (fixed mobile convergence), 254–256
- Ford Sync system, 261
- form factor, 99–101, 250
- free phone calling, 15
- FreeRADIUS Web site, 178
- frequency band. *See also* channel bonding; channel (for network)
  - Bluetooth, 56–57, 283
  - for DECT phones, 251
  - for piconets, 57
  - ranges, relationship to, 107
  - unlicensed, 336
  - Wi-Fi, 44

## ● G ●

- gadgets, wireless, 350
- gain (signal improvement), 41, 42, 160
- game controllers, 205
- GameCube (Nintendo), 213
- gaming
  - demilitarized zone, 220–221
  - hardware requirements, 204–205
  - networking requirements, 205–206
  - online, overview, 203–204
  - online gaming services, 210–213
  - port forwarding, 217–220
  - router configurations for, 214–219
- gaming adapter, cost of, 209

- gaming console
    - cost, 206
    - as network client, 29
    - network planning, inclusion in, 86
    - networking of, 206–213, 320–321
  - gaming PC
    - gaming console, comparison with, 206–207
    - hardware requirements, 204–205
    - networking requirements, 205–206
  - gateway (Internet gateway)
    - about, 32–33
    - connection to, during access point installation, 118
    - description, 77
    - network with, 91
    - printer connection, 85
  - GE, Cell Fusion DECT 6.0 phone, 255
  - general Wi-Fi certification, 97
  - geocaching, 353
  - GigaAir Child Tracking system, 353
  - Gizmo Project, 247
  - global positioning systems (GPS), 59, 268–270, 353
  - Globalpetfinder, 349
  - Google Talk, 247
  - GPRS/EDGE wireless WAN service, 314
  - GPS navigation systems, 59, 268–270, 353
  - GSM phones, 254
  - Guitar Hero (Activision), 348
- H •
- hacking, security against, 106, 321–322. *See also* security (of network and devices)
  - handheld gaming devices, 213, 214
  - handheld (personal digital assistant), 286–289
  - hardware. *See* access point; AirPort hardware; equipment; Internet gateway; switch
  - Harmony remote controls (Logitech), 278
  - Hawking Technologies, security cameras, 274
  - HD-DVD, 207
  - HD Radio, 260–261
  - HDMI (high definition multimedia interface), 229, 347–348
  - HDTV, bandwidth requirements, 225
  - headless computing appliance, 29
  - headphones, Bluetooth-enabled, 290
  - headsets, Bluetooth-enabled, 285
  - H+H Zentrum fuer Rechnerkommunikation GmbH, 195–196
  - high definition multimedia interface (HDMI), 229, 347–348
  - high-speed (broadband) Internet service, 12
  - home arcade, 15
  - home control, 275–278. *See also* control networking
  - home network. *See* benefits, of home networking; network
  - Home Networking For Dummies* (Ivens), 181–182
  - home phone replacement services, 246
  - Home PNA (Phoneline Networking Alliance), 65
  - home salability, 17
  - home security, videocameras for, 271–275
  - Home Server (Microsoft Windows), 29
  - home theater, 229. *See also* entertainment system
  - Home Theater and Lighting Controller 300 (Monster Cable), 278
  - Home Theater For Dummies* (Briere and Hurley), 235
  - home theater PC (HTPC), 228, 235–237, 238–240
  - home wireless cam accessibility, 16
  - HomePlug networking, 51, 62, 77
  - HomeRemote Wireless Home Automation System HRGZ1 Gateway (Hawking), 274
  - hot spot
    - on airplanes, 302
    - AirPort Express as, 149
    - Boingo, 303, 306–307, 309
    - car as, 264–265
    - for-pay services, 301–304
    - freenets, 300–301
    - locating, tools for, 307–308
    - metro-wide (hot zone), 304–305
    - mobile devices, 312–313
    - Network Stumbler, 308–309
    - for Nintendo DS, 214
    - portable backpack version, 265–266
    - public, locating, 298–300
    - security of, 177, 310–312
    - T-Mobile, 304, 305–306
    - unwilling, 299

using VoIP phone with, 247, 248  
 Wayport, 306  
 as wireless benefit, 16  
 Hot Spot @ Home (T-Mobile), 256  
 hot zone (metro-wide hot spot), 304–305  
 house plan, influence on signal strength, 79  
 HP  
   Jetdirect ew2400 802.11g Wireless Print Server, 84  
   MediaSmart TV, 346  
   z560 Digital Entertainment Center, 235  
 HSDPA wireless WAN service, 314  
 HTPC (home theater PC), 228, 235–237, 238–240  
 hub, 24, 30, 31. *See also* switch  
 Hurley, Pat (author)  
   *Home Theater For Dummies*, 235  
   *Smart Homes For Dummies*, 281  
   *Wireless Hacks and Mods For Dummies*, 178

• **I** •

IEEE (Institute for Electrical and Electronics Engineers), 43, 282. *See also* standard (for wireless network)  
 industry standard. *See* standard (for wireless network)  
 Industry Standard Architecture (ISA) adapter, 26  
 Infrared Data Association (IrDA) wireless technology, 54  
 infrastructure, 30–33  
 infrastructure mode, 39  
 installation, of access point  
   about, 113–114  
   configuration, changing, 120–124  
   installation process, 117–120  
   preparation for, 115–117  
 instant messaging, voice functionality of, 242  
 Institute for Electrical and Electronics Engineers (IEEE), 43, 282. *See also* standard (for wireless network)  
 interference (of radio signal). *See* radio signal interference  
 internal wireless network adapter, 34  
 Internet. *See also* Web sites  
   connection sharing, 12–15, 88–89  
   connection to, planning, 86–90, 91  
   radio stations, 231, 240

  service types, 87  
   troubleshooting connection, 319–320  
 Internet-based phone calling (VoIP), 15  
 Internet gateway  
   about, 32–33  
   connection to, during access point installation, 118  
   description, 77  
   network with, 91  
   printer connection to, 85  
 Internet Protocol (IP) address  
   about, 32  
   assignment of, on network, 76  
   determining, 125, 323–324  
   for gaming PC/console, 216–217  
   local, 124  
   use in access point setup, 115  
   wide area network, 124  
 interoperability, 22, 156  
 InterPhone, Bluetooth motorcycle helmet kit, 273  
 IP (Internet Protocol) address. *See* Internet Protocol (IP) address  
 IP surveillance program (D-Link), 272  
 iPhone (Apple), 287  
 iPod (Apple), 259  
 IrDA (Infrared Data Association) wireless technology, 54  
 iRobot robotic equipment, 350  
 ISA (Industry Standard Architecture) adapter, 26  
 Isys i/O WiFi, TPMC-8x (Creston), 276  
 iTunes Tagging, 261  
 Ivens, Kathy (author)  
   *Home Networking For Dummies*, 181–182

• **J** •

Jacuzzi Affinity hot tub, 340, 341  
 Jetdirect ew2400 802.11g Wireless Print Server (HP), 84  
 joystick, for gaming, 205

• **K** •

key (passphrase), 38, 123, 164, 171–172, 177  
 keyboard, 288, 291  
 KR2 Mobile Router (Kyocera), 264

KX-HCM110A PetCam Network Camera with  
2-Way Audio (Panasonic), 273  
Kyocera mobile router, 264

## • L •

LAN (local area network), 28, 281  
Leapfrog Series Wireless A/V System, 239  
level (of radio signal). *See* radio signal  
strength  
Leviton, 278  
LGE multimedia refrigerator, 344, 345  
lighting control module, 278  
Link Layer Topology Discovery (LLTD), 197,  
198  
link test function (network adapter), 141–142  
LinkStation Network Storage Center (Buffalo  
Technology), 29  
Linksys  
DMA 2200 Media Center Extender, 237, 238  
SoloLink service, 274  
Wireless-G Access Point, 118  
WLAN-WPC4400N wireless adapter, 92  
WVC200 Wireless-G Pan/Tilt/Zoom Video  
Camera, 274–275  
LLTD (Link Layer Topology Discovery), 197,  
198  
local area network (LAN), 28, 281, 327–337  
local IP address, 124  
logging utilities, 106  
Logitech  
Harmony remote controls, 278  
Squeezebox, 226  
LSC27991 multimedia refrigerator (LGE), 344  
LucidLink Web site, 178

## • M •

MAC (Media Access Control) address, 116,  
123, 174–175  
*Mac OS X All-in-One Desk Reference For  
Dummies* (Chambers, Tejkowski, and  
Williams), 181–182  
Macintosh computer. *See also* entries  
*beginning “AirPort”*  
access point for, 95  
file sharing with PCs, 201–202  
gaming, requirements for, 205  
non-Apple-based networks, connecting to,  
157–158  
older, network adapter cards for, 146  
OS 9, 143  
OS X, using AirPort with, 149–156  
OS X version 10.5 networking software, new  
features, 143  
setting up network for, 143–158  
upgrading to 802.11n, 145  
macros, for home remote controls, 278  
Mad Catz, 205  
master (Bluetooth network), 55, 283  
Media Access Control (MAC) address, 116,  
123, 174–175  
media adapter, 226, 227, 228–231  
media center extender, 227, 237  
Media Center PC, 237  
media player/server, 86, 227, 228–231  
MediaSmart TV (HP), 346  
memory card wireless adapter, 36  
mesh topology, 65–66  
metro-wide hot spot, 304–305  
Microsoft. *See also* entries *beginning*  
*“Windows”*; Xbox 360  
operating systems, Bluetooth support, 59  
specification for hardware and software, 29  
MIMO (multiple inputs, multiple outputs)  
technology, 40, 47  
mobile (cell) phone  
about, 241–242  
Bluetooth-enabled, 58, 59, 285–286  
extenders, 254  
mode, for PC Card, 133  
modem, 12–13, 14, 77  
module (home control network device), 66  
monitoring software, 106  
Monster Cable  
Home Theater and Lighting Controller 300,  
278  
Z-Wave lighting control modules, 278  
motorcycle helmets, Bluetooth-enabled, 273  
Motorola, Netopia MiAVo Series Gateways, 32  
mouse, Bluetooth-enabled, 291  
MP3 player, 11, 259  
MP3Car Web site, 267  
Multimedia over Coax (MoCA), 65  
multipath interference, 61  
multiple inputs, multiple outputs (MIMO)  
technology, 40, 47

multiple-PC network, model for, 14  
 multiuser game, 15  
 music server, navigation system as, 270  
 musical instruments, wireless-enabled,  
 348–349  
 My Network Places (Network Neighborhood),  
 28, 183, 185–187

## • N •

N1 Vision access point (Belkin), 115  
 nanny-cam, 30  
 narrowband Internet connection, 87–88  
 NAS (Network Attached Storage) Server, 29,  
 72  
 NAT (Network Address Translation)  
 firewall, comparison with, 322  
 functionality, 217–218  
 Internet connection sharing, 162  
 port forwarding, 218–219  
 router, 87, 89  
 as security tool, 31  
 navigation system, networking of, 268–270  
 near field communications (NFC), 176  
 Neosonik, 229  
 Net-Vision HNC290G Wireless-G Network  
 Camera (Hawking), 274  
 NETGEAR  
 access point security, 172  
 EVA8000 Digital Entertainer HD, 30  
 WGX102 Wireless Range Extender, 62, 63  
 WPN824 router, 219, 220  
 Netopia MiAVo Series Gateways (Motorola),  
 32  
 Netstumbler Web site, 170  
 network. *See also* equipment; planning, of  
 wireless network  
 benefits. *See* benefits, of home networking  
 channels. *See* channel (for network)  
 cost of wireless compared with wired  
 network, 27  
 definition, 182  
 infrastructure, 30–33  
 Internet connection sharing, 12–15, 88–89  
 local area network, 28, 281  
 mixing XP and Vista on, 198–199  
 performance, 141–142, 327–337  
 personal area network, 52, 281, 356  
 phone jack, comparison with, 13–15  
 planning, of wireless network  
 security. *See* security (of network and  
 devices)  
 speed, 46, 47, 65, 283. *See also* throughput  
 standards. *See* standard (for wireless  
 network)  
 type of, choosing, 73  
 whole-home, 224  
 wide area network, 28, 124, 313–314  
 wired. *See* wired (wireline) network  
 wireless. *See* wireless network  
 network address, 101  
 Network Address Translation (NAT)  
 firewall, comparison with, 322  
 functionality, 217–218  
 Internet connection sharing, 162  
 port forwarding, 218–219  
 router, 87, 89  
 as security tool, 31  
 Network Address Translation router, 89  
 Network and Sharing Center (Windows  
 Vista), 138–141, 196  
 Network Attached Storage (NAS) Server,  
 29, 72  
 network bridge. *See* bridge  
 network devices  
 attached device, 186  
 communication among, 182–183  
 counting, during planning, 72–73  
 identification of, on network, 185  
 sharing, in Windows Vista, 200  
 sharing, in Windows XP, 195  
 stand-alone, 186  
 network effect, 66, 289  
 network interface adapter  
 AirPort card (Apple), 34, 144–145, 146  
 bandwidth monitor, 130  
 cost, 92  
 description, 25  
 examples, 33–36  
 for gaming Mac, 206  
 for gaming PC, 205–206  
 setting up, 127–134  
 Vista protocol, 199  
 wireless, 25–26  
 WPA password requirement, 130  
 WPA protocol, support for, 167  
 network interface card (NIC), 25, 116  
 Network (Mac workgroup), 28

- network name (SSID, service set identifier)
    - broadcast of, 173–174
    - changing default, 170
    - configuring, 121
    - description of, 37
    - requirement for network interface adapter, 130
  - Network Neighborhood (My Network Places), 28, 183, 185–187
  - network router. *See* router
  - network sniffer programs, 307–308
  - Network Stumbler software, 308–309
  - NFC (near field communications), 176
  - NIC (network interface card), 25, 116
  - 911 calls (on VoIP), 245
  - Nintendo
    - DS, 214
    - Wii, 29, 206, 207, 212–213
  - noise level (of network), 142. *See also* radio signal interference
  - nVIDIA video card, 205
- 0 ●
- obstacle to radio signals. *See* radio signal interference
  - Olympia Dual-Phone, 15
  - omnidirectional (dipole) antenna, 40, 41
  - Omnifi, 263
  - 100BaseT network, 14
  - 1000BaseT (gigabit Ethernet), 14
  - 1xRTT wireless WAN service, 313
  - online gaming. *See* gaming
  - onscreen menu, 230
  - OnStar, 342
  - OS X
    - using AirPort with, 149–156
    - version 10.5 networking software, new features, 143
  - Outmesguine, Mike (hotspot knapsack inventor), 265
  - outputs, of media adapters/players, 231
- p ●
- Packet8, 247
  - packets, 31, 32
  - pairing and discovery (Bluetooth), 56, 288–289, 293–295
  - PAN (personal area network), 52, 281, 356
  - Panasonic, 273, 274
  - parameters (for access point), 119–124
  - Parrot (equipment manufacturer), 259, 261
  - passkey (Bluetooth), 295
  - passphrase (key), 38, 164, 171–172, 177
  - PBC (push button configuration) for WPS, 176
  - PC-based supplementary voice services, 246
  - PC card (PCMCIA, Personal Computer Memory Card International Association card), 26, 34, 100, 131–132
  - PC (Windows-based computer). *See also* entries beginning “Windows”
    - access point installation, setup for, 113–114
    - digital video recorder, 237
    - file sharing with Macs, 201–202
    - gaming PC, 204–207
    - home theater, adding to, 235–237
    - network printers, installing, 194
  - PCI/PClx (Peripheral Component Interconnect) adapter, 26, 35, 132–133
  - PCMCIA card (PC card, Personal Computer Memory Card International Association card), 26, 34, 100, 131–132
  - PDA (personal digital assistant), 286–289
  - peer-to-peer networking, 283
  - performance of network
    - tracking, 141–142
    - troubleshooting, 327–337
  - Peripheral Component Interconnect (PCI/PClx) adapter, 26, 35, 132–133
  - peripherals, sharing, 12, 191–196
  - permissions for file sharing, 189–191
  - personal area network (PAN), 52, 281, 356
  - Personal Computer Memory Card International Association card (PCMCIA card, PC card), 26, 34, 100, 131–132
  - personal digital assistant (PDA), 286–289
  - personal security, 353–354
  - pets, 273, 349
  - phone
    - cordless phone, 337
    - DECT 6.0 phones, 251–252
    - digital technologies, 241
    - femtocell technology, 254
    - fixed mobile convergence, 254–256
    - Skype phones, 252–253
    - VoIP, 15, 242–247

- Wi-Fi VoIP, 247–250
    - wireless technologies, 241–242
  - phone jack, network, comparison with, 13–15
  - physical connection between computers, 14
  - physical security, 93
  - picocell, 254
  - piconets, 54–55
  - plain old telephone service (POTS), 241, 245, 246, 251
  - planning, of wireless network
    - about, 23
    - access point, choosing, 76–77
    - access point location, 77–83
    - budget, 90–93
    - entertainment, adding, 86
    - Internet, connecting to, 86–90, 91
    - network devices, counting, 72–73
    - network type, choosing, 73
    - printers, adding, 83–86
    - RF doughnut, 83
    - security, 93
    - wireless technology, choosing, 74–75
  - PlayStation (Sony) consoles, 29, 206, 207, 212
  - PoE (Power over Ethernet) standard, 105
  - point-to-multipoint connection, 283
  - Point-to-Point Protocol over Ethernet (PPPoE), 124
  - Popular Science*, 265
  - port forwarding, 217–220, 320–321
  - port triggering, 219
  - portable hot spot, 265–266
  - POTS (plain old telephone service), 241, 245, 246, 251
  - power. *See also* radio signal range and coverage
    - of access point transmission, 40–41
    - Bluetooth's use of, 283
  - power outages, resetting equipment after, 329
  - Power over Ethernet standard, 105
  - Power Users group, 190
  - powerline networking, 61–63
  - PPPoE (Point-to-Point Protocol over Ethernet), 124
  - PracticallyNetworked Web site, 219
  - pre-shared key (PSK), 122
  - price. *See* cost
  - price comparison Web sites, 109
  - print driver, 193, 194
  - print server
    - with AirPort Express, 149
    - choosing, 24–25, 104
    - cost, 86
    - description, 29, 72, 77
    - setting up, in Windows XP, 192–195
    - wireless, 84, 85
    - WPA protocol, support for, 167
  - printer
    - adding to network, 72, 83–86
    - Bluetooth-enabled, 289–290
    - sharing of, 11, 192–195
  - printing, using Bluetooth, 60
  - processor speed, for gaming, 205
  - protocol
    - definition, 182
    - Extensible Authentication Protocol, 98
    - for network connection, 14
    - Point-to-Point Protocol over Ethernet, 124
    - Session Initiation Protocol (SIP), 243
    - Transmission Control Protocol/Internet Protocol, 32
    - Z-Wave networking protocol, 52, 66–67
  - PS2 (PlayStation2, Sony), 212
  - PSK (pre-shared key), 122
  - PSP (PlayStation Portable, Sony), 213
  - public network access. *See* hot spot
  - Public Switched Telephone Network (PSTN), 242
  - push button configuration (PBC) for WPS, 176
- *Q* •
- Quality of Service (QoS), 98
- *R* •
- Radeon HD 3850 gaming card (ATI), 205
  - radio frequency identification tags (RFID), 352
  - radio frequency (RF) doughnut, 83
  - radio signal. *See also* access point; Bluetooth as basis for wireless networking, 33
    - channels used by. *See* channel (for network) frequencies for. *See* frequency band
    - interference. *See* radio signal interference
    - range and coverage. *See* radio signal range and coverage
    - signal to noise ratio (SNR), 142
    - strength. *See* radio signal strength

- radio signal interference
    - about, 19
    - for different network standards, 21–22
    - dual-band, 331–332
    - effects on network speed, 330
    - minimizing, during access point installation, 121–122
    - multipath interference, 61
    - from physical objects, 332
    - sources, 80, 81
    - from X10 networks, 337
  - radio signal range and coverage. *See also* radio signal strength
    - using 802.11n standard, 47
    - for access point, 40–41
    - Bluetooth, 56
    - for different network standards, 21–22, 333
    - factors affecting, 40–42
    - home control network, 65–66
    - home network, 19, 160
    - improving coverage, 334–335
    - information sources for, 107
    - RF doughnut, 83
    - signal strength, relationship to, 79
    - TV cable, as network extension, 63
    - Wi-Fi comparison with Bluetooth, 52
  - radio signal strength (level). *See also* radio signal interference; radio signal range
    - attenuation, 41
    - factors affecting, 79–82
    - obstacles to, 81–82
    - tracking, 142
  - radio stations (Internet-based), 231, 240
  - RADIUS server, 178
  - range (of radio signal). *See* radio signal range and coverage
  - Rathbone, Andy (author)
    - Windows Vista For Dummies*, 182
    - Windows XP For Dummies*, 181–182
  - RC4 encryption protocol, 165
  - Real Network, Rhapsody, 231
  - Real-time Transport Protocol (RTP), 243
  - receive sensitivity (of access point), 41
  - reliability of network, 17
  - remote control
    - for cars, 343
    - macros for, 278
  - repeaters, 335–336
  - resources
    - description, 28
    - sharing on network, 181
  - RF (radio frequency) doughnut, 83
  - RF (radio frequency) interference. *See* radio signal interference
  - RFID (radio frequency identification tag), 352
  - RH269LBSH Digital Network Refrigerator (Samsung), 345
  - Rhapsody (Real Network), 231
  - RK8200 Bluetooth Car Stereo (Parrot), 261
  - robots, 278–280, 350–352
  - Rock Bank wireless instruments, 348
  - Rockford Omnifi, 263
  - rotating key system, 137
  - router (switch). *See also* AirPort Express; AirPort Extreme
    - about, 76
    - access point feature, 24
    - broadband (high-speed), 76, 102–103
    - cable/digital subscriber line (DSL), 14, 77
    - choosing, 103
    - connection to, during access point installation, 118
    - cost, 89
    - defaults, resetting to, 325
    - description, 24
    - DMZ setup, 220–221
    - firewall functionality, 161–162
    - gaming, configurations for, 214–219
    - Internet connection sharing with, 89
    - packet transmission, 31
    - PIN, 121
    - print server combination with, 84
    - Xbox Live compatibility, 211–212
  - RTP (Real-time Transport Protocol), 243
- S •
- Samsung equipment, 254
  - satellite Internet, 88
  - satellite modem, 13
  - satellite radio, 260
  - scatternet, 55, 56
  - SD memory card, wireless, 280
  - SecureMyWiFi, 178
  - SecuriCam products (D-Link), 272

- security (of network and devices). *See also*
  - encryption and authentication; Wi-Fi Protected Access; Wired Equivalent Privacy
  - about, 19
  - access point features, 106–107
  - airlink security, 162–163
  - AirPort Extreme, 147
  - Bluetooth, 56
  - closed network, creating, 173–175
  - defaults, importance of changing, 170–171
  - DMZ's effects on, 221
  - domains, comparison with workgroups, 184
  - entertainment devices, 228
  - entertainment system Wi-Fi Ethernet bridge, 234
  - file sharing, 182
  - firewalls. *See* firewall
  - against hacking, 106, 321–322
  - hot spots, 310–312
  - Internet security, 160–161
  - key (passphrase), 38, 123, 164, 171–172, 177
  - NAT router, importance of, 89
  - planning for, 93
  - risk assessment, 160–163
  - security certification, 97–98
  - shared secret (security measure), 164–165
  - sharing's impact on, 188
  - Wi-Fi VoIP phones, 247–249, 250
  - Windows Vista, 197, 198, 199
  - wired network, 17
- security camera, 271–275
- server. *See also* Dynamic Host Configuration Protocol (DHCP) server; media player/server; print server
  - network, influence on, 184
  - types of, 29
- Server Operators group, 189
- service area. *See* SSID (service set identifier)
- service set identifier (SSID)
  - broadcast of, 173–174
  - changing default, 170
  - configuring, 121
  - description of, 37
  - requirement for network interface adapter, 130
- Session Initiation Protocol (SIP), 243
- shared secret (security measure), 164–165
- sharing of peripherals, 192–196. *See also* file sharing
- Shaughnessy, Tim (NETGEAR), 328
- signal booster, 333–334
- signal to noise ratio (SNR), 142
- signal (wireless radio). *See* radio signal
- Simple Config. *See* Wi-Fi Protected Setup
- SIP phones, 244
- SIP (Session Initiation Protocol), 243
- SIRIUS radio, 260
- Skype
  - about, 243
  - network type, 253
  - phones, choosing, 252–253
  - phones, use of hot spots, 248
  - SIP protocol, non-use of, 249
  - SkypeIN service, 246
  - SkypeOUT service, 253
- slave (Bluetooth network), 55, 283
- Smart Homes For Dummies* (Briere and Hurley), 281
- smartphone, 287
- SMCWEBT-G wireless Ethernet bridge (SMC Networks), 209–210
- SMCWSP-100 phone (SMC Networks), 248
- SNR (signal to noise ratio), 142
- softphone, 244
- software programming, of access points, 108
- software requirements, for media players/adapters, 229–230
- solar-charging backpack, 265–266
- SoloLink service (Linksys), 274
- Sonos Digital Music System, 234–235
- Sony
  - AIBO robotic dog, 278–280, 352
  - DMX-NVI BRAVIA Internet Video Link, 346
  - PlayStation consoles, 29, 206, 207, 212
  - PSP (PlayStation Portable), 213
- sound card, for gaming, 205
- speaker systems, Bluetooth-enabled, 290–291
- speed (of network). *See also* throughput
  - 802.11n standard, 46, 47
  - Bluetooth, 53, 283
  - home control networks, 65
  - powerline networking, 62
- SpeedStream router, 221
- SPI (stateful packet inspection) firewall, 162
- Sprint, EV-DO wireless WAN service, 314
- Squeezebox (Logitech), 226

- SSID (service set identifier)  
 broadcast of, 173–174  
 changing default, 170  
 configuring, 121  
 description of, 37  
 requirement for network interface adapter, 130  
 standard (for wireless network). *See also*  
   802.11g standard; 802.11n draft standard  
 best, 22  
 Bluetooth 2.0 + EDR (extended data rate), 57  
 Bluetooth 2.1, 57  
 choosing, 19–22, 49, 318–319  
 differences among, 75  
 802.1x security, 177–178  
 802.3af (Power over Ethernet), 105  
 802.11, 44–45  
 802.11a, 20, 45–46, 121, 330–331, 333  
 802.11b, 20, 45–46  
 802.11i, 106, 168. *See also* Wi-Fi Protected Access  
 802.11x networking, 21  
 802.15, 282  
 802.15.4, 66  
 equipment compatibility related to, 74, 96–99  
 history, 44–45  
 Institute for Electrical and Electronics Engineers, 43, 282  
 interoperability of different, 22  
 Wi-Fi Alliance, 43  
 Wi-Fi channels, 44  
 for Wi-Fi VoIP phones, 249  
 Z-Wave, 66–67  
 ZigBee, 66–67  
 star-shaped topology, 30, 31  
*Star Trek: The Original Series (TOS)*  
   communicator, 279  
 stateful packet inspection (SPI) firewall, 162  
 station (computer, on wireless network), 33  
 streaming (of audio/video files), 225–226, 231  
 StreetDeck mobile electronic packages, 267  
 strength (level, of radio signal). *See* radio signal strength  
 Subnet mask, 124  
 supplicant software, 249  
 switch (switched hub, router). *See also*  
   AirPort Express; AirPort Extreme  
   about, 76  
   access point feature, 24  
   broadband (high-speed), 76, 102–103  
   cable/digital subscriber line (DSL), 14, 77  
   choosing, 103  
   connection to, during access point installation, 118  
   cost, 89  
   defaults, resetting to, 325  
   description, 24  
   DMZ setup, 220–221  
   firewall functionality, 161–162  
   gaming, configurations for, 214–219  
   Internet connection sharing with, 89  
   packet transmission, 31  
   PIN, 121  
   print server combination with, 84  
   Xbox Live compatibility, 211–212  
 synchronization of files, 11, 59, 285  
 system requirements, 2
- T •
- T-Mobile, 256, 305–306  
 TCP/IP (Transmission Control Protocol/Internet Protocol), 32  
 TCP port, 219  
 technical support, for equipment, 110  
 technology, wireless, choosing, 74–75  
 Tejkowski, Erick (author)  
   *Mac OS X All-in-One Desk Reference For Dummies*, 181–182  
 telephone. *See* phone  
 telephone adapter, 243  
 television, wireless-enabled, 346  
 Temporal Key Integrity Protocol (TKIP)  
   encryption, 38, 122  
 terminology, 182–183  
 text messaging, with navigation system, 270  
 theme (for computer desktop), 183  
 throughput (actual data transmission speed).  
   *See also* speed (of network)  
   802.11a standard, 45  
   advertised speeds, comparison with, 329  
   Bluetooth, 55–56, 57, 61  
   combination a/b/g/n access points, 92  
   DS2 Powerline network, 62

estimating, 48  
 HomePlug network, 62  
 improving, 327–337  
 maximizing through channel use, 122  
 network standards, relationship to, 21, 75  
 powerline link, 62  
 video streaming, 225–226  
 Wi-Fi, comparison with Bluetooth, 52, 53, 56  
 wired network, comparison with wireless network, 16, 18  
 Z-Wave networks, 66  
 ZigBee networks, 66  
 time-gate, 61  
 Time Warner Road Runner, 101  
 TKIP (Temporal Key Integrity Protocol)  
   encryption, 38, 122  
 topology (of network)  
   illustrations of, 74, 76, 85, 91  
   mesh, 65–66  
   star-shaped, 30, 31  
 Toshiba, 52  
 touch panels, for home control, 276  
 traffic, 30  
 Transmission Control Protocol/Internet Protocol (TCP/IP), 32  
 transmission (TX) power, 40–41  
 travel, wireless networks, accessing, 16. *See also* hot spot  
 travel router, 149  
 TrendNet, 274  
 troubleshooting  
   network connection, 325  
   videoconferencing, 321  
   wireless LAN, 327–337  
 TV, wireless-enabled, 346  
 TV cable, as network extension, 63  
 TV-IP312W Wireless 2-Way Audio Day/Night Internet Camera Server (TrendNet), 274  
 TX (transmission) power, 40–41

## • U •

UDP (User Datagram Protocol) port, 219  
 ultra wideband (UWB) technology, 61  
 unconscious connectivity, 55  
 uninterrupted power supply (UPS), 245  
 Universal Plug and Play (UPnP), 219  
 universal remote controls, 278

Universal Serial Bus (USB) adapter  
   benefits, 35–36  
   Bluetooth, 60  
   example, 33  
   features, 26  
   hubs, 292–293  
   installation, 134  
   use in access point setup, 115  
   use in Wi-Fi Protected Setup, 176  
   versions, 100  
 uplink ports (for access points), 105  
 user accounts, 190–191, 199–200, 202  
 User Datagram Protocol (UDP) port, 219  
 user interface, for media players/adapters, 230  
 Users group, 190  
 UWB (ultra wideband), 61

## • V •

vehicle monitoring systems, 343  
 VeriChip, 354  
 Verizon, 101, 314  
 video card for gaming, 205  
 video file, bandwidth requirements for  
   distributing, 225–226  
 video monitoring, 271–275  
 videocamera, network aware, 271–275  
 videoconferencing, troubleshooting, 321  
 videogaming industry, size, 203. *See also*  
   gaming; gaming console  
 Virtual Private Network (VPN), 106, 169,  
   310–311  
 virus definition file, 160  
 Vista (Microsoft Windows)  
   Details view, 183  
   file sharing, enabling, 196–200  
   Home Premium, 237  
   PC Card drivers, 132  
   print server features, 192  
   security pop-ups, 118  
   themes, choosing, 183  
   Wireless Zero Configuration, 138–141  
 Voice over IP (VoIP)  
   about, 242–243  
   dual-mode phones, 244  
   911 calls, 245  
   phones, choosing, 249–250  
   provider list Web site, 247

Voice over IP (VoIP) (*continued*)

- services, 244, 246–247
- Skype phones, 252–253
- terminology, 243–244
- wireless, 247–249

VoipYourLife, 247

Voltaic Systems solar-charging backpack,  
265–266

Vonage, 243

VPN (Virtual Private Network), 106, 169,  
310–311

## • W •

WAN router, 264–265

WAN (wide area network), 28, 124, 313–314

war driving, 93

warranties, for equipment, 110

Wayport hot spot, 306

WDS (wireless distribution system), 149, 210

wearables, 352–354

Web-based equipment setup, 108

Web sites

- access points, 24, 335
- appliances, wireless, 344–345
- Bluetooth-enabled devices, 58, 273, 282,  
285–291, 293
- cameras, 30, 272–275
- car-related products, 259–260, 263–265,  
267–269, 342–344
- comparison shopping, 360–361
- device drivers, 146
- entertainment systems and services, 223,  
226–231, 233–237, 239–241, 346–347
- equipment manufacturers, 366
- equipment reviews, 107, 204, 360, 362, 364
- Ethernet bridges, 233
- Ethernet cables, 117
- file servers, 29
- gadgets, 350
- games and gaming, 29, 203, 205, 207,  
210–212, 214, 321, 353
- gateways, 32
- general information, 364
- geochaching, 353
- home appliances, 344–345
- home control equipment, 66, 276, 278
- home networking, 362–363

hot spots, 299–301, 303, 305–309, 365–366

industry news, 361

Internet-based phone calling, 15

media adapters, 226

musical instruments, 348

network interface adapters, 34, 146, 209

organizations, 43, 65, 74

PCs, 362

pet tracking systems, 349–350

powerline networking equipment, 62–63

price comparison, 109

product fan sites, 364

robots, 350, 352

security tools, 161, 169, 176, 178, 219,  
311–312

servers, 195, 196

service reviews, 88

standards organizations, 365

technology industry, 365

telephones and calling services, 243,  
246–250, 252–256

tracking and location systems, 353–354

wearables, 352, 354

Wi-Fi products, 350

for Wi-Fi Protected Setup, 176

Windows software, 29, 198

*Wireless Home Networking For Dummies*,  
258, 359

WP3 players, 11

WEP (Wired Equivalent Privacy)

Apple password, 156–157, 158

description, 106

introduction to, 164–167

key length, 166

keys, 123

mentioned, 93

WPA, comparison with, 38, 106, 164, 168

WGX102 Wireless Range Extender  
(NETGEAR), 62, 63

whole-home wireless revolution, 224

Wi-Fi Alliance (trade group), 21, 43, 74, 97–98

Wi-Fi Connection (Nintendo), 213

Wi-Fi Ethernet bridge, 207–210, 216

Wi-Fi Multimedia (WMM), 98, 232

Wi-Fi Protected Access (WPA)

certification for, 97

encryption methods, 122–123

features, 168

- variants, 167
- weakness, 177
- WEP, comparison with, 38, 106, 168
- Wi-Fi Ethernet bridge, compatibility with, 208–209
- WPA/WPA2 Enterprise, 98, 122–123, 178
- Wi-Fi Protected Setup (WPS), 98, 123, 175–176
- Wi-Fi (wireless fidelity)
  - Bluetooth, comparison with, 53–54
  - description of term, 21
  - with gaming consoles, 204
- Wibree, 356–357
- wide area network (WAN), 28, 124, 313–314
- Wii (Nintendo), 29, 206, 207, 212–213
- Williams, Michael L. (author)
  - Mac OS X All-in-One Desk Reference For Dummies*, 181–182
- WiMax wireless WAN service, 314
- WiMedia Alliance, 61
- Windows Automotive (Microsoft), 261
- Windows Explorer (Microsoft), network resources, 186–187
- Windows Home Server (Microsoft), 29
- Windows (Microsoft). *See also* Windows Vista; Windows XP
  - installing access points in, 113–126
  - Service Pack 2, impact on sharing, 188
- Windows Vista For Dummies* (Rathbone), 182
- Windows Vista (Microsoft)
  - Details view, 183
  - file sharing, enabling, 196–200
  - Home Premium, 237
  - PC Card drivers, 132
  - print server features, 192
  - security pop-ups, 118
  - themes, choosing, 183
  - Wireless Zero Configuration, 138–141
- Windows XP For Dummies* (Rathbone), 181–182
- Windows XP (Microsoft)
  - file sharing, enabling, 188–191
  - Media Center Edition, 237
  - PC Card drivers, 132
  - print server features, 192
  - printer sharing, setting up, 193
  - themes, choosing, 183
  - Wireless Zero Configuration, 134–137
- Wired Equivalent Privacy (WEP)
  - Apple password, 156–157, 158
  - description, 106
  - introduction to, 164–167
  - key length, 166
  - keys, 123
  - WPA, comparison with, 38, 106, 164, 168
- wired (wireline) network
  - powerline networking, 61–63
  - security of, 162
  - wireless network, comparison with, 16–19, 73
- Wireless AirCard 750 (Sierra), 267
- wireless distribution system (WDS), 149
- Wireless Ethernet Compatibility Alliance (WECA). *See* Wi-Fi Alliance
- Wireless-G Access Point (Linksys), 118
- Wireless Hacks and Mods For Dummies* (Briere and Hurley), 178
- wireless network. *See also* Bluetooth; equipment
  - benefits, 18
  - drawbacks, 18–19
  - performance, tracking, 141–142
  - planning. *See* planning, of wireless network setup, user interfaces for, 108–109
  - standards for. *See* standard (for wireless network)
  - wired network, comparison with, 16–19, 73
  - wireless on the go, 16
- Wireless Zero Configuration
  - Windows Vista, 138–141
  - Windows XP, 134–137, 173
- wireline (wired) network
  - powerline networking, 61–63
  - security of, 162
  - wireless network, comparison with, 16–19, 73
- WiTopia, 169, 178, 311
- WLAN-WPC4400N wireless adapter (Linksys), 92
- WMM (Wi-Fi Multimedia), 98, 232
- workgroup, 28, 184, 196–197
- workstation, 28
- WPA/WPA2 (Wi-Fi Protected Access)
  - certification for, 97
  - encryption methods, 122–123
  - features, 168

WPA/WPA2 (Wi-Fi Protected Access)

*(continued)*

variants, 167

weakness, 177

WEP, comparison with, 38, 106, 168

Wi-Fi Ethernet bridge, compatibility with,  
208–209

WPA/WPA2 Enterprise, 98, 122–123, 178

WPN824 router (NETGEAR), 219, 220

WPS (Wi-Fi Protected Setup), 98, 123, 175–176

WVC200 Wireless-G Pan/Tilt/Zoom Video  
Camera (Linksys), 274–275

## • X •

X10 FloodCam, 275

X10 networks, 337

Xbox 360 (Microsoft)

cost, 206

features, 207

online gaming, requirements for, 204

Xbox Live online gaming service, 210–212

XM Radio, 260

XM Sky Fi3 receiver (Delphi), 260

XP (Microsoft Windows)

file sharing, enabling, 188–191

Media Center Edition, 237

PC Card drivers, 132

print server features, 192

printer sharing, setting up, 193

themes, choosing, 183

Wireless Zero Configuration, 134–137

## • Y •

Yahoo! Voice, 247

## • Z •

Z-App Systems, 264

Z-Wave networking protocol, 52, 66–67,  
355–356

z560 Digital Entertainment Center (HP), 235

zBoost, 254

Zensys, 66

Zeroconf, 202

ZigBee networking standard, 52, 66–67,  
355–356

Zone Alarm, 160, 219

Zonebridge (Sonos), 235

Zune portable media player, 11