

# INDEX

## Symbols and Numbers

- ; (semicolon)
    - in command line calls, 504
    - in CSS properties, 88, 140, 482
  - : (colon)
    - in command line calls, 504
    - in CSS properties, 87, 482
    - in element and attribute names, 476
  - / (slash), in XML, 474
  - ... (ellipsis)
    - as stroke marker, 168
    - in text, 332
  - (bullet), in text, 332
  - '...' (curly single quotes), in text, 332
  - "..." (double quotes)
    - in command line calls, 504
    - in XML, 475
  - "..." (curly double quotes), in text, 332
  - «...» (double guillemets), in text, 332
  - © (copyright sign), in text, 332
  - ® (registered sign), in text, 332
  - ™ (trademark sign), in text, 332
  - # (hash mark), in SVG, 87, 483
  - × (multiplication sign), in text, 332
  - <...> (angle brackets), in XML, 474
  - = (equal sign)
    - in command line options, 498
    - in XML, 475
  - (en dash), — (em dash), in text, 332
  - 3D Box tool, 6, 14, 24, 206, 431–435
    - controls bar of, 201
      - Angle fields, 207
      - New/Change label, 201
      - style swatch, 201
    - deselecting in, 89
    - dragging in, 200, 207
    - editing
      - filter area in, 360
      - gradients in, 176
      - path effects in, 256
      - patterns in, 196
      - shapes in, 200
    - selecting in, 78, 81, 200
    - styling in, 202, 208, 212
  - 3D boxes, 199, 205–212
    - applying path effects to, 252
    - converting to
      - groups of paths, 200, 206, 211, 458
      - guides, 119–120
    - creating, 200, 207
    - as drawing aid, 431–435
    - editing handles of, 200, 207, 209–211
    - opacity of, 211
    - perspective of, 207–209, 485
    - selecting, 200, 206, 211
    - sides of, 205, 211
    - snapping, 210, 433
    - styling, 201–202, 208, 211–212
    - tessellation with, 457–459
    - tweaking, 212
    - ungrouping, 211
    - unmerging, 208
    - vanishing points of, 207–209, 432–433
    - z-order of, 211
    - See also* shapes
  - 3D effects, 287
  - 3D Polyhedron extension, 406
  - 3D software, 6, 206
  - 7-Zip file archiver, 18
- ## A
- About dialog, 18, 206
  - accelerated simplification, 231
  - ACD Systems Canvas, 42
  - action-list command line option, 504
  - actions, 504–505
  - actions command line option, 497, 504
  - Adaptive Threshold extension, 398
  - Add Nodes extension, 169, 231, 288
  - Add Noise extension, 398

- Adobe
  - Acrobat, 32
  - Flash, 3, 9, 423
  - Illustrator (AI), 10
    - Bloat tool in, 246
    - color management in, 401
    - constraining actions in, 92
    - emulating keyboard shortcuts
      - of, 42
    - file format of, 7, 11–12, 488, 493
    - gradient meshes in, 156
    - GUI of, 11, 13
    - importing Inkscape SVG into, 480
    - Knife tool in, 313
    - layers in, 488, 493
    - live shapes in, 200
    - Mesh tool in, 188
    - panning in, 53
    - Pucker tool in, 246
    - selecting in, 82
    - speed of, 11
    - stroke positioning in, 173
    - transformations in, 12
    - versions of, 11–12, 493
  - InDesign, 6
  - Photoshop, 10
    - adjusting levels in, 462
    - advantages of, 5
    - blend modes in, 357
    - color management in, 401
    - layers in, 2
    - running from Inkscape, 379
    - selecting in, 2
    - soft brush in, 156
  - RGB, 147
- affine transformation matrix, 91, 481
- AIGA (American Institute of Graphic Arts), 351
- Align and Distribute dialog, 128–135
  - Align buttons, 128–130
  - Distribute buttons, 131–132
  - Exchange places buttons, 132–133, 137
  - with Node tool, 132
  - Nodes section, 243–244
  - Randomize button, 133
  - Remove overlaps section, 135
  - Unclump button, 134, 459
- alignment, 6, 128–130
  - checking, 116
  - of clones, 339
  - of path nodes, 132
  - of text objects, 129, 327
- alpha. *See* opacity
- American Institute of Graphic Arts (AIGA), 351
- anchor boxes, 129
- Android Studio IDE, 465
- Angle bisector path effect, 285
- angles, measuring, 107
- animations, 3, 7, 9, 423–430
  - templates for, 424
- anime characters, 5
- anti-aliasing, 2, 13, 152
  - minimizing, 290
  - suppressing, 366, 393, 395
- Apache FOP, 6
- Apparition filter, 363
- approximating strokes, 264–266
- arcs, 212–215
  - closed/unclosed, 215
  - creating, 214
  - editing handles of, 212
  - turning into a whole ellipse, 215
  - See also* ellipses
- Arrange dialog, 135–137
- arrowheads and tails, 166–167, 478
  - color of, 170
- artistic drawings, 5, 437–442
  - distortions in, 232–233, 418–419, 441–442, 470
  - emulating painting techniques
    - in, 365
  - flipping temporarily, 100
  - paths in, 113, 231, 246
  - patterns in, 197
  - photorealistic, 354, 460–461
  - randomness in, 218
  - tools for, 5, 26, 41, 294, 302
  - tracing, 452
  - tweaking, 156
  - visual bounding boxes in, 61
- ArtRage image editor, 5
- aspect ratio, 93
  - preserving, 61, 93–94, 98
  - stroke width and, 113
- Aspell dictionaries, 333
- attributes, in XML, 475
  - inline, 469
  - order of, 475
  - presentation, 482
  - in XML Editor, 76
- Auto palette, 142, 149
- Autodesk
  - AutoCAD program, 6
  - Maya program, 6
  - Autopackage program, 19

axonometric drawings, 204, 443–449  
using grids for, 120–122, 443–444

## **B**

- background
  - exporting, 501
  - fading into, 158
  - filling with flat color, 365
  - of page, 44–45, 153
  - tracing, 66
- Background color dialog, 44, 119
- banners, 5
- barcodes, 7, 406
- baseline origin point, 129, 132
- Batonic* mobile game, 470
- Battle of the Pucks (BotP)* mobile game, 466–470
- Bend path effect, 259–262, 302
- bevel joins, 162
- bevels, 233
  - imitating by filters, 362, 365
- Bézier, Pierre, 227
- Bézier curves, 227
  - creating, 294–295, 297, 299
  - cusps in the middle of, 162
  - dragging, 241
  - flattening, 242, 288, 290, 467
  - handles of, 227, 239–242
    - hiding, 234, 240–241, 245
    - jittering, 289
    - moving, 241–243
    - retracted, 239–242
    - visualizing, 291
  - length of, 227
  - nodes of, 168, 227
  - replacing deleted nodes with, 236
  - vs. spirals, 221
  - vs. splines, 274–275
- Bicubic interpolation, 194
- bitmap editors, 293
  - canvas size in, 3
  - layers in, 2
  - natural-media tools in, 5
  - running from Inkscape, 379–380, 397
  - selecting in, 2
  - usability of, 5
  - zooming in, 3
- bitmap image file (BMP) format, 378
- bitmaps, 1–2, 377–401
  - blending vector objects with, 152–153, 384
  - clipping, 382, 489
  - cloning, 399
  - converting to patterns, 144, 383
  - cropping, 382
  - editing, 379, 384, 397
  - embedding, 379–380
  - exporting, 32, 392–396, 420, 491–492, 495, 499–502
  - extensions for, 397–399
  - feathering out, 186, 355, 383
  - file size of, 495
  - filtering, 365, 397, 462
  - importing, 4, 8, 26, 377–380, 397, 451, 495
  - linked, 379, 399, 476
  - masking, 382–383
  - memory consumption of, 3
  - no path effects for, 252
  - opacity of, 145
  - in Outline mode, 54
  - picking color from, 152–153
  - pixel size of, 377, 380, 398
  - pixel-sized, 393, 501
  - rendering, 381
  - resolution of, 32, 376, 380, 387–388, 393, 398, 480, 492, 501
  - retouching, 5, 189, 193–194, 384
  - sharpening, 357
  - styling, 144, 177
  - thumbnails from, 106
  - tracing, 8, 227, 245, 310, 385–392, 451–462
- Black and white extension, 157
- Black Point extension, 398
- blend modes, 357–359, 463
- Blender suite, 6
- blur, 9, 354–357, 441
  - applied to
    - 3D boxes, 211
    - clones, 340, 348
    - content only, 363
    - groups, 355–356
    - multiple bushstrokes, 461
    - text objects, 324
- bitmap editing with, 384
- blending bushstrokes with, 436, 453
- bounding boxes and, 355, 374
- masking bitmaps with, 383
- motion, 356, 363
- picking color from, 152
- rendering, 55
- supporting in SVG, 4
- transforming, 356
- tweaking, 357

- Blur filter, 356, 363
  - BMP (bitmap image file) format, 378
  - book covers, 5
  - Boole, George, 228
  - Boolean operation path effect, 281
  - Boolean operations
    - on paths, 228–231, 281
    - on shapes, 228
    - on text, 228
  - BotP (Battle of the Pucks)* mobile game, 466–470
  - Bounding Box path effect, 283–284
  - bounding boxes, 60–61
    - always upright, 60
    - converting to guides, 119
    - coordinates of, 60–61
    - dimensions of, 60–61, 503
    - geometric center of, 96
    - geometric vs. visual, 61, 374
    - handles around, 93, 95
    - of objects with filters, 355, 360, 374
    - querying via command line, 503
    - repeated randomization and, 133
    - rubber band selection and, 82
    - as selection cue, 78
    - snapping to, 124–125
    - of text objects, 321
  - Box tool. *See* 3D Box tool
  - Box2D library, 465
  - Brighter extension, 157
  - brightness, 147, 398
    - adjusting with color extensions, 157
  - browsers
    - PNG support in, 32
    - SVG support in, 8–9, 32, 189
    - viewing presentations in, 6
  - BSpline path effect, 274
    - bitmap tracing in, 385
    - with Pen or Pencil tools, 300, 302
  - bullets
    - in text, 332
    - using clones for, 337
  - business cards, 415–421
  - butt caps, 163
  - Button filter, 457
- C**
- CAD (Computer-Aided Design), 6, 443, 494
  - Cairo library, 395, 489
  - Calendar extension, 406
  - calibrated space, 147
  - Calligraphic pen tool, 26, 302–309
    - adding paths with, 307
    - applying stroke style with, 150
    - background tracing with, 304, 428
    - bitmap tracing with, 452
    - controls bar of
      - Angle control, 305, 437
      - Caps control, 305
      - Fixation control, 305, 437, 461
      - Mass control, 306, 309
      - Pressure Sensitivity button, 303, 437
      - Thinning control, 304, 437
      - Tracing Background button, 304
      - Tremor control, 306, 309, 418, 427, 441–442, 461, 470
      - Width control, 34, 303, 418, 427, 437, 461
      - Wiggle control, 306, 470
    - drawing with, 156, 294
    - guide tracking with, 304, 307–309, 455
    - hatching with, 427–428
    - making brush strokes more natural
      - in, 233
    - presets of, 306–307
    - selection cue in, 78
    - sketching with, 435
    - unioning/subtracting paths with, 229, 307
  - Camouflage pattern, 197
  - Canva image editor, 14
  - canvas, 20–21, 43, 46
    - background of, 44
    - current position on, 479
    - empty
      - clicking, 89
      - cursor shape and, 80
      - dragging from, 83
      - transparency of, 153
    - flipping, 294
    - look of, 19
    - rotating, 53, 95, 100, 294, 479
    - scrolling
      - automatic, 318
      - by mouse, 24
      - size of, 477
  - caps, 163–164–165
    - for Calligraphic pen, 305
  - cartoons, 5, 26
    - adding depth to, 187
    - drawing, 246, 294
  - Cascading Style Sheets (CSS), 140–141
  - Celtic knots, 278
  - center of rotation. *See* rotation fixed point

- chamfers, 277
- Channel Transparency filter, 364
- channels, 145–147
  - correcting, 398
  - inverting, 158
  - suppressing, 158
  - tweaking, 156
- characters
  - kerning of, 328–330, 418
  - rotating, 329
  - selecting, 318
  - special, 331–332
- charts, 5
- Check Spelling dialog, 334
- Checkerboard patterns, 197
- Chrome browser. *See* Google Chrome
- circle element (SVG), 200, 467
- Circle by center and radius path effect, 285
- Circle by three points path effect, 284
- circles, 212
  - creating, 214, 284–285–286
  - in Inkscape vs. SVG, 200, 467
  - length of, 106
  - as markers, 168
  - meshes on, 192
  - of objects, 137
  - pattern of, 197
  - skewing, 214
  - from squares, 205
  - See also* dots, ellipses
- Classic extension, 406
- click/drag threshold, 80–81, 93
- clipart, 7–8, 418, 494
- clipboard operations
  - on clones, 341
  - on colors, 146, 150, 152
  - on filters, 359
  - on gradients, 180, 182
  - layers and, 70, 426
  - on nodes, 238
  - on objects, 64
  - on path effects, 253
  - on patterns, 196
  - on sizes, 105
  - on styles, 31, 139, 182, 196
  - on text, 318–319, 324
- clipping paths, 229, 282, 382
  - applied to 3D boxes, 211
  - definitions of, 478
  - editing in Node tool, 235
  - inverted, 282
  - in Outline mode, 54
  - snapping to, 127
- Clone original path effect, 256, 270, 282–283, 285
- clones, 337–350
  - aligning/distributing, 339
  - applying filters to, 341
  - of bitmaps, 399
  - blurred, 340, 348
  - chaining, 341–342
  - converting to stroke markers, 172
  - copying/pasting between
    - documents, 341
  - creating, 338–339
  - duplicating, 341–343
  - of groups, 338, 341, 343
  - no path effects for, 252
  - opacity of, 145, 186, 340, 348
  - originals of
    - deleting, 342
    - editing, 338
    - finding, 89, 342, 345
    - transforming, 338–340
  - orphaned, 341
  - randomizing, 347
  - rotation fixed point of, 97
  - snapping, 339
  - styling, 142, 144, 156, 177, 339–341, 349, 458
  - tiled, 14, 122, 156, 343–350, 421, 456–459, 485
    - randomizing, 458
    - unclumping, 459
  - transforming, 338–340
  - unlinking/relinking, 342–343
- Cloth pattern, 198
- CMYK color model, 6, 146–147, 401
  - calibrating, 147
  - converting from/to RGB, 146
  - device-independent, 9, 11
  - device-specific, 421
- Color, Color Burn, Color Dodge blending
  - modes, 358
- Color Blindness filter, 364
- color chooser dialog, 44, 119
- color gestures, 150–152
  - for gradients, 182
- color management, 399–401, 421
- Color Markers extension, 171
- Color Matrix primitive, 158, 374
- color palette. *See* palette control
- Color Shift filter, 158, 364, 463
- colord-kde package, 400
- colorimeters, 400
- Colorize filter, 158, 364

- colors
  - adjusting with filters, 364
  - assigning, 150, 152–154
    - with color gestures, 152
    - in Dropper tool, 153, 447
    - in palette, 147
    - without selecting, 21, 148
    - in Tweak tool, 154
  - averaged, 146, 152
  - blending into, 182, 357–359, 364, 463
  - clipboard operations on, 146, 150, 152
  - in CMYK, 146
  - correction of, 5
  - desaturating, 157
  - editing, 146, 149
  - flat, 142, 151
  - grayscale, 157–158, 364
  - in HSL, 147
  - inverting, 150, 157, 364
  - last selected, 150
  - last set, 149
  - models of, 145–147
  - names of, 148
  - order of rendering, 170, 172–173
  - in Outline mode, 53
  - picking, 384, 447, 459–460
    - in Dropper tool, 152–154
    - in Spray tool, 67
  - profiles of. *See* ICC color profiles
  - randomizing, 155, 430
  - range of, 400
  - rendering, 55
  - replacing, 157
  - in RGB, 87, 145–146
  - tweaking, 154–157
  - under cursor, 152
- comics, 5, 351
- command line interface, 45, 497–505
  - exporting via, 376, 396, 426–427, 499–503
  - help in, 498
  - parameters in, 499
  - querying in, 503
  - selecting objects via, 89, 500, 502, 504
  - shell mode of, 505
- command palette, 22–23
- commands bar, 22
  - hidden, 46
- complex artwork
  - analyzing, 98
  - organizing, 58, 68, 70
  - searching for objects in, 87
  - temporarily simplifying, 70
- Composite primitive, 370–373, 453
- Compressed Scalable Vector Graphics (SVGZ), 9, 488
- Computer-Aided Design (CAD), 6, 443, 494
- Connector tool, 6, 135, 314–315
  - controls bar of, 314
  - deselecting in, 89
  - selecting in, 78, 81
- connector lines, 6, 135
  - arrowheads and tails of, 166, 170
- construction lines, 264–266
- constructivism, 417
- context-sensitive controls, 13
- contrast
  - adjusting with filters, 158
  - increasing, 398
- controls bar, 23, 201
  - accessing by keys, 46
  - See also individual tools*
- Coons interpolation, 194
- coordinates, 480
  - absolute vs. relative, 468
  - measuring, 59–60
  - origin of, 59, 100, 480
  - in Selector controls bar, 60–61
  - in status bar, 59
- copying, 64
  - colors, 146, 150, 152
  - gradients, 180, 182
  - layers and, 70
  - nodes, 238
  - path effects, 253
  - patterns, 196
  - sizes, 105
  - styles, 31
- copyright sign, 332
- Corel Painter, 5
- CorelDRAW, 12, 15
  - emulating keyboard shortcuts of, 42
  - GUI of, 12
  - selecting in, 82, 95
  - supporting in Inkscape, 7, 493
- Corners (Fillet/Chamfer) path effect, 277–278
- Create Tiled Clones dialog, 14, 343–350, 421
  - Blur & Opacity tab, 348
  - Color tab, 156, 349, 430
  - creating tiles in, 344, 456
  - pattern size in, 344
  - randomizing tiles in, 344, 347
  - Rotation tab, 347–348, 458
  - Scale tab, 347–348, 458
  - Shift tab, 347–348, 458

- Symmetry tab, 345–348, 456
- Trace tab, 349–350, 456
- unclumping tiles in, 344
- Crop extension, 398
- cross-sections, 448
- CSS (Cascading Style Sheets), 140–141
- cubes. *See* 3D boxes
- current layer indicator, 72, 79
  - locking layers in, 439–440
  - order of layers in, 75
- cursor, for text editing, 317
- cusps, 162
- Custom extension, 157
- cutting operation, 64, 230, 448
- Cyan plug-in, 401
- cylinders, drawing, 445–447

## D

- d attribute (SVG), 252, 468, 484
- Darken blending mode, 358
- Darker extension, 157
- dash patterns, 164–166
  - of dots, 165
  - on spirals, 166, 221
- Dashed Stroke path effect, 283
- Datamatrix extension, 406
- Deep Ungroup extension, 68, 405
- default.svg* file, 41
- defs element (SVG), 89, 168, 252, 382, 478, 483, 485
- Desaturate extension, 157
- desc element (SVG), 58
- deselecting, 27–28
- Despeckle extension, 398
- development builds, 17–19
- DeviantArt community, 8
- Dia program, 6
- diagrams, 5–6, 314–315
- dialogs, 48–49
  - docked/floating, 23–24, 48
  - hiding, 24
  - modal, 118
  - navigating by keyboard, 48
  - size of, 24
- diamonds, as markers, 168
- Difference blending mode, 358
- difference operation, 229
- dimension lines, 168, 291
- Dimensions extension, 291
- Displacement Map primitive, 372, 453
- display calibration, 400
- distance measurement markers, 168
- distortions
  - artistic, 232–233, 418–419, 441–442, 470
  - by roughening, 250, 364
  - by simplifying, 170, 232, 236, 240, 247, 418–419
- distribution, 6, 131–135
  - of clones, 339
  - of path nodes, 132, 169
  - of text objects, 132
  - using grids for, 120
- Dither extension, 398
- division operation, 230–231
- docks, 23–24, 48
  - hidden, 46
- Document Metadata dialog, 479
- document order, 75
- Document Properties dialog, 39, 478–479
  - document units in, 60
  - Grids tab, 120–122, 444
  - Guides tab, 118
  - Page tab, 43–45, 153, 480
  - Snap tab, 126–127, 433
- document templates. *See* templates
- documents
  - cleaning up, 168, 180, 368, 478
  - creating, 33, 40, 70
  - file size of, 9, 180, 337, 379, 469, 477, 495
  - multipage, 6, 14
  - opening
    - via command line, 45, 499
    - in multiple windows, 45, 77, 499
  - properties saved in, 39, 479, 485
    - current layer, 70
    - export hints, 394, 502
    - fixed points, 485
    - gradient definitions, 179
    - guides, 116, 118
    - rotation fixed points, 96
    - swatches, 142
    - view area and zoom level, 47
  - recently edited, 19
  - saving, 9, 21, 31–32, 43, 420, 487, 500
- dots
  - creating with Pen tool, 214, 300
  - as markers, 168
  - randomizing, 134, 166, 197, 214
  - rectangular grids of, 121
  - sequentially numbered, 291
  - strokes of, 164–165
  - See also* bullets, circles
- double flipping, 99
- dpi (dots per inch), 60, 100, 290, 393, 405, 480, 501

- drafts, 5
  - dragging
    - in 3D Box tool, 200, 207
    - constrained, 92
    - in Dropper tool, 153
    - in Ellipse tool, 200, 213
    - in Eraser tool, 312
    - gradient handles, 183–185
    - interactive transforming and, 114
    - in Measure tool, 107
    - by mouse, 92
    - in Node tool, 241
    - off palette, 21, 148
    - in Pen tool, 295
    - in Rectangle tool, 200, 202
    - off a ruler, 116
    - in Selector tool, 21, 28, 33, 80, 82–83, 92–93, 123
    - speed of, 304
    - in Spiral tool, 200, 220
    - in Star tool, 200, 216
    - off stroke width value, 160
    - by tablet pen, 80
    - in Text tool, 321
  - Draw From Triangle extension, 406
  - Draw Handles extension, 291
  - Drawing Exchange Format (DXF), 494
  - Drop Shadow filter, 367, 419–420
  - Dropper tool, 152–154
    - controls bar of, 153–154
    - gradients in, 176, 182, 447
    - picking and assigning
      - colors, 152–153, 384, 447, 459–460
      - opacity, 153–154
      - selection cue in, 78
  - Duochrome filter, 158, 364
  - duplicating, 29, 34–35, 64–65
    - clones, 341–343
    - nodes, 237, 239
    - objects with gradients, 180
    - random, 112
    - rotation fixed point of, 97
  - dx, dy attributes (SVG), 330
  - DXF (Drawing Exchange Format), 494
  - dynamic offsets, 233
- E**
- Edge Detect filter, 365
  - Edit menu
    - Clone submenu
      - Create Clone command, 338
      - Create Tiled Clones command, 343, 456
      - Relink to Copied command, 343
      - Unlink Clone command, 342, 351
    - Copy command, 64, 196
      - on clones, 341
      - on filters, 359
      - on nodes, 238
      - on path effects, 253
      - on text, 318–319, 324
    - Cut command, 64, 426
      - on nodes, 238
      - on text, 318–319
    - Cut in Place command, 72
    - Duplicate command, 64–65
      - on clones, 341
    - Find/Replace command, 87
    - Input Devices command, 41
    - Invert Selection command, 89
    - Make a Bitmap Copy command, 397
    - Paste command, 64
      - on clones, 341
      - on nodes, 238
      - on text, 318–319
    - Paste in Place command, 64, 72, 426
    - Paste Size submenu, 105–106
      - Paste Size Separately command, 106
    - Paste Style command, 31, 139, 182, 196
      - on filters, 359
      - on text, 324
    - Preferences command, 38
    - Select Same submenu, 87
    - Undo command, 51, 193
      - and extensions, 399, 404
  - elements, in XML, 474
    - empty, 474
    - linking, 483
    - nesting, 474
    - parent, 474, 481–482
    - root, 475–477
    - in SVG, 75
  - ellipse element (SVG), 200–215, 467
  - Ellipse from points path effect, 286
  - Ellipse tool, 24, 213–215
    - controls bar of, 201, 215
      - New/Change label, 201
      - style swatch, 201
    - deselecting in, 89
    - dragging in, 200, 213
    - editing
      - filter area in, 360
      - gradients in, 176
      - path effects in, 256
      - patterns in, 196
      - shapes in, 200



- rotating/skewing in, 214
- scaling in, 214
- selecting in, 78, 81, 200
- styling in, 33, 202
- ellipses, 199, 212
  - arcs of, 212–215
  - converting to paths, 200
  - creating, 33, 200, 213, 286
    - from center, 213–214
    - by rounding a rectangle, 445
  - editing handles of, 200, 212, 214–215
  - in Inkscape vs. SVG, 200
  - integer-ratio, 213
  - meshes on, 192
  - from rectangles, 205
  - segments of, 212–215
    - creating, 214
    - turning into a whole ellipse, 215
  - selecting, 200
  - snapping to, 126
  - styling, 201–202
  - transforming, 214
  - See also* circles, shapes
- emblems, 5
- embossing, 363
- EMF (Enhanced MetaFile Format), 494, 499
- engineering drawings, 6
- engravings, 134, 307, 454–456
- Enhance extension, 398
- Envelope Deformation path effect, 263, 428, 470
- EPS (Encapsulated PostScript), 12, 492
  - exporting to, 376, 492, 499, 502
  - filters and, 376
  - importing, 12, 492
  - supporting in Inkscape, 7
- Equalize extension, 398
- equalizing gaps, 131–132, 134
- Eraser tool, 312–313
  - Delete mode of, 83
  - subtracting paths with, 229, 307, 313
- Ermine pattern, 197
- Evanescent filter, 363
- exchanging places, 132–133, 137
- Exclusion blending mode, 358
- exclusion operation, 230
- eXperimental Computing Facility (XCF) format, 495
- export, 32, 487
  - area of, 32, 43, 392–393, 492, 500–501
  - background for, 44, 501
  - batch, 394
  - via command line, 376, 396, 426–427, 499–503
  - to EPS, 492, 499, 502
  - filenames for, 394, 485–486, 502
  - filter rasterization for, 376
  - filters and, 503
  - to JPG, 394–396, 495
  - to multiple files at once, 394
  - to PDF, 4, 6, 376, 401, 420, 491–492, 499, 502
  - to PNG, 32, 392–396, 420, 495, 499–502
    - optimized, 394–396
  - to PostScript, 492, 499, 502
  - resolution for, 394, 492, 501–502
  - reusing parameters of, 395
  - saved hints for, 502
  - to TIFF, 394–396, 495
  - vs. saving, 487
  - to WebP, 394–396, 495
- export-\* command line options, 376, 396, 426, 499–503
- Export Layer Slices extension, 404–405
- Export PNG Image dialog, 32, 392–395, 405, 486–487
- exporting
  - to PDF, 161
- Extensible Application Markup Language (XAML), 9, 494, 499
- Extensible HyperText Markup Language (XHTML), 473, 475
- Extensible Markup Language (XML), 8, 473–476
- extensions, 403–414
  - architecture of, 408–410
  - for bitmaps, 397–399
  - for colors, 157
  - creating, 410–414
  - files for, 410–411
  - for paths, 286–291
  - selection and, 89
  - for text objects, 334–335
  - undoing, 399, 404
  - vs. path effects, 286, 404
- Extensions menu, 404
  - Arrange submenu, 405, 459
    - Deep Ungroup command, 68
    - Restack command, 63–64
  - Color submenu, 157, 405
  - Document submenu, 405
  - Export submenu, 405
  - Gcodetools submenu, 405
  - Generate from Path submenu, 286–288, 405
    - Interpolate command, 425

- Extensions menu (*continued*)
  - Images submenu, 405
    - Embed Images command, 380
    - Extract Image command, 380
    - Set Image Attributes command, 381
  - Jessyink submenu, 405
  - Modify Path submenu, 286, 288–290, 405, 467
    - Add Nodes command, 169, 231
    - Color Markers command, 171
  - Previous Extension command, 404
  - Previous Extension Settings command, 404
  - Raster submenu, 397–399, 405
  - Render submenu, 406–408
    - Barcode subsubmenu, 406
    - Gear subsubmenu, 407
    - Grids subsubmenu, 122, 407
    - Mathematics subsubmenu, 408
  - Stylesheet submenu
    - Merge Styles into CSS command, 405
  - Text submenu, 334–335, 405, 411, 414
  - Typography submenu, 405
  - Visualize Path submenu, 286, 291, 405
  - Web submenu, 405
- Extract Channel filter, 158, 364
- Extrude extension, 287

## F

- Fabric.js library, 14
- facial expressions, 35
- Fade to Black or White filter, 158
- fantasy art, 5, 290, 462
- Fast Crop filter, 364
- Feather filter, 363
- feathering, 186, 355, 383
- feBlend primitive, 359
- fidelity. *See* Tweak tool
- File menu
  - Clean Up Document command, 168, 180, 368, 478
  - Document Metadata command, 479
  - Document Properties command, 479
  - Export PNG Image command, 32
  - Import command, 26, 64, 377–378, 451
  - New command, 20, 40, 424
  - New from Template command, 40, 335, 416
  - Open command, 45, 377–378
  - Print command, 495
  - Save a Copy command, 488, 491
  - Save As command, 488, 491
  - Save command, 21, 31

- fill, 4
  - adjusting by filters, 364–365
  - assigning, 147
    - via command line, 504–505
    - in Dropper tool, 153
    - in Paint bucket tool, 310, 312
    - from palette, 30, 33
    - in Tweak tool, 154
  - between paths, 272
  - color of, adjusting with
    - extensions, 157
    - gestures, 151–152
  - default, 142, 150
  - editing, 149
  - imitating by filters, 366
  - last selected, 150
  - last set, 149
  - none, 80, 88, 142, 150
  - not applied to gradient stops, 182
  - opacity of, 144, 150
  - in Outline mode, 53
  - painted with
    - flat color, 142
    - gradient, 176, 483
    - mesh, 190
    - pattern, 195, 383, 420
  - removing, 31, 148
  - rendering order of, 172–173
  - in SVG, 87
  - swapping with stroke, 150
  - unset, 142, 144, 150, 177, 341, 349, 458–459, 483
  - See also* colors, style
- Fill and Stroke dialog
  - averaged color in, for multiple objects, 146
  - Blend mode list, 357
  - Blur slider, 354, 372, 460
  - CMS tab, 147
  - CMYK tab, 146–147
  - fill rule buttons in, 143
  - Fill tab, 142, 226, 341, 420, 448
  - HSL tab, 147
  - limitations of, 157
  - Opacity slider in, 144
  - opening from selected style
    - indicator, 149
  - Pattern button, 197
  - Pattern fill list, 196–197
  - RGB tab, 146, 152
  - for selected
    - gradient handles, 182
    - mesh nodes, 194

- Stroke paint tab, 142, 160, 341
- Stroke style tab, 160–167, 170–172
  - swatches in
    - for colors, 142, 149
    - for gradients, 179
  - Wheel tab, 147
- Fill Background dialog, 365
- Fill between many path effect, 272–273
- fill property (CSS), 140–141
- fill rule, 143, 225–226, 228, 238, 271
- fillets, 277
- Filter Editor dialog, 356, 368–374, 460
  - editing
    - filter area in, 360
    - filter parameters in, 359
  - Filter General Settings area, 373–374
- filter element (SVG), 485
- filters, 9, 353–376
  - applying, 368
    - to bitmaps, 397
    - to clones, 341
    - to text objects, 324
  - bounding boxes and, 61, 360
  - clipboard operations on, 359
  - for colors, 157–158
  - creating, 158, 362, 368
  - definitions of, 478
  - editing, 368–374
  - exporting, 376, 492, 503
  - nondestructiveness of, 157
  - for photorealistic images, 4
  - preset, 158, 360–368, 485
  - primitives for, 369–374
  - rasterizing, 376, 492, 495
  - removing, 360, 368
  - rendering, 55, 158, 357, 374, 397
  - stacked, 359
  - transforming, 356
  - zoom level and, 357
- filters.svg* file, 362
- Filters menu, 361
  - Bevels submenu, 362, 457
  - Blurs submenu, 356, 363, 397
  - Bumps submenu, 363
  - Bundled submenu, 362
  - Color submenu, 157–158, 364, 397, 462
  - Distort submenu, 364, 462
  - Fill and Transparency submenu, 364–365
  - Filter Editor command, 368
  - Image Effects submenu, 365, 397, 463
  - Image Paint and Draw submenu, 365
  - Materials submenu, 365
  - Morphology submenu, 366
  - Non-Realistic 3D Shaders submenu, 366
  - Overlays submenu, 366, 460
  - Pixel Tools submenu, 366
  - Protrusions submenu, 367
  - Remove Filters command, 360
  - Ridges submenu, 367
  - Scatter submenu, 367
  - Shadows and Glows submenu, 367, 419
  - Textures submenu, 367
- Find/Replace dialog, 87
- Firefox browser. *See* Mozilla Firefox
- fixation. *See* Calligraphic pen tool
- fixed point. *See* rotation fixed point
- flags, 5
- Flash. *See* Adobe Flash
- Flatten Béziers extension, 288, 467
- Flatten Transparency filter, 365
- Flickr community, 8
- flip cASE extension, 335
- flipping, 99–100
  - double, 99
  - by keys, 99–100
  - transform attribute and, 467
- flowcharts, 6
  - prepackaged symbols for, 351
- flowed text, 9, 26
- flowRoot element (SVG), 322
- Fluorescent filter, 364
- focus (of elliptic gradients), 179
- font-family property (CSS), 140–141
- FontForge font editor, 335–336
- fonts
  - available to Inkscape, 324
  - built-in kerning of, 329
  - creating, 335–336
  - embedded, 335, 489, 491, 503
  - families of, 323–324
  - installing, 417
  - ligatures in, 331
  - names of, 490
  - replacing, 335
  - size of, 323, 326
  - substituting, 490
  - variable, 326
  - variants of, 324
- force. *See* Tweak tool
- forking, 15
- Fractalize extension, 290
- fractals, 7, 273
- Freehand. *See* Macromedia Freehand
- FreeSVG.org, 8
- fullscreen mode, 6, 21, 46
- Function Plotter extension, 406–407

## G

- g element (SVG), 68, 70, 477, 479–481, 483, 485
- games, graphics accets for, 5, 465–470
- Gamma Correction extension, 398
- Gauss, Carl Friedrich, 354
- Gaussian Blur primitive, 354, 356, 369, 371–372, 453
- G-code language, 405
- General Public License (GPL), 15
- generate-layers.py* file, 424
- Gentium font, 416
- geometric constructions, 284–286
- Ghostscript interpreter, 12, 492
- GIF format, 378
  - animated, 427
  - importing, 495
- Gifsicle utility, 427
- Gill image editor, 15
- GIMP (GNU Image Manipulation Program), 15
  - adjusting levels in, 462
  - advantages of, 5
  - blend modes in, 357
  - color separation in, 7
  - drawing shapes in, 7
  - exporting to, 495
  - palettes in, 149
  - running from Inkscape, 379
  - selecting in, 2
  - soft brush in, 156
- GitLab, Inkscape code on, 19
- gnome-color-manager package, 400
- Google
  - Android Studio IDE, 465
  - Chrome, support for meshes in, 189
  - Fonts, 326
  - image search, 438
- GPL (General Public License), 15
- gradient meshes, 4, 14, 156
- Gradient tool, 176–186
  - controls bar of
    - gradient toggle buttons, 177–178
    - lock button, 180
    - plus button, 184
    - Repeat list, 181
    - Reverse direction button, 180
    - Select list, 179–180
  - deselecting in, 89
  - selecting in, 78–79, 81, 176, 181
- gradients, 175–188
  - applying to
    - clones, 340
    - fill, 176
    - multiple selected objects, 176
    - objects with an existing gradient, 177
    - stroke, 176
  - approximating nonlinear profiles with, 185–187
  - bilinear, 179
  - bitmap editing with, 384
  - colors of, 176–177
  - connecting lines of, 176
  - controls of, 13
  - creating, 176–179
  - definitions of, 177, 179–180, 478, 483
    - assigning, 179
    - preserving, 177
    - removing unused, 180
    - shared, 180
  - editing in Node tool, 235
  - elliptic, 175, 178–179, 430
  - feathering out edges with, 186–187
  - handles of, 176
    - assigning colors to, 182
    - constrained dragging of, 178
    - deselecting, 181
    - for linear gradients, 178
    - merging, 183–184
    - moving, 183–186
    - selecting, 181–182
    - snapping, 184
  - linear, 175, 177–178
  - masking bitmaps with, 383
  - master opacity and, 182
  - mesh. *See* meshes
  - multistage, 184–186
  - from opaque to transparent color, 175, 419
  - in Outline mode, 53
  - overlying, 187–188
  - for photorealistic images, 4
  - picking color from, 152
  - in PostScript, 11
  - removing, 177
  - repeating, 180–181
  - reversing, 180
  - simplifying, 185
  - stock, 485
  - stops of, 179, 181–182
    - adding, 184
    - color of, 151–152, 157, 184
    - deleting, 185

- end, 179, 183, 185
- interpolating between, 146
- middle, 179–180, 183–186
  - for selected objects, 79, 183
- supporting in Inkscape, 14
- on text objects, 324
- transforming, 114, 177, 186
- tweaking, 187–188
- graphics tablets. *See* pressure-sensitive devices
- graphs, 5
- Gravit image editor, 14
- Grayscale extension, 157
- Grayscale filter, 158, 364
- Grid extension, 122
- grids, 120–122
  - aligning, 122
  - axonometric, 120–122, 444
  - color of, 122, 479
  - density of, 121–122, 479
  - disabling, 121
  - generating, 407
  - hidden, 121
  - isometric, 443
  - major/minor lines of, 121–122, 444
  - origin of, 122
  - pixel-sized, 120, 393, 397, 501
  - rectangular, 120–122
  - snapping to, 120–121, 126, 243, 443
- grids of objects, 122, 135–137
- groups, 67–69
  - of a single object, 67, 343, 359, 383, 461
  - applying
    - blur to, 355–356
    - path effects to, 252–254, 263
  - clipping, 382
  - cloning, 338, 341
  - coordinates of, 106
  - entering, 71–72, 85–86, 461, 479
  - extracting objects from, 72
  - impossible for objects from different layers, 69, 475
  - masking, 383
  - selecting, 67–68, 85
    - individual objects in, 63, 81, 85
  - size of, 106
  - styling, 144
  - in SVG, 485
  - transforming, 481
  - transparency of, 69
  - ungrouping, 67–69, 405
  - vs. layers, 68–71, 479

- guide tracking, 304, 307–309, 455
- Guideline dialog, 117–118
- guides (guidelines), 115
  - anchor of, 116
  - creating, 116, 407
    - from measurements, 109
    - from objects, 119
  - deleting, 116, 118
  - diagonal, 116–117
  - hidden, 116, 118
  - locked, 118
  - moving, 116
  - rotating, 116
  - snapping to, 116–117, 243
- Guides Creator extension, 407

## H

- halos, 233
- Hard Light blending mode, 358
- Hatches path effect, 266–268
- hatching, 198, 307–428
- Hello, World!, 19–21
- help command line option, 498
- Help menu
  - About command, 206
  - Command Line Options command, 498
- Hewlett-Packard plotters, 494
- holiday cards, 5
- HPGL (Hewlett-Packard Graphics Language), 494, 500
- HSB Adjust extension, 398
- HSB color model, 147
- HSL color model, 147, 151
- HSV color model, 147
- hue, 147
  - adjusting, 398
    - with color extensions, 157
    - with color gestures, 151
    - with filters, 158
  - randomizing, 430
  - tweaking, 156
- Hue blending mode, 358
- Huion graphic tablets, 41

## I

- ICC color profiles, 55, 400–401
- ice surface imitation, 466
- Icon Preview dialog, 396
- icons, 5, 396
  - collections of, 44
  - using clones for, 337

- id attribute (SVG), 58, 75, 141, 483, 485, 500
  - searching objects by, 87
- IE. *See* Microsoft Internet Explorer
- Illustrator. *See* Adobe Illustrator
- image element (SVG), 379, 476
- ImageMagick suite, 427
- images. *See* bitmaps
- implode extension, 398
- Import dialog, 378
  - file formats in, 411, 487
- importing, 26, 64
  - bitmaps, 8, 377–380, 397, 451, 495
  - layers and, 70
  - PDF, 12, 499
  - photorealistic images, 4
  - PostScript/EPS, 12, 492
  - vector files, 7
- InDesign. *See* Adobe InDesign
- inkex library, 409, 411–412, 503
- inking, 439–440
- Inkscape
  - bugs in, 18
  - compiling, 19
  - coordinate origin in, 59
  - destructive operations in, 200, 233, 281, 399, 404
  - developers of, 14–15, 18
  - downloading, 18
  - embedded fonts in, 335
  - fully automated editing sessions in, 89
  - GUI of, 14, 20–21–24, 45–47, 481
  - history of, 15–16
  - installing, 17–19
  - instances of, 45
  - limitations of, 5–7, 14
    - color management, 399
    - no animations, 9
    - no automatic hyphenation, 321
    - no cross-document references, 9, 339, 483
    - no kerning or rotation in text-in-a-shape, 330
    - no nonlinear gradient profiles, 185
    - no PDF forms in, 488
  - look of, 19, 49
  - memory consumption of, 497
  - namespace of, 477
  - patching, 16
  - printing from, 146
  - rendering in, 53–55
  - restarting, 38
  - sample SVG files for, 253
  - shell mode of, 505
  - speed of, 15
    - clones and, 337
  - command line interface and, 497
  - filling large areas and, 312
  - filters and, 55, 158, 374, 397, 454
  - hiding layers and, 70
  - in Outline mode, 54, 216
  - roughened paths and, 250
  - subpaths and, 279
- stability of, 14–15, 17–18
- starting, 19, 45, 54
- stock palettes in, 148
- usability of, 5, 14
- users of, 7–8, 17
- versions of
  - determining, for documents, 477, 498
  - older, 252–254, 481, 500, 504
  - stable vs. development build, 17–19
  - testing latest, 16
- inkscape:collect attribute, 478, 485
- inkscape:export-\* attributes, 88, 394, 485–486
- inkscape:groupmode attribute, 70, 485
- inkscape:isstock attribute, 485
- inkscape:label attribute, 58, 71, 485
- inkscape:menu, inkscape:menu-tooltip attributes, 485
- inkscape:original-d attribute, 252
- inkscape:path-effect, element and attribute, 252
- inkscape:perspective attribute, 485
- inkscape:tile-\* attributes, 485
- inkscape:transform-center-\* attributes, 485
- inkscape:version attribute, 477, 485
- inkscape/fonts* directory, 324
- inkscape.gpl* file, 149
- Inkscape Forum, 8
- Inkscape SVG, 9, 32, 488
  - background in, 44–45
- Inkscape Wiki, 18
- inkscape-extension element, 410
- InkSlides add-on, 6
- Inkview viewer, 6
- inline-width property (CSS), 320
- Input Devices dialog, 41
- Inset/Outset Halo extension, 286–287
- insetting, 232, 281, 286
  - imitating by filters, 366
- Internet Explorer. *See* Microsoft Internet Explorer
- Interpolate extension, 287, 425, 429

Interpolate Sub-Paths path effect,  
280–281, 307  
intersection operation, 229  
invert filter, 158, 364  
.inx file, 410–411, 500  
isometric drawings, 443–449

## J

JavaScript, embedded in SVG, 58, 405  
JessyLink add-on, 6, 405  
Jigsaw Piece filter, 457  
Jitter Nodes extension, 289  
joins, 162–163  
JPG format  
  exporting to, 394–396, 495  
  importing, 378, 495

## K

Kaplinski, Lauris, 15  
kerning, 328–330, 418  
keyboard focus, 48  
keyboard modifiers, 42  
keyboard shortcuts, 14, 41–43  
  active set of, 19  
  adjusting nodes with, 241  
  configuring, 42  
  emulating layouts of other vector  
  editors, 42  
  flipping with, 99–100  
  moving with, 30, 97–98  
  panning with, 52  
  rotating with, 30, 95–96, 99  
  scaling with, 30, 94, 98–99  
  selecting with, 28, 86–87, 181  
  zooming with, 24, 50–52  
keyframes, 425  
Knot path effect, 278–279  
Krita image editor, 5

## L

LaTeX typesetting system  
  converting into vector images, 408  
  exporting to, 495  
LaTeX extension, 408  
Lattice Deformation path effect, 263  
Layer menu, 71–72  
  Add Layer command, 71, 439  
  Delete Current Layer command, 71  
  Duplicate Current Layer command, 71  
  Layer to Bottom command, 72

  Layer to Top command, 72  
  Layers command, 72  
  Lower Layer command, 72  
  Move Selection to Layer Above command, 71  
  Move Selection to Layer Below command, 71  
  Raise Layer command, 72  
  Rename Layer command, 71  
  Switch to Layer Above command, 71  
  Switch to Layer Below command, 71  
layers, 70–73  
  for animation frames, 423  
  creating, 71, 73  
  with a script, 423–424  
  current, 70–72, 82, 86, 479  
  switching, 89  
  deleting, 71–73  
  duplicating, 71  
  following selection, 70, 79  
  hidden, 59, 70–73, 87  
  hierarchy of, 70–71  
  locked, 59, 70–73, 80, 87, 439–440, 451  
  moving objects between, 64, 71, 426  
  naming, 71, 73, 485  
  rearranging, 72–73  
  in SVG, 485  
  transparency of, 73, 429  
  vs. groups, 68–71, 475, 479  
Layers dialog, 72–73, 424  
  accessing layers in, 59  
  Blend mode list, 357  
  Blur slider, 354  
  layer opacity in, 429  
  order of layers in, 75  
leaflets, 5–6  
Less Hue, Light, Saturation extensions, 157  
Level extension, 398  
Level (with Channel) extension, 398  
Levien, Raph, 15, 275  
libdpx library, 391  
LibreOffice suite, 494  
ligatures, 331  
Light Eraser filter, 365  
Lighten blending mode, 358  
lightness, 147  
  adjusting with  
  color extensions, 157  
  color gestures, 151  
  filters, 158  
  tweaking, 156  
Lightness-Contrast filter, 158, 364, 462  
Lindenmeyer systems, 7, 407–408  
linearGradient element (SVG), 478, 483  
linked offsets, 89, 233

- links, following, 89
- Linux
  - Aspell dictionaries for, 333
  - Inkscape versions for, 18
- live path effects (LPEs). *See* path effects
- logos, 5
  - on business cards, 416, 418
  - collections of, 44
- lowercase extension, 335
- L-system extension, 407–408
- Luminosity blending mode, 358

## M

- macOS, Inkscape versions for, 19
- Macromedia
  - Flash. *See* Adobe Flash
  - Freehand, 12, 42
- Make Initial extension, 410–414
- maps, 5, 462
- marker-\* attributes (SVG), 172
- marker element (SVG), 172
- markers, 166–172
  - anchor point of, 171
  - bounding boxes and, 61
  - from cloned objects, 172
  - color of, 170–171
  - converting to path, 226
  - creating, 171–172
  - definitions of, 478
  - on an invisible path, 170
  - middle, 166–169
  - orientation of, 167–168, 171–172
  - removing, 168
  - rendering order of, 172–173
  - size of, 166–168, 171–172
  - on spirals, 221
  - start/end, 166–168, 225
  - stock, 485
- markerUnits attribute (SVG), 172
- marquee. *See* rubber band
- masks, 5, 186, 282, 382–383
  - applied to 3D boxes, 211
  - definitions of, 478
  - editing in Node tool, 235
  - inverted, 282
  - in Outline mode, 54
  - snapping to, 127
- Measure tool, 106–110
  - angles in, 107
  - controls bar of, 108–110
  - creating measurement objects with, 109–110
  - dragging with, 107
  - hovering upon objects with, 106
  - segments in, 107–109
- Measure Segments path effect, 284
- measurements
  - distance markers for, 168
  - visualizing, for objects, 291
- Median extension, 398
- menu bar, 22–23
- Mesh Gradient tool, 188–195, 384
  - controls bar of
    - Fill/Stroke buttons, 190
    - Pick colors button, 195
    - Rectangular/Conical buttons, 190
    - Rows, Columns fields, 190
    - Smoothing list, 194
    - Straight line/Curve buttons, 192
  - selecting in, 81
- meshes, 188–195
  - conical, 190–192
  - converting to
    - bitmaps, 189
    - paths, 290
  - creating, 190
  - deleting, 193
  - editing in Node tool, 235
  - nodes of, 191–192
    - assigning colors to, 194–195
  - in PDF vs. SVG, 491
  - rasterizing, 495
  - rectangular, 190–192
  - subdiving, 192–193
- Mesh-Gradient to Path extension, 290
- metadata element (SVG), 9, 479
- Microsoft
  - Edge, 189
  - Internet Explorer, 9, 189
  - Office, 494
  - PowerPoint, 6–7
  - Silverlight, 9, 494
  - Visio, 6, 314, 494
- Mirror symmetry path effect, 271–272
- mirroring. *See* flipping
- miter joins, 162, 282
- mix-blend-mode property (CSS), 359
- mobile games, graphics for, 5, 465–470
- moiré pattern, 219, 279
- More Hue, Light, Saturation extensions, 157
- motion blur, 356, 363
- Motion extension, 287
- mouse
  - canvas rotating with, 53
  - canvas scrolling with, 24



- click/drag threshold of, 80–81, 93
- cursor changing, 80–81, 125, 127
- dragging with, 92, 114, 304
- freehand drawings with, 442
- grab sensitivity of, 80
- moving with, 21, 28
- panning with, 24, 52
- scrolling with, 52
- selecting with a scroll wheel, 84
- stamping with, 65
- zooming with, 24, 50–51
- See also* dragging
- moving, 28, 481
  - automatic panning with, 52
  - away and back, 98
  - between layers, 64, 71, 426
  - clone's original, 338–340
  - clones, 338–339
  - constrained, 92
  - by keys, 30, 92, 97–98, 241
  - by mouse, 21, 28, 80
  - by numbers, 100–102
  - objects with gradients, 177
  - patterns, 196, 383
  - randomized, 133
  - relative other selected objects, 101–102
  - in Selector tool, 21, 28, 80, 92–93
  - by tablet pen, 80
  - in Tweak tool, 111–112
  - zoom level and, 98
  - See also* transformations
- Mozilla Firefox browser
  - support for meshes in, 189
  - viewing presentations in, 6
- MSIE. *See* Microsoft Internet Explorer
- multipage documents, 6, 14
- Multiply blending mode, 358
- MyPaint image editor, 5

## N

- namespaces, 476
- natural-media tools, 5
- Negative extension, 157
- .NET Framework, 494
- New From Template dialog, 40
- NiceCharts extension, 408
- No Filters mode, 55, 374, 454
- Node tool, 233–246
  - adding nodes in, 169, 231, 236–237
  - aligning and distributing in, 132
  - Bézier handles in, 227, 234
  - breaking paths in, 239
  - controls bar of, 235
    - Break nodes button, 239
    - Delete segment button, 239
    - Insert node button, 237
    - Join nodes button, 238
    - Join with segment button, 238
    - Make segment line/curve buttons, 242
    - Make selected segments lines button, 240
    - Show clipping paths button, 235, 382
    - Show handles button, 234, 240–241, 245
    - Show masks button, 235, 383
    - Show next editable path effect parameter button, 235, 255, 273, 301
    - Show path outline button, 234, 254, 277
    - Show transformation handles button, 245
    - X, Y fields, 243
  - deleting
    - nodes in, 169
    - segments in, 239
  - deselecting in, 89, 235
  - dragging in, 241
  - editing
    - filter area in, 360
    - gradients in, 176, 235
    - meshes in, 235
    - path effects in, 256, 263, 267, 271–272, 277–278, 282, 285
    - paths in, 235, 254–255
    - patterns in, 196, 235, 383
    - shapes in, 200, 235
    - Spiro paths in, 277
    - text in, 235
  - highlighting selected paths in, 234, 254
  - joining nodes in, 238
  - mesh nodes in, 192
  - moving guides in, 116
  - path outline in, 225
  - reversing subpaths in, 226
  - selecting in, 78, 81
    - multiple paths, 235
    - nodes, 234–236
    - objects, 235
  - switching node types in, 274
  - transforming nodes in, 114, 245–246
- nodes, 224, 234
  - adding, 169, 227, 231, 236–237, 245, 288, 446
  - adjacent but not connected by
    - segments, 224
  - aligning, 132, 243–244
  - auto-smooth, 240–241
  - copying, 238
  - creating with Pen tool, 295–296

- nodes (*continued*)
  - cuspl, 162, 239–240, 274, 276, 295–296, 385, 485
  - deleting, 169, 227, 231, 236
  - deselecting, 235
  - distances between, 236
  - distributing, 132, 169
  - duplicating, 237, 239
  - end, 224–225, 237, 296, 298
    - deleting, 236
    - joining, 238
  - flipping, 246
  - half-smooth, 239–240, 276
  - imitating, 284
  - jittering, 289
  - middle, 168, 224, 236, 239
  - moving, 242–245, 296
  - no styling for, 235
  - number of, 224
  - pasting, 238
  - reducing. *See* paths, simplifying
  - rotating/scaling, 246
  - sculpting, 244–245, 248, 428–429
  - selecting, 234–236
  - smooth, 237–240–241, 276, 295–296, 485
  - snapping, 126, 243
  - symmetric, 240–241, 485
  - See also* Bézier curves, paths, straight lines
- Noise Fill filter, 366
- Normal view mode, 54
- Normalize extension, 398
- Number Nodes extension, 291

## O

- Object menu
  - Align and Distribute command, 128
  - Arrange command, 135
  - Clip submenu
    - Release command, 313, 382
    - Set command, 382
    - Set Inverse (LPE) command, 282
  - Group command, 67
  - Lower, Lower to Bottom commands, 62
  - Mask submenu
    - Release command, 382
    - Set command, 382
    - Set Inverse (LPE) command, 282
  - Object Properties command, 57
  - Objects command, 74
  - Objects to Guides command, 119
  - Objects to Marker command, 171
  - Paint Servers command, 198

- Pattern submenu
  - Objects to Pattern command, 195
  - Pattern to Objects command, 196
- Pop Selected Objects out of Group command, 72
- Raise, Raise to Top commands, 62
- Symbols command, 351
- Ungroup command, 68, 206
- Unhide All, Unlock All commands, 59
- Object Properties dialog, 57–58, 351
- objects, 2, 57–76
  - arranging, 115, 122, 135–137
  - background, 70, 80
  - clipboard operations on, 31, 64, 70, 72, 105, 139, 180, 196, 426
  - converting to
    - guides, 119
    - markers, 171
    - patterns, 195
  - coordinates of, 59–61, 106
  - creating, 24–27, 61, 64, 70
  - cropping, 364
  - deleting, 83, 112
  - duplicating, 29, 34–35, 64–65
  - edges of, 383, 460
  - editing, 2
  - exchanging places of, 99
  - extracting from patterns, 196
  - feathering out, 186, 355, 383
  - fixed point of, 485
  - grouping. *See* groups
  - hidden, 58–59, 75, 78, 82–83, 87
  - IDs of, 58, 89, 141, 394, 485
  - interpolating, 287, 425–426, 429
  - invisible, 31, 54, 82–83, 142
  - labels of, 58, 485
  - linked, 89
  - locked, 58–59, 75, 78, 82–83, 87
  - metadata of, 58, 75
  - next/previous, 28
  - order of. *See* z-order
  - in Outline mode, 53–54
  - in Outline Overlay mode, 55
  - overlapping, 61, 66–67, 132, 135
  - preserving relative positions of, 69
  - properties of, 5, 57–59
  - reusability of, 3
  - rotation fixed point of, 96–97
  - scaling, 33–34
  - searching, 87–88
  - selecting
    - all, 28
    - via command line, 89, 500, 502, 504

- by filter usage, 368
- in Gradient tool, 81
- locked or hidden, 58–59, 78, 83
- multiple, 28, 61, 63, 81–83
- in Node tool, 81, 235
- in Outline mode, 54, 80
- by properties, 87
- in Selector tool, 27, 31, 34, 80–81
- in shape tools, 81, 200
- under other objects, 83–85, 92
- within groups, 63, 81, 85, 92
- size of, 59, 61, 105–106
- spraying, 65–67, 156
- stamping, 65
- styling, 30–31, 405
- swapping, 132–133, 137
- transforming, 28–30
- transparent, 80, 88
- types of, 5
- Objects dialog, 74, 234
- ODG (OpenDocument Drawing Document Format), 494
- Offset path effect, 282
- offsetting, 232–233
  - from paths, 281–282, 286
  - from stars, 218
- oil paint imitation, 5
- Oil Painting filter, 398
- Old Paint pattern, 198
- onclick, onmouseover attributes (JavaScript), 58
- online vector editors, 13
- opacity, 31, 88, 144–145
  - accumulated, 153
  - assigning, 152–154
  - of clones, 340, 348
  - fill, 144, 150
  - master, 144–145, 150, 156, 182, 186
  - order of rendering and, 173
  - picking, 152–154
  - rasterizing, 493, 495
  - reduced for tracing, 451
  - stroke, 144–145, 150
  - tweaking, 156
  - See also* transparency
- Opacity filter, 365
- Open dialog, 45
  - file formats in, 411, 487
- Open Clip Art Library, 8
- open source software, 8, 14–16
- OpenDocument Drawing Document Format (ODG), 494

- OpenOffice suite, 494
  - Impress, 6
- OpenType fonts, 324, 326
- orient attribute (SVG), 172
- Outline mode, 53–55, 161
  - bounding boxes and, 61
  - for filters, 374
  - for polygons/stars with too many corners, 216
  - selecting objects in, 80
  - stroke with in, 161
- Outline Overlay mode, 55
- outlines, 233
- outsetting, 232, 281, 286
  - imitating by filters, 366
- overlaps
  - equalizing gaps and, 132
  - removing, 135
  - in Spray tool, 66–67
  - z-order and, 61
- Overlay blending mode, 358, 463

## P

- Packed Circles pattern, 197
- page
  - border of, 44
  - coordinate origin and, 59
  - exporting, 32
  - frame of, 21–22, 32
    - snapping to, 118
  - orientation of, 43
  - size of, 43–44, 416
- page layout software, 6
- paint. *See* colors, fill, stroke
- Paint bucket tool, 26, 309–312, 441
  - controls bar of
    - Close gaps list, 312
    - Fill by list, 311
    - Grow/shrink by control, 311
    - Threshold control, 311
  - drawing with, 294
  - selection cue in, 78
  - tool style of, 312
- paint programs, 5, 293
- Paint Servers dialog, 179, 198
- Painter. *See* Corel Painter
- palette control, 23, 147–149
  - clicking, 30, 33–34
  - dragging from, 21, 148
    - onto gradients, 182, 184
    - onto meshes, 194
  - editing, 149

- palette control (*continued*)
  - hidden, 46
  - hovering over, 87
  - settings of, 148
- panning, 24, 52
  - automatic, 52
  - by keys, 52
  - by mouse, 24, 52
  - in Pen tool, 296
- Parallel path effect, 285
- parallelograms, 216
- Parametric Curves extension, 406–407
- parametric modeling, 6
- pastel imitation, 5
- pasting, 64
  - colors, 146, 150, 152
  - gradients, 180, 182
  - layers and, 70
  - nodes, 238
  - patterns, 196
  - in place, 64, 72
  - sizes, 105
    - to multiple objects separately, 106
    - style, 139
    - on top of current selection, 64
- Path Effect Editor dialog, 254–256, 282, 285, 297, 301–302
  - hidden effects in, 284
- path effects, 14, 251–286
  - applied to
    - groups, 252–254, 263
    - shapes, 252, 263
    - spirals, 221
  - clipboard operations on, 253
  - compatibility of, 252–253
  - default parameters for, 256
  - editing in Node tool, 235, 255–256
  - flattening, 253
  - removing, 253, 255
  - stacking, 252
  - visible shape and, 252
  - vs. extensions, 286, 404
- path element (SVG), 200, 252, 315, 484
- PATH environment variable, 487, 492, 495
- Path menu
  - Break Apart command, 225, 239
  - Combine command, 225, 228, 230, 333, 425
  - Cut Path command, 230
  - Difference command, 229, 307
  - Division command, 230–231
  - Dynamic Offset command, 282
  - Exclusion command, 230
  - Fill between paths command, 272
  - Inset command, 233, 311
  - Intersection command, 229
  - Linked Offset command, 282
  - Object to Path command, 206, 253, 302, 333
  - Outset command, 233, 311
  - Paste Path Effect command, 253
  - Remove Path Effect command, 253
  - Reverse command, 225–226, 261, 287, 323
  - Simplify command, 170, 227, 231–232
  - Stroke to Path command, 171, 226
  - Trace Bitmap command, 461
  - Union command, 226, 228, 307, 310
- Path to Mesh-Gradient extension, 290
- paths, 4, 223–250
  - approximating freehand lines with, 297
  - averaging, 299
  - blending, 287, 307
  - Boolean operations on, 226, 228–231, 281, 307, 310, 384
    - cutting, 230
    - difference, 229
    - division, 230–231
    - exclusion, 230
    - intersection, 229
    - with path effects, 253
    - union, 228–229
  - breaking into subpaths, 239, 253, 278
  - canceling, 296
  - clipping, 229, 282, 313, 382
  - cloning, 270
  - closed, 246, 295
  - combining, 253, 333
  - continuing, 296, 298
  - converting
    - from bitmaps, 144
    - to guides, 119–120
    - to meshes, 190, 290
    - from a stroke, 171, 226
    - from text, 156, 228, 333, 503
  - creating, 25–26
  - curvilinear, 162
  - direction of, 225, 235, 249, 261, 287, 323
  - distorting, 170, 232–233, 236, 240, 247, 250, 263–269, 290
  - editing, 254
  - erasing unneeded parts of, 229, 249
  - extensions for, 286–291
  - fill of, 142, 225–226, 230, 258, 310
  - fill rule of, 143, 225–226, 228, 238, 271
  - fill-between, 272–273
  - gaps in, 224, 278

- highlighting, 234, 254, 277
- holes in, 143, 226, 228–229, 238
- invisible, 170
- length of, 106, 224
- linked, 255–256
- markers on. *See* markers
- mirroring, 271–272
- nodes of. *See* nodes
- offsetting, 218, 232–233, 418–419, 441, 454
  - dynamic and linked offsets for, 233
- open, 142, 163, 233, 246, 296, 298
- in Outline mode, 54, 61
- randomizing, 289–290
- rounding corners of, 277–278
- sculpting, 248
- segments of, 224
  - changing types of, 242
  - clicking in Node tool, 235
  - deleting, 239
  - dividing, 288
  - measuring, 107–109
  - See also* Bézier curves, straight lines
- self-intersecting, 143, 226, 278
- simplifying, 170, 227–228, 231–232, 236, 247, 269, 297, 300, 418–419, 441
- slicing, 270–271
- snapping to, 125–127
- stroke of, 226, 230
- style of, 225, 235
- subpaths of, 224–225
  - adding, 297, 309
  - breaking into separate paths, 225, 239
  - closed, 225
  - combining, 225, 228
  - copying and pasting, 238
  - direction of, 143, 225–226
  - erasing, 229
  - inside another subpath, 226
  - interpolating, 280–281
  - joining, 238
  - open, 225, 237
  - removing, 226, 228, 296, 309
  - selecting, 235
  - stitching, 279–280
- subtracting, 229
- text on, 225, 270, 321–323, 329
- tweaking, 246–250, 440, 455
- Pattern Along Path extension, 288
- Pattern Along Path path effect, 259–262, 288, 301–302
- distance parameters in, 261
- repeat modes of, 260–261
- patterns, 195–198
  - of clones. *See* clones, tiled
  - creating, 195–196, 383
  - definitions of, 478
  - editing in Node tool, 235
  - extracting tile objects from, 196
  - handles of, 196
  - spacing tiles in, 196
  - stock, 197–198, 420, 448, 485
  - symmetric, 337
  - on text objects, 324
  - transforming, 114, 195–197, 383
- patterns.svg* file, 198
- PDF (Portable Document Format), 9, 12, 488
  - exporting to, 4, 6, 161, 376, 401, 420, 491–492, 499, 502
  - filters and, 376, 492
  - importing, 7, 12, 499
  - mesh gradients in, 491
  - printing, 495
  - supporting in Inkscape, 4, 7, 12, 32, 488
  - viewers for, 32
- PDF Import Settings dialog, 489, 491–492
- pdf-\* command line options, 499
- pdflatex program, 408
- pebbles, 219
- Pen tool, 25, 294–297
  - bitmap tracing with, 385, 452
  - controls bar of, 299
    - Scale control, 300–301
    - Shape list, 260, 299–300–302
  - creating dots with, 214, 300
  - dragging in, 295
  - drawing with, 295–297
  - modes of, 299–300
    - BSpline, 300, 385
    - default, 299
    - Paraxial, 214, 300
    - Spiro, 300, 302, 385
    - Straight lines, 214, 300, 385
  - panning in, 296
  - scrolling in, 296
  - selection cue in, 78
  - shaped strokes in, 260, 299–302
  - stroke width in, 113
  - tool style of, 299
  - zooming in, 296
- Pencil tool, 25, 297–299
  - applying fill style with, 30, 150
  - averaging in, 299
  - bitmap tracing with, 452

- Pencil tool (*continued*)
  - controls bar of
    - Scale control, 300–301
    - Shape list, 260, 298, 300–302
    - Smoothing control, 297–298
  - drawing with, 294, 297–298
  - modes of, 299–300
    - BSpline, 300, 385
    - default, 299
    - pressure-sensitive, 257, 298
    - Sketch, 299
    - Spiro, 300, 385
    - Straight lines, 385
  - selection cue in, 78
  - shaped strokes in, 259–260, 300–302
  - smoothness of, 297
  - stroke width in, 113
  - tool style of, 299
- Perpendicular bisector path effect, 285
- perspective, 206–209, 264, 431, 433, 481
  - changing, 208
- Perspective Transformation path
  - effect, 264
- phantom measurements, 109
- photos
  - importing, 4, 26
  - retouching, 5, 189, 193–194, 384
  - sprucing-up, 462–463
  - See also* bitmaps
- Photoshop. *See* Adobe Photoshop
- pipe command line option, 499
- pixel art, 391
- Pixel Snap extension, 290
- Pixelize filter, 366, 393
- pixels, 1–2
  - clipping, 382
  - screen, 80, 127, 480
  - sharpening borders of, 357
  - SVG, 43, 60, 100, 326, 480
- plans, 5
- Plot extension, 405
- PNG (Portable Network Graphics) format
  - background of, 44
  - compression level of, 395
  - converting into
    - TIFF, 401, 420
  - exporting to, 32, 43–44, 376, 392–396, 420, 495, 499–502
  - importing, 378, 495
  - optimized, 394–396
- pngcrush utility, 395
- Polka Dots patterns, 134, 197
- polyfill scripts, 189
- polygons, 199, 215–219
  - converting to paths, 200
  - creating, 216
  - editing handles of, 216
  - in Inkscape vs. SVG, 200
  - meshes on, 190
  - randomizing, 218–219
  - rounding, 217–218
  - snapping to, 126
  - tessellating a plane with, 288
  - transforming, 216
  - See also* stars, shapes
- Poppler library, 489
- Portable Document Format. *See* PDF
- Portable Document Format dialog, 491
- Portable Network Graphics format. *See* PNG
- posters, 5–6
- PostScript dialog, 492
- PostScript format, 9, 11–12, 492
  - Encapsulated. *See* EPS
  - exporting to, 376, 492, 499, 502
  - filters and, 376
  - importing, 12, 492
  - limitations of, 11
  - memory consumption of, 11
  - printing, 495
  - supporting in Inkscape, 7
- Potrace utility, 386, 461
- POVRay package, 494
- Power clip, Power mask path effects, 282
- Power stroke path effect, 257–258, 298, 301–302
  - on paths with fill, 273
- PowerPoint. *See* Microsoft PowerPoint
- preferences, 38–39
  - saved automatically, 38
- Preferences dialog, 38–39
  - 3D Box page, 201–202
  - Behavior page, 64, 231
  - Calligraphy page, 78
  - Clones page, 340, 342–343
  - Color management page, 55, 147, 400
  - Connector page, 78
  - Dropper page, 78
  - Ellipse page, 201–202
  - floating tool tips in, 38
  - Gradient page, 78, 180
  - Imported Images page, 54, 379, 381, 397
  - Input Devices page, 80–81
  - Interface page, 59, 93, 481
  - Keyboard page, 42
  - Markers page, 170

- Node page, 78, 192, 225
- opening by double-clicking a tool button, 201
- Paint Bucket page, 78, 312
- Pen page, 78, 214, 300
- Pencil page, 78, 299
- Rectangle page, 201–202
- Rendering page, 375
- Scrolling page, 50–52
- searching in, 38
- Selecting page, 86–87, 89
- Selector page, 78
- Shapes page, 78
- Snapping page, 127–128
- Spellcheck page, 333
- Spiral page, 201–202
- Spray page, 78
- Star page, 201–202
- Steps page, 50, 53, 95, 98–99, 107, 178, 296
- SVG Output page, 468–469
- System page, 38, 41, 149, 198, 253, 324, 352, 362, 414, 498
- Text page, 78, 324
- Theme page, 49
- Tools page, 61, 119
- Transforms page, 467, 482
- Tweak page, 78
- Windows page, 47, 49
- Zoom page, 78
- preferences.xml* file, 38–39, 54
  - predefined dash patterns in, 165
- presentations, 6
- `preserveAspectRatio` attribute (SVG), 381
- pressure-sensitive devices, 41
  - with Calligraphic pen tool, 302–304, 437, 452
  - with Power stroke effect, 257–259, 298
  - setting up, 41
  - with Spray tool, 66
  - with Tweak tool, 111–112, 155–157, 247, 357
- Print dialog, 495
- print service providers, 399, 421
- printers, 11
  - color model in, 146
  - emulating colors of, 55
  - output previewing, 400
- printing, 6, 495
  - document page and, 43
  - from SVG, 146
- produce-gif.py* file, 427, 429
- properties (CSS), 140–141

- PSTricks package, 495
- px. *See* SVG pixel
- Python language, 411
  - calculating bounding boxes with, 503
  - creating
    - Inscape extensions with, 408–414
    - layers with, 423–424
  - exporting with, 426–427
  - mathematical functions in, 407
  - optimizing SVG with, 469

## Q

- QCAD package, 6
- QR Code extension, 406
- query-\* command line options, 503

## R

- rANdOm CasE extension, 335
- Random Tree extension, 408
- randomizing, 218
  - colors, 155, 430
  - dots, 134, 166, 197, 214
  - objects, 112, 133
  - paths, 255, 280, 289–290
  - polygons, 218–219
  - stars, 218–219
  - tiled clones, 344, 347, 458
- rasters. *See* bitmaps
- RDF (Resource Description Framework), 479
- rect element (SVG), 200, 481–484
- Rectangle tool, 20, 24
  - controls bar of, 201
  - New/Change label, 201
  - Rx, Ry fields, 205
  - style swatch, 201
  - unit drop-down menu, 203
  - W, H fields, 203
- deselecting in, 89
- dragging in, 200, 202
- editing
  - filter area in, 360
  - gradients in, 176
  - path effects in, 256
  - patterns in, 196, 383
  - shapes in, 200
- rotating in, 203
- scaling in, 203–204
- selecting in, 78, 81, 200
- styling in, 202

- rectangles, 199, 202–205
    - axonometric, 204
    - converting
      - from bitmaps, 383
      - to ellipses, 205
      - to guides, 119–120
      - to paths, 200, 384
    - creating, 20, 200, 202
      - from the center, 202
    - editing handles of, 200, 203–205
    - integer-ratio, 202
    - isometric, 444
    - with rounded corners, 203–205, 217, 445–447
      - elliptic, 204
      - removing rounding, 205
      - scaling, 113, 205
    - selecting, 200
    - skewing, 205
    - snapping, 204
    - styling, 201–202
    - transforming, 203–204
    - using for technical drawings, 443
    - See also* shapes
  - Reddit community, 8
  - Reduce Noise extension, 398
  - registered mark sign, 332
  - Remove Blue, Green, Red extensions, 157
  - rendering modes, 53–55
  - rendering order, 170, 172–173
  - repetitiveness, 197
  - Replace color extension, 157
  - Replace Font extension, 335
  - Resample extension, 398
  - resizing. *See* scaling
  - Restack extension, 63–64, 133, 405, 459
  - retouching, 5, 189, 193–194, 384
  - RGB color model, 87, 145–146
    - converting from/to CMYK, 146
    - inverting colors in, 150
    - modifying channels in, 157
  - rhombuses, 216
  - road signs, 5
  - rot attribute (SVG), 330
  - Rotate copies path effect, 272
  - rotating, 28–30, 481
    - by 90 degrees, 99
    - bounding boxes and, 60
    - canvas, 294
    - characters, 329
    - clone's original, 338–339
    - clones, 338–339
    - constrained, 95, 99, 296
    - in Ellipse tool, 214
    - guides, 116
    - by keys, 30, 95–96, 99
    - multiple objects separately, 103
    - by numbers, 103
    - objects with
      - filters, 356
      - gradients, 177
    - patterns, 197, 383
    - in Rectangle tool, 203
    - in Selector tool, 29–30, 94–97
    - in Star tool, 216
    - transform attribute and, 467
    - in Tweak tool, 112
    - zoom level and, 99
    - See also* transformations
  - rotation fixed point, 96–97, 485
    - default, 96
    - as marker's anchor point, 171
    - moving, 96–97
    - of multiple selected objects, 97, 103–104
    - scaling and, 94
    - snapping, 96
    - snapping to, 126
  - Roughen filter, 364, 462
  - Roughen path effect, 268–269, 466
  - round caps, 163, 165
  - round joins, 162
  - rubber band
    - selecting with, 28, 31, 34, 80–82, 181
    - in Node tool, 235
    - zooming with, 51
  - Rubber Stretch extension, 290
  - Ruler path effect, 284
  - rulers, 21, 59–60
    - dragging off, 116
    - hidden, 46, 59
    - triangular markers on, 59
    - visible, 116
- ## S
- Sand pattern, 198
  - Sandy Blur filter, 369–373, 454
  - saturation, 147
    - adjusting, 398
    - with color extensions, 157
    - with color gestures, 151
  - desaturating, 157
  - maximizing, 152
  - tweaking, 156
  - Saturation blending mode, 358



- Save dialog, 31–32, 401, 469, 487
  - file formats in, 412
- Save a Copy dialog, 469, 487
  - file formats in, 491
- Save As dialog, 469, 487
  - file formats in, 412, 491
- scalability, 2
- Scalable Vector Graphics. *See* SVG
- scaling, 28–29, 33–34, 481
  - around rotation fixed point, 94, 96, 103
  - aspect ratio of, 93, 98, 113
  - clone's original, 338–339
  - clones, 338–340
  - in Ellipse tool, 214
  - by integer multipliers, 94
  - by keys, 30, 94, 98–99
  - multiple objects separately, 103, 106
  - nonuniform, 356
  - by numbers, 100, 102–103
  - objects with gradients, 177
  - patterns, 195–196, 383
  - by percent, 100, 102–103
  - proportional, 61, 93–94, 102
  - in Rectangle tool, 203–204
  - rectangles with rounded corners, 113, 205
  - in Selector tool, 93–95, 203
  - in Star tool, 216
  - stroke width and, 113
  - in Tweak tool, 112
  - twice, 99, 447
  - undoing, 93
  - zoom level and, 98
  - See also* transformations
- schemes, 5
- scientific illustrations, 5
- scissors markers, 168
- Screen blending mode, 358
- screen pixel, 80, 480
  - snapping and, 127
- screen proofing, 400
- Scribus program, 6, 401
- scripts, 7
- scroll bars, 21, 52
  - hidden, 24, 38, 46, 52
- scrolling, 52
  - almost infinite, 22
  - by keys, 24
  - by mouse, 52
  - in Pen tool, 296
- searching for objects, 87–88
- Select a filename for exporting dialog, 394
- selected style indicator
  - color gestures in, 150–152, 182
  - for multiple selected
    - gradient handles, 182
    - objects, 79, 146, 152
  - opacity field in, 144
  - paint controls in, 30–31, 34, 87, 142, 146, 149–150, 152, 341
    - for gradients, 178
    - limitations of, 157
    - middle-clicking on, 31, 33, 150, 155
    - for selected gradient handles, 182
  - stroke width in, 160–161
  - subselection and, 79
- selecting, 27–28, 77–89
  - in 3D Box tool, 81, 200
  - all objects, 28
  - in bitmap editors, 2
  - via command line, 89, 500, 504
  - in Connector tool, 81
  - in Ellipse tool, 81, 200
  - in Gradient tool, 79, 81, 176, 181
  - groups, 67–68, 85
  - inside groups, 92
  - by keys, 28, 86–87, 181, 309
  - locked or hidden objects, 58–59, 78, 82–83
  - in Mesh Gradient tool, 81
  - multiple objects, 28, 61, 81–83
    - in different layers, 63
  - in Node tool, 81, 234–236
  - by object properties, 87
  - objects using a filter, 368
  - in Outline mode, 54, 80
  - in Rectangle tool, 81, 200
  - by rubber band, 28, 31, 34, 80–82, 235
  - in Selector tool, 27
  - small objects, 80
  - in Spiral tool, 81, 200
  - in Star tool, 81, 200
  - in Text tool, 79, 81, 318–319, 328, 330
  - touch, 83
  - under, 83–85, 92
  - in XML Editor, 75
  - z-order and, 61
- selection
  - adding objects to, 27, 81, 83–84, 200
  - current layer and, 82
  - deselecting, 27–28, 80–81, 89, 200
  - dimensions of, 100
  - exporting, 32
  - followed by current layer, 70, 79
  - inverting, 89, 236

- selection (*continued*)
  - local to editing window, 77
  - moving, 101–102
  - of multiple objects, 79, 183
    - applying gradients to, 176
    - assigning stroke width to, 161
    - averaged color of, 146, 152
    - batch exporting, 394
    - displayed style of, 142
  - panning into, 52, 78
  - pasting objects on top of, 64
  - position of, 100
  - removing objects from, 27, 81, 84, 200
  - resizing page to, 44
  - rotation fixed point of, 96–97
  - style of, 30–31, 79, 146, 152
  - zooming into, 51
  - z-order and, 96
- selection cue, 27, 78
- Selector tool, 12
  - 3D boxes in, 206, 209
  - automatic panning in, 52
  - controls bar of
    - Affect buttons, 113–114, 177, 205, 340
    - lock button, 61, 93–94, 100
    - Toggle selection box to select all touched objects button, 82
    - transformation buttons, 99
    - units drop-down menu, 61, 100
    - W, H fields, 43, 60–61, 100
    - X, Y fields, 43, 60–61, 100
    - z-order buttons, 62
  - deselecting in, 89
  - dragging in, 21, 28, 33, 80, 82–83, 92–93, 114, 123
  - on groups, 67–68
  - moving guides in, 116
  - no perspective transformations in, 481
  - rotating in, 29–30, 94–97, 216
  - scaling in, 29, 93–95, 203, 216
  - selecting in, 27–28, 80–81
  - selection cue in, 78
  - skewing in, 30, 95
  - switching to, 27, 53
  - text objects in, 317, 319
  - touch selection in, 83
  - transforming in, 28–30, 65
- selectors (CSS), 140–142
- Selectors and CSS dialog, 140–141, 341
  - dash patterns in, 164–165
  - font names in, 491
  - markers in, 172
- Sentence case extension, 335
- Sepia filter, 357
- Set Attributes extension, 405
- Set Image Attributes extension, 381
- shaders, 186–187
- shadows, 233
- shape-inside property (CSS), 322
- shapes, 24, 199–221, 484
  - applying path effects to, 252, 263
  - Boolean operations on, 228
  - combining, 253
  - converting to
    - meshes, 190
    - paths, 200, 228
  - creating, 25, 200
  - editing, 200
    - in Node tool, 235
    - in shape tools, 25
  - in Inkscape vs. SVG, 200, 484
  - length of, 106
  - in Outline mode, 54
  - parameters of, 201
  - selecting, 200
  - as separate object types, 13
  - slicing, 271
  - See also* individual shapes
- Sharpen extension, 398
- Sharpen filter, 357, 365, 463
- Sharpen More filter, 463
- shears. *See* skewing
- shell command line option, 505
- Show handles path effect, 283–284
- Silhouette filter, 365
- Simple Blend filter, 364
- Simplify path effect, 269
  - with Pencil tool, 297, 300, 302
- SIOX (Simple Interactive Object eXtraction), 390
- Sketch path effect, 252, 264–266
- sketching, 299, 303, 435, 437–438
- SketchUp suite, 6
- skewing, 28–30, 481
  - around rotation fixed point, 96
  - clone's original, 338–339
  - clones, 338–339
  - constrained, 95–96
  - in Ellipse tool, 214
  - multiple objects separately, 104
  - by numbers, 104, 444
  - objects with
    - filters, 356
    - gradients, 177
  - in Rectangle tool, 203
  - rectangles with round corners, 205

- in Selector tool, 30, 95
- See also* transformations
- Slice path effect, 270–271
- snap controls bar, 23, 123–126, 433
- snapping, 6, 115, 122–128
  - centers of objects, 126
  - clones, 339
  - current modes of, 479
  - depending on screen pixels, 127
  - disabling, 116, 121, 123
  - rotation fixed points, 126
  - snappables for, 122
    - 3D boxes, 210
    - gradient handles, 184
    - node handles, 243
    - nodes, 290
    - rotation fixed point, 96
    - shape handles, 204
  - suppressing temporarily, 93
  - targets of, 122
    - bounding boxes, 124–125
    - grids, 120–121, 126, 290
    - guides, 116–117
    - nodes, 126, 433
    - paths, 125–127, 433
  - text anchors, 126
  - using for technical drawings, 443
  - visual clues for, 125, 127
  - zoom and, 127
- Sodipodi image editor, 15–16, 477
- sodipodi:absref attribute, 379
- sodipodi:namedview attribute, 478, 485
- sodipodi:nodetypes attribute, 485
- sodipodi:role attribute, 485
- sodipodi:type attribute, 484–485
- sodipodi:version attribute, 477
- Soft Colors filter, 158
- Soft Light blending mode, 358
- spaces, in command line calls, 504
- spans
  - formatting, 318
  - styling, 323–324
- Speckle filter, 460
- spellchecker, 333–334
- Spiral tool, 24, 220
  - controls bar of, 201
    - Divergence field, 220
    - Inner radius field, 220
    - New/Change label, 201
    - style swatch, 201
    - Turns field, 220
  - deselecting in, 89
  - dragging in, 200, 220
  - editing
    - filter area in, 360
    - gradients in, 176
    - path effects in, 256
    - patterns in, 196
    - shapes in, 200
  - fixed style of, 220
  - selecting in, 78, 81, 200
  - styling in, 202
- spirals, 199, 220–221
  - converting to paths, 200
  - creating, 200, 220
  - dashed, 166, 221
  - divergence of, 220
  - editing handles of, 200, 220–221
  - in Inkscape vs. SVG, 200
  - parameters of, 220–221
  - selecting, 200
  - styling, 201–202
  - transforming, 221
  - vs. Bézier curves, 221
  - See also* shapes
- Spiro paths, 275–277
  - vs. Bézier curves, 275
- Spiro spline path effect, 240, 276–277
  - bitmap tracing in, 385
  - with Pen or Pencil tools, 300, 302
- Spirograph extension, 408
- splash animation, 470
- splines, 274–277
- Split text extension, 335
- Split View mode, 54
- Spray tool, 65–67, 156
  - Eraser mode of, 67
  - overlapping options of, 67
  - selection cue in, 78
- square caps, 163, 165
- squares
  - creating, 202
  - as markers, 168
  - turning into circles, 205
  - See also* rectangles
- stable versions, 17–18
- stamping, 65
- Star tool, 24, 215
  - controls bar of, 201, 216–218
    - Corners field, 216
    - New/Change label, 201
    - Polygon/Star buttons, 216
    - Randomized field, 218
    - Rounded field, 218
    - Spoke ratio field, 216
    - style swatch, 201

- Star tool (*continued*)
  - deselecting in, 89
  - dragging in, 200, 216
  - editing
    - filter area in, 360
    - gradients in, 176
    - path effects in, 256
    - patterns in, 196
    - shapes in, 200
  - selecting in, 78, 81, 200
  - styling in, 202
- stars, 199, 215–219
  - converting to
    - guides, 120
    - paths, 200
  - creating, 200, 216
  - editing handles of, 200, 216–218
    - moving tangentially, 217–218
  - in Inkscape vs. SVG, 200
  - meshes on, 190
  - mirroring, 272
  - offsetting, 218
  - randomizing, 218–219
  - rounding, 217–218
  - selecting, 200
  - snapping to, 126
  - spoke ratio of, 216
  - styling, 201–202
  - See also* polygons, shapes
- status bar, 23
  - canvas rotation indicator in, 53
  - coordinates in, 59
  - current layer indicator in, 72, 79
  - hidden, 46
  - hints in, 43
  - messages in, 23, 27, 78–79
    - for Bézier handles, 241
    - for bitmaps, 378–379
    - for clones, 342
    - for colors, 151–152, 154
    - error, 89
    - for filters, 359, 361
    - for gradients, 181, 183
    - for groups, 68
    - for guide tracking, 308
    - for layers, 70
    - for path effects, 253
    - for shapes, 200
    - for text objects, 319
  - selected style indicator in, 30–31, 33–34
    - color gestures in, 150–152
    - for gradients, 178, 182
    - opacity field of, 144
    - paint controls of, 79, 142, 146, 149–150, 152, 155, 157
    - stroke width in, 160–161
    - zoom field in, 50, 480
- Stitch Sub-Paths path effect, 279–280
- stock palettes, 148
- straight lines
  - bitmap tracing with, 385
  - converting into Bézier curves, 242
  - creating, 25, 119, 294, 299
  - curving, 232
  - grids of, 420
  - horizontal or vertical, 296
  - mid markers on, 168
  - midpoints of, snapping to, 126
  - paraxial, 300
- Straighten Segments extension, 288
- Stripes patterns, 197
- stroke, 4, 159–172
  - assigning, 147
    - in Dropper tool, 153
    - to selected objects, 30, 161
    - in Tweak tool, 154
  - bounding boxes and, 61
  - caps of, 163–164–165
  - color of, adjusting with
    - extensions, 157
    - gestures, 151–152
  - converting to a filled path, 171, 226
  - cusps of, 162, 162
  - dashed, 164–166, 283
  - default, 142, 150
  - editing, 149
  - imitating by filters, 366
  - joins of, 162–163
  - last selected, 150
  - last set, 149
  - markers of, 166–172
  - none, 142, 150, 160
    - in SVG, 88
  - not applied to gradient stops, 182
  - opacity of, 144–145, 150
  - in Outline mode, 54, 161
  - painted with
    - flat color, 142
    - gradient, 176
    - mesh, 190
    - pattern, 195
    - same color as fill, 233
    - text, 301
  - positioning, relative to path, 145, 173, 226
  - removing, 31, 33, 148

- rendering order of, 172–173
- shape of, 257–258, 300–302
- swapping with fill, 150
- unset, 142, 144, 150, 177, 341, 349, 483
- width of, 159–161
  - adjusting with gestures, 160
  - averaged, 161
  - hairline, 55, 161, 303, 305
  - setting, 160–161, 300–301
  - while scaling, 113
- See also* colors, style
- stroke-dasharray property (CSS), 165
- stroke-linecap property (CSS), 164
- stroke-linejoin property (CSS), 163
- stroke-miterlimit property (CSS), 163
- stroke-width property (CSS), 140
- style, 30–31, 139–158, 482–483
  - averaged, 79, 182
  - changing, and z-order, 61
  - clipboard operations on, 31, 139, 182
  - inheriting, 68, 482
  - last selected, 215
  - last set, 201, 212, 299, 312
  - pasting, 182
  - searching objects by, 87
  - shared by multiple objects, 405
  - unset, 483
- See also* fill, stroke, opacity
- style attribute (SVG), 76, 87–88, 140–141, 482
- style element (SVG), 141
- subpaths. *See* paths, subpaths of
- subscripts and superscripts, 328
- subselection, 79, 89
- svg element (SVG), 394, 475–477
- SVG (Scalable Vector Graphics), 473–486
  - animated, 3, 7, 9, 423
  - compressed, 9, 488
  - converting to PDF, 4, 6
  - coordinate origin in, 59
  - displaying in browsers, 8–9, 32
  - document properties in, 39
  - embedded
    - fonts in, 9, 335
    - JavaScript in, 58, 405
  - files available to reuse, 8
  - filters in, 353, 359–360
  - groups vs. layers in, 479
  - hatches in, 198
  - history of, 8–9
  - Inkscape SVG, 9, 32, 44–45, 477, 484, 488
  - interactivity in, 3
  - limitations of, 14, 189
    - no branching paths in, 224
    - no nonlinear gradient profiles, 185
    - no path effects in, 252, 286
    - no shaped strokes in, 301
  - manual editing, 3, 74
  - namespace of, 477
  - optimizing, 469
  - Plain SVG, 9, 477, 488, 500
  - primary color model in, 145
  - printing, 146
  - shapes in, 200
  - specification of, 369, 473
  - storing affine transformations in, 91, 481
  - stroke properties in, 161, 163–165
  - style selectors in, 141
  - supporting in Inkscape, 4, 9
  - Unicode in, 9
  - using CSS, 140
  - versions of, 8
  - z-order of elements in, 62
- SVG editors
  - path effects in, 253
  - shapes in, 484
- SVG Font Editor dialog, 335
- SVG pixel, 43, 326, 480
- inches and, 60, 100
- SVG viewers, 484
  - background in, 45
  - displaying page only, 21, 43
  - hairline width in, 161
  - in Inkscape. *See* Inkview
  - JavaScript-enabled, 58
  - path effects in, 252
  - plug-ins for Internet Explorer, 9
- SVG-Edit image editor, 14
- SVGZ (Compressed Scalable Vector Graphics), 9, 488
- swatches, 142, 149
- Swatches dialog, 148
- Swirl extension, 398
- symbols, 5, 351–352
- Symbols dialog, 351–352
- symmetry groups, 345–346
- system-data-directory command line option, 498

**T**

- tables of objects, 135–137
- tablet pen, 442
  - angle detection of, 305
  - dragging in, speed of, 304

- tablet pen (*continued*)
  - pressure-sensitivity of
    - with Calligraphic pen tool, 302–304, 437, 452
    - with Power stroke effect, 257–259, 298
    - with Spray tool, 66
    - with Tweak tool, 111–112, 155–157, 247, 357
  - zooming with, 50
- tags, in XML, 474
- Taper stroke path effect, 258, 273
- technical drawings, 314, 406–407
  - connector lines in, 6, 135, 170
  - creating, 408, 443–449
  - dots in, 300
  - geometric bounding boxes in, 61
  - isometric, 443
  - paths in, 231, 246
  - patterns in, 197
  - prepackaged symbols for, 351
  - rounded rectangles in, 114, 205
  - tracing, 452
- templates, 6, 40–41, 416
  - for animations, 424
  - creating, 41
  - default, 19, 40–41
  - initial layer in, 70
- tessellation, 346, 456–459
- TeX typesetting system, 6
- text, 317–336
  - aligning, 129, 320, 327
  - anchors of, 126
  - applying filters to, 324, 356
  - automatic hyphenation and, 320–321
  - baseline origin of, 330
  - Boolean operations on, 228
  - bounding box of, 321
  - case of, 334
  - clipboard operations on, 318–319, 324
  - converting to
    - meshes, 190
    - paths, 156, 228, 322, 333, 503
  - creating, 21, 26, 318–321
  - direction of, 326–327
  - distributing, 132
  - editing, 26, 317–318
  - extensions for, 334–335
  - flowed, 9, 26, 322
    - changing dimensions in Node tool, 235
  - formatting, 317–319
  - in-a-shape, 320–322, 327, 330
  - justified, 327
  - Kerning of, 328, 418
  - letter spacing of, 330, 418
  - ligatures in, 331
  - line spacing of, 330
  - linked to path, 270, 321–322
  - no path effects for, 252
  - in Outline mode, 54
  - painting strokes with, 301
  - on path, 89, 225, 322–323, 329
    - applied to spirals, 221
  - regular, 319–320, 322
  - rotating characters in, 329
  - scaling, 326
  - searching, 87
  - selecting, 318–319, 328, 330
  - special characters in, 331–332
  - spellchecking, 333–334
  - stroked, and join settings, 163
  - styling, 323–326
  - truncated, 320–321
  - word spacing of, 328, 330
  - wrapped, 319–320
- Text and Font dialog, 323, 325–326, 417
  - Features tab, 331
  - Text tab, 318
- text editing cursor, 317
  - moving, 317–318, 327
- text editors, 317
- text element (SVG), 319–322, 330, 485
- Text menu
  - Check Spelling command, 334
  - Convert to Text command, 322
  - Flow into Frame command, 321
  - Put on Path command, 322
  - Remove from Path command, 323
  - SVG Font Editor command, 335
  - Unflow command, 322
  - Unicode Characters command, 331
- text nodes, in XML, 75
- Text tool, 21, 26, 317–333
  - controls bar of, 323
    - Block progression list, 326–327
    - Font size list, 326
    - Glyph orientation list, 326–327
    - Horizontal kerning control, 328, 418
    - Select Font Family list, 324, 417
    - Spacing between baselines control, 330
    - Spacing between letters control, 330, 418
    - Spacing between words control, 330
    - Style list, 324
    - Subscript, Superscript buttons, 328
    - Text alignment list, 327
    - Text direction list, 326–327
  - default style of, 326

- deselecting in, 89
- dragging in, 321
- selecting in, 78–79, 81
- status bar messages in, 319
- switching to, 317
- zooming in, 50
- textPath element (SVG), 323
- textures, 4–5
  - adding, 198, 420
  - imitating, 363–367
- themes, 19, 49
- thinning. *See* Calligraphic pen tool
- thumbnails, 106
- TIFF format
  - color-separated, 401
  - converting from PNG, 420
  - exporting to, 394–396, 495
  - importing, 378, 495
- tiles, 195
  - extracting from patterns, 196
  - impossible to overlap, 196
- Title Case extension, 335
- title element (SVG), 58
- tool controls bar. *See* controls bar
- toolbox, 22, 24–27
  - double-clicking a button in, 201, 300, 312
  - hidden, 46
- touch selection, 83
- Trace Bitmap dialog, 310, 386–390
  - Mode tab, 386–390
  - Pixel art tab, 391
- tracing
  - background with
    - Calligraphic pen tool, 304, 428
    - clone tiler, 349–350, 456–459
  - bitmaps, 8, 227, 245, 310, 385–392, 451–462
    - automatic, 386–392
    - manual, 385
    - quality of, 387–388
  - by spraying, 66
- tracking. *See* text, letter spacing of
- trademark sign, 332
- transform attribute (SVG), 91, 105, 356, 467, 481–482
- Transform dialog, 96–97, 101–105
  - Matrix tab, 105
  - Move tab, 101–102
  - opening by keyboard, 101
  - Rotate tab, 103
  - Scale tab, 102–103
  - Skew tab, 104, 444
- transformation matrix, 105
- transformations, 28–30, 91–114, 481–482
  - affected properties of, 113–114, 177, 384
  - around rotation fixed point, 96
  - combined with selections, 12
  - by keys, 97–100
  - matrix of, 481
  - by mouse, 65
  - by numbers, 100, 443
  - z-order and, 61
  - See also* moving, scaling, rotating, skewing
- translations. *See* moving
- translucent glass imitation, 187
- Transmit Attributes extension, 405
- transparency, 13, 145
  - adjusting by filters, 364–365
  - flattening, 365
  - group, 69
  - in Outline mode, 53
  - in PDF, 12
  - for photorealistic images, 4
  - in PostScript, 11
  - selection and, 80
  - setting, 119
  - in SVG, 88
  - See also* opacity
- tremor. *See* Calligraphic pen tool
- Triangle extension, 406
- triangles, 216
  - as markers, 168
  - as stroke shapes, 301
- Trichrome filter, 364
- TrueType fonts, 324
- tspan element (SVG), 319–323, 485
- Turbulence primitive, 369–370, 453, 460
- Tweak tool
  - color modes of, 14, 154–157, 440
    - on 3D boxes, 212
    - Blur, 357
    - Color Jitter, 154–155
    - Color Paint, 154–155, 459
    - on gradients, 187–188
  - controls bar of
    - Channels buttons, 156
    - Fidelity field, 247
    - Mode buttons, 247
    - Width, Force fields, 111, 247
  - with gradient meshes, 491
  - path modes of, 246–250
    - on 3D boxes, 212
    - Attract/Repel, 249
    - Grow/Shrink, 248–249, 309, 452, 455
    - Push, 247–248, 309, 455
    - Roughen, 250

- Tweak tool (*continued*)
  - selection cue in, 78
  - simplifying paths in, 247
  - transform modes of, 111–113
    - Attract/Repel Objects, 111
    - Duplicate/Delete, 112
    - Move, 111
    - Move Jitter, 112
    - Rotate, 112
    - Scale, 112
- tweening, 425
- Type 1 fonts, 324
- Typography Canvas template, 335

## U

- Ubuntu
  - GUI palette for, 148
  - Software Center, 18
- uder-data-directory command line option, 498
- unclumping, 134
  - rounded pentagons, 219
  - tiled clones, 344, 459
- undo action
  - current selection and, 89
  - for extensions, 399, 404
  - history of, 3
  - limitations of, 51–52, 71
  - for meshes, 193
  - moving fixed points and, 96
  - offsetting and, 233
  - for scaling vs. zooming, 93
  - z-order and, 69
- Unicode, 331–332, 416
  - in SVG, 9
- Unicode Characters dialog, 331–332
- union operation, 226, 228–229
- units, 480
  - absolute, 100, 161
  - current, 479
  - default, 43, 60, 100, 480
  - percent, 100, 161
  - relative, 303
  - in Selector controls bar, 61, 100
- Unsharp Mask extension, 398
- UPPERCASE extension, 335
- urban signage, 351
- URLs (Universal Resource Locators), 476, 483
- US National Park Service Map
  - Symbols, 351
- use element (SVG), 339

## V

- vacuum-defs command line option, 500
- vanishing points, 207–209, 432–433
- vector brushes, 257
- vector editors, 293
  - importing Inkscape SVG into, 480
- vector effects, 9
- vector formats, 4
  - converting between, 4
  - document page and, 43
  - supporting in Inkscape, 487
  - See also individual formats*
- vector graphics, 1–5, 252, 293
  - interactivity of, 3
  - limitations of, 5–7
  - memory consumption of, 3
  - reusing, 7
  - scalability of, 2–3, 50
  - studying, 8
  - writing files manually, 3
- vector-effect:non-scaling-stroke property (SVG), 161
- verb command line option, 504
- version attribute (SVG), 477
- version command line option, 18, 498
- View menu
  - Canvas Orientation submenu, 53, 294
  - Color Display Mode submenu, 55
  - Color-Managed View command, 55, 400
  - Display Mode submenu
    - No Filters command, 55
    - Outline command, 54
    - Outline Overlay command, 55
    - Visible Hairlines command, 55
  - Duplicate Window command, 45
  - Fullscreen command, 46
  - Icon Preview command, 396
  - Show/Hide submenu, 24, 38, 46
    - Snap Controls Bar command, 123
  - Split Mode command, 54
  - X-Ray Mode command, 54
  - Zoom submenu, 52
    - Selection command, 290
- view area, 47
- vignettes, 5
- Visible Hairlines mode, 55, 161
- Visio. *See* Microsoft Visio
- vocabularies, in XML, 473, 475
- VonKoch path effect, 273
- Voronoi diagrams, 288
- Voronoi tessellation, 391
- VSD (Visio Drawing File Format), 494



## W

W3C (World Wide Web Consortium), 9  
Wacom graphic tablets, 41, 66  
watercolor imitation, 5, 369–373, 453  
Wave extension, 398  
Wavy pattern, 197  
WebP format, exporting to, 394–396, 495  
web-safe palette, 148  
Welcome dialog, 19  
Whirl extension, 290  
White Point extension, 398  
wiggle. *See* Calligraphic pen tool  
Wikimedia Commons, 8  
Wikipedia, 345  
window geometry, 47  
Windows  
    command line applications on, 498  
    GUI palette for, 148  
    Inkscape versions for, 18, 333  
Wireframe Sphere extension, 408  
WMF (Windows MetaFile Format),  
    494, 499  
WOFF fonts, 9  
word balloons, 351  
word processors, 317  
WordPerfect text processor, 494

## X

XAML (Extensible Application Markup  
    Language), 9, 494, 499  
Xara image editor, 13  
    gradients in, 14  
    GUI of, 14  
    selecting in, 82, 95  
    versions of, 13, 42  
XCF (eXperimental Computing Facility)  
    format, 495  
XHTML (Extensible HyperText Markup  
    Language), 473, 475  
XLink (XML Linking Language), 477, 483  
xlink:href attribute, 323, 339, 379,  
    476, 483  
XML (Extensible Markup Language), 8,  
    473–476

XML Editor dialog, 74–76  
    adding animation attributes with, 423  
    coordinate origin in, 59  
    editing markers in, 172  
    hidden or locked objects in, 75, 78  
    order of layers in, 75  
    status bar of, 75  
    style attributes in, 76, 87–88, 140  
XP-Pen graphic tablets, 41  
X-Ray mode, 54

## Z

Zoner Draw image editor, 42  
zoom, 50–52  
    adjusting amount of, 50  
    current level of, 50, 479  
    depth of, 3, 22, 50  
    different in multiple windows, 45  
    grid lines and, 121  
    history of, 52  
    by keys, 24, 50–52  
    by mouse, 24, 50–51  
    in Outline mode, 53  
    in Pen tool, 296  
    by rubber band, 51  
    saving with documents, 47  
    into selection, 51  
    snapping and, 127  
    by tablet pen, 50  
    in Text tool, 50  
    transformations and, 98–99  
    undoing, 51–52  
Zoom tool, 24, 51–52  
    Next Zoom, Previous Zoom buttons, 52  
    selection cue in, 78  
z-order, 61  
    of 3D boxes, 211  
    of fill vs. stroke, 145, 226  
    of groups, 69  
    of layers, 63–64  
    of objects, 61–64, 82–85, 479  
    rearranging, 62–64, 405, 458–459  
    selection and, 86, 96  
    in SVG, 62  
    vs. document order, 75