

Index

Symbols

- (hyphen)
 - in names, 81
 - in text, 228–232
- _ (underscore), in names, 81
- (em-dash), 227–228, 232
- / (slash), 178
 - in Cocoon, 370
 - in pathnames, xxxiv
 - in XPath, xxxv, 169
- ` (backquote)
 - in text, 232
 - in shell scripts, 349
-
- Names of elements, attributes, instructions, and functions are shown without namespace prefixes. Instead, for each name, its source vocabulary is specified. An exception is the custom extension functions (such as `files:dir()`) used in the book's examples; they are listed with their namespace prefixes.
- ' (single straight quote), 232
 - in text, 228–232
 - in XPath, 188
- ' ' (single curly quotes), 227–228, 232
- ' (apostrophe), 227–228
- " (double straight quote)
 - in text, 228–232
 - in XPath, 188
- “ ” (double curly quotes), 227–232
- () (parentheses), in a makefile, 352
- { } (curly braces), in XSLT, 286
- @ (at), in XPath, 335
- \$ (dollar sign), in a makefile, 352
- \$\$, in a makefile, 353
- * (asterisk)
 - in Cocoon, 369–370
 - in XPath, 162
- \ (backslash)
 - in a makefile, 352
 - in pathnames, xxxiv
- & (ampersand), 75

- # (hash), in URIs, 201
- % (per cent sign), in a makefile, 353
- < (left angle bracket), 75
- <? ?>, in PHP, 377
- <% %>, in ASP, 377
- =, operator, 165
- | (vertical bar), in XPath, 194

- 4**
- 404 error page, 18, 115
- 4Suite, 332, 339
- 4update, utility, 332
- 4xslt, 339

- A**
- a, HTML element type, 100–101, 108
- abbreviations, 118
 - in image locations, 118–121, 313
 - in names, 80
 - in links, 111–116, 130, 313, 370
 - see also* deabbreviation of links
- act, Cocoon sitemap element type, 378
- actions, 368, 377–378
- Active Server Pages, *see* ASP
- ActiveX controls, 117
 - see also* images
- Adobe Illustrator, graphic editor, 241
- advertisements, on a web page, 51, 94
 - see also* blocks
- Ælfred, parser, 338
- aggregate, Cocoon sitemap element type, 373–374
- aggregation, 32, 35, 134, 136, 371–376
 - see also* compilation
- aggregators (Cocoon), 368, 372, 374
- aliases, 116, 142, 194, 200
- alpha transparency, 243
- alt, HTML attribute, 80, 120–121, 239
- &, entity reference, 75
- anchors, 100

- Ant, build tool, 46, 355–356
- antialiasing, 243
- Apache, server, 361
- Apache XML Project, 240, 338
- API (Application Programming Interface), 377
- apply-templates, XSLT instruction, 176–178, 208, 224, 226
- ApplyXPath, utility, 333
- as, XSLT attribute, 162, 179
- ASCII, character encoding, 227
- ASP (Active Server Pages), 31, 362, 364, 377
- assert, Schematron element type, 199
- assign, Saxon instruction, 170, 172–173
- assignable, Saxon attribute, 172
- attribute declarations, 43, 61
- attribute(), node type, 162
- attributes
 - classifier, 110
 - vs. element types, 79–80, 108–109, 121–122, 311
 - generic, 112
 - names of, 80–82
 - order of, 330
- authoring environment, 19
- authoring tools, 282–315
 - parsers in, 55
- AWK, programming language, 229

- B**
- batch files, 254
- batch processing, 17, 250–255, 264, 345
 - input document for, 188
 - output directory for, 141
 - stopping on validation errors, 255
- Batik, suite, 240, 245, 263, 267, 338
- Berners-Lee, Tim, 12
- bind, XForms element type, 306
- bitmap, format, 6–8

- blocks, 93–94, 223–225
 - IDs of, 132
 - as link targets, 101
 - referencing dynamic content in, 134–135
 - blurbs, on a web page, 93, 132–133
 - see also* blocks
 - body, HTML element type, 208
 - bookmarks, in a browser, 98–99
 - Bray, Tim, 341
 - Browning, Robert, 90
 - browsers
 - title bar of, 98–99
 - XML-capable, 11, 24, 359
 - build files, 346, 355
 - build tools, 254–255, 344
 - buttons, *see* images
- C**
- C, programming language, 160
 - C++, programming language, 333, 338, 340
 - call-template, XSLT instruction, 176–178
 - captions, 121, 324
 - Cartwright, William, 184
 - Cascading Style Sheets, *see* CSS
 - catchXSL!, profiler, 344
 - CDATA sections, 71
 - change logs, 72, 92
 - Chaperon, generator, 318
 - character references, 227–228
 - mnemonic, 207
 - numeric, 75, 286
 - choose, XSLT instruction, 180
 - CInclude transformer, 372, 374
 - citations, 103, 105
 - in a foreign language, 101, 232
 - Clark, James, 339
 - class, CSS attribute, 96, 323
 - CLASSPATH, environment variable, 222, 241, 243, 263
 - clients, *see* browsers
 - CME (Collaborative Markup Editor), 283, 292
 - CMS (content management system), 45, 284
 - Cocoon, 338, 361–383
 - debugging, 366
 - downsides of, 365–366
 - FAQ for, 374
 - installing, 379
 - performance of, 364–366, 382–383
 - Coleridge, Samuel Taylor, 2
 - Collaborative Markup Editor, *see* CME
 - columns, on a web page, 93
 - see also* blocks
 - comments, in XML, 45, 64, 69, 181, 311
 - company names, 104
 - compilation
 - after transformation, 36
 - before transformation, 32–36, 374
 - offline, 35
 - see also* aggregation
 - composite values, 28
 - concat(), XPath function, 202
 - conditionals, 177, 180
 - content (as opposed to style), xxviii, xxix, 4–5, 7, 22, 29, 43, 122, 136, 164, 363, 374, 377
 - content management system, *see* CMS
 - copy, *see* plain text
 - copyrights
 - for images, 121
 - site-wide, 49, 92, 267
 - credits
 - for photos, 121
 - for web pages, 137
 - cross-references, *see* links, internal

CSS (Cascading Style Sheets), xxxv, 309
 in HTML, 7, 9–10, 84, 179, 211–212, 267
 in SVG, 243
 template for, 212
 used for displaying diffs, 331
 in XML, 11, 310–315
 Cygwin, environment, 347–348

D

data, in XML, xxxvi, 13–15, 159
 access from programming languages, 160
 auxiliary, 53
 strictness of, 65
 tabular, *see* tables
 data type checks, 73, 79
 databases
 access to, 377
 conventional, 125
 dynamic values in, 28–29, 34
 XML-aware, 34, 54
Datatypes for DTDs, specification, 73
 dates
 in EXSLT, 171
 in XML, 104
 in XSLT, 104, 124, 163
 defs, SVG element type, 242
 Delta Update Language, *see* DUL
 denial-of-service attacks, 23
 descriptions
 of images, 80, 120–121
 of web pages, 92, 213
 DHTML (Dynamic HTML), 218
 Dickinson, Emily, 156
 diff, utility, 330
 diffmk, utility, 331
 diffxml, utility, 331
 directory generator, 381
 displayed materials, 101
 div, HTML element type, 84

Dmitry Kirsanov Studio, xxxviii, 248
 Dmitry's Design Lab, monthly column, xxxviii
 Döbler, Johannes, 339
 DocBook, vocabulary, 8, 85, 102, 181, 313
 DOCTYPE declaration, 73, 75
 document element, *see* root element
 document layer (of a source definition), 43
 document types in, 44
 Schematron checks of, 48, 58–59, 198
 Document Object Model, *see* DOM
 document type definitions, *see* DTDs
 document(), XPath function, 46, 168, 199
 in Cocoon, 373–376
 documentation
 in DTDs, 69
 human-readable, 45, 48, 70
 markup examples in, 71
 metadata in, 72
 in Schematron, 64, 70, 72
 of a source definition, 63, 69–73
 in stylesheets, 181
 in XSDL, 69, 72
 documents, 14
 converting to XML, 6, 18, 315–329
 database-like, 299, 308, 341
 document-oriented, 159, 309
 human-readable, 9
 modularity of, 8
 size of, 8
 in XML, *see* source documents
 DOM (Document Object Model), 220, 366
 drop shadow, 244
 DTDGenerator, application, 337
 DTDs (document type definitions), 42, 56, 73–77
 converting to XSDL, 337
 documentation in, 69

DTDs (*continued*)

- expressiveness of, 62
 - generation from a sample, 336
 - linking from source documents, 75
 - modularity of, 61
 - and namespaces, 74
 - strictness of, 64
 - unenforceable hints in, 62
 - validation with, 16, 44–45, 54, 74–75, 83, 111, 263
- DUL (Delta Update Language), 331
- Dynamic HTML, *see* DHTML
- dynamic values, 35
- in databases, 28–29, 34
 - referenced in a master document, 204
 - in static templates, 134, 376
 - in XML, 29, 32, 134

E

- eg:ext-link(), extension function, 193, 201
- eg:fact(), extension function, 167
- eg:letters-only(), extension function, 229
- eg:os-path(), extension function, 264
- eg:page-src(), extension function, 225
- eg:upcase2(), extension function, 233
- element type declarations, 43, 56, 61
- element types, xxxiv
- vs. attributes, 79–80, 108–109, 121–122, 311
 - block-level, 83, 102, 105–107
 - classifier, 110–111, 117
 - generic, 94, 109–110, 117, 122, 132–133
 - inline-level, 102, 105–107
 - names of, xxxiv, 64, 80–82, 95, 148
 - top-level, 178
 - wrapper, 108

- elements, xxxiv
- checking presence of, 58, 148
 - IDs of, 80, 204–207, 335
 - nested, 311–312
 - order of, 79, 84, 128
 - sequences of, 79
- em, HTML element type, 103, 225
- Emacs, editor, 288–290
- email messages, 346, 349, 364, 377
- emphasis, 14, 101, 103, 225
- within emphasis, 107
 - within headings, 98
 - text-level vs. paragraph-level, 105–107
- encoding, 202, 227–228
- ends-with(), XSLT function, 221
- entity references
- creating by Saxon, 175
 - mnemonic, 75–76, 140
 - parameter, 61
- environment groups, 137–139, 192
- IDs of, 140, 211, 350
 - variables in, 140–142, 189–192, 250, 253, 350–351, 355, 381
- eval(), Saxon function, 173
- evaluate(), Saxon function, 134, 173
- every ... in ... satisfies, XPath expression, 204
- explain, Saxon attribute, 174
- expression(), Saxon function, 173
- EXSLT (Extended XSLT), 161, 170–171
- supported by XSLT processors, 171, 339–340
 - XPath expressions in, 134, 171
- Extensible HyperText Markup Language, *see* XHTML
- Extensible Markup Language, *see* XML
- Extensible Server Pages, *see* XSP
- Extensible Stylesheet Language, *see* XSL
- Extensible Stylesheet Language Formatting Objects, *see* XSL-FO

Extensible Stylesheet Language

Transformations, *see* XSLTextension functions, *see* functions,

extension

extensions, in filenames, 189–194, 221

external entities, 76

external processing, 287

F

factorial, 167

false(), XPath function, 199

featured products, on a web page,
132–133

file:/, in URLs, 142, 190

FilenameFilter, Java interface, 220

files, xxxv

checking presence of, 220

lists of, 219–221

names of, 44, 217, 229

extensions in, 189–194, 221

files:dir(), extension function, 223,
366, 381files:exists(), extension function, 200,
202, 237files:run(), extension function, 245,
252–255

filtering

in Cocoon, 367

in XSLT, 220

Flash animations, 18, 117, 123

generating from XML, 10, 247–249

see also images

FOAF (Friend of a Friend), standard, 13

fonts, 241, 263

Foobar Corporation, sample site, 99,

114–115, 123–124, 147–154,

380–383

footer, on a web page, 214, 267

FOP, formatter, 249, 291, 338

for, XHTML attribute, 126

for, XPath operator, 180, 199–200

for-each, XSLT instruction, 161, 168,
177, 180, 198, 214, 220, 225

for-each-group, XSLT instruction, 163

form scripting, 300

formatting hints

for forms, 127

for images, 119–120

for paragraphs, 120

separate namespaces for, 119–120

for text, 103

formatting properties, 29, 323–324

form-based editing, 298–309

forms, 125–127

formatting hints for, 127

in HTML, 125

layout of, 127

site-wide, 125

submission addresses in, 126

validation of, 300, 377

vocabularies for, 125–127

Forms, XHTML module, 125

Fourthought, 339

frame, HTML element type, 211

frameset, HTML element type, 211

front page, 49, 192

menus on, 218

ftp://, protocol specification in URIs,
114, 193

function, XSLT instruction, 172, 193

functional programming, 159, 165–170,
172, 251function-available(), XSLT function,
164functions, in XSLT, 17, 162–163, 171,
180

caching, 172

custom, 164, 207

extension, 17, 46, 160, 164, 169, 171,
175–176, 186, 195, 200–202,

207, 220, 222, 255, 263, 381

names of, 193

functions (*continued*)

- parameters in, 194
- recursive, 167

G

- galleries of images, 237
- generate, Cocoon sitemap element type, 369
- generators (Cocoon), 366, 373–374, 376
- Ginger Alliance, 340
- Gnome, project, 340
- Goldfarb, Charles F., xxxvi, xxxvii
- grammar, of a language, 56, 336–337
- graph:geth(), extension function, 237, 244, 352
- graph:getw(), extension function, 237, 244, 352
- graphic files, *see* images
- graphical editing of XML, 293–298
- guided editing of XML, 59–60, 68, 286, 310, 326, 336

H

- h, XHTML element type, 96
- h1 to h6, HTML element types, 95–96
- Haskell, programming language, 165
- has-same-nodes(), Saxon function, 174
- head, HTML element type, 208
- headings, 95–99
 - alignment of, 119
 - attributes for, 96–97
 - element types for, 83, 95–96
 - graphical, 97, 239, 245
 - in HTML, 95
 - IDs of, 96–97
 - levels of, 95
 - numbering of, 7, 97
 - in plain text, 318, 322
 - versions of, 98
 - in XHTML 2.0, 96
- height, HTML attribute, 120, 235, 244

- Holman, G. Ken, xxxvii
- home page, *see* front page
- href, HTML attribute, 109, 193
- HTML (HyperText Markup Language),
 - xxxvi, 7, 9, 322–323
 - block elements in, 102, 105–107
 - browser-specific, 10
 - converting to XML, 318–319
 - embedded scripts in, 10, 36
 - exported from MS Office, 322
 - forms in, 125
 - headings in, 95
 - inline elements in, 102, 105–107
 - links in, 100, 107, 375
 - pathnames in, 142
 - size of documents in, 9
 - tables in, 10, 123, 179, 211
 - vocabulary of, 10, 83, 181
- htmlize.el, program, xxxvii
- http://, protocol specification in URIs, 114, 193
- https://, protocol specification in URIs, 114
- hyperlinks, *see* links
- HyperText Markup Language, *see* HTML

I

- i, HTML element type, 103
- i18n transformer, 367
- iconic tags, 297–298
- ID, data type, 204–207
- IDE (Integrated Development Environment), 341–344
- IE, *see* Microsoft Internet Explorer
- IETF (Internet Engineering Task Force), 112
- if, XPath operator, 180
- if, XSLT instruction, 180, 225
- IIS (Internet Information Server), 361
- Imagemagick, suite, 240, 244–245, 263
- imagemaps, 122–123

- images, 116–123, 235–237
 - abbreviated locations of, 118–121, 313
 - alignment of, 119
 - attributes for, 117
 - checking presence of, 202, 235, 237
 - descriptions of, 80, 120–121
 - dimensions of, 47, 120, 235–237, 244, 352
 - element types for, 117
 - formatting hints for, 119–120
 - generating by a stylesheet, 18, 20, 139, 142–143, 207, 217, 238–246, 346, 383
 - linked, 108, 110, 122
 - pathnames for, 137, 142, 189, 202, 217, 229
 - spacer, 10, 179
 - standalone, 117
 - transparency of, 243
 - trimming margins of, 244
 - img, HTML element type, 80, 235, 237, 244
 - reusing in a custom vocabulary, 88
 - include, CInclude element type, 372
 - include, XInclude element type, 371–372
 - Inkscape, editor, 241
 - inner focus, 336
 - input, HTML element type, 126
 - input, XForms element type, 307
 - instance, XForms element type, 305
 - instances, *see* source documents
 - instructions, xxxv, 197
 - integer, data type, 162
 - Integrated Development Environment, *see* IDE
 - internal DTD subset, 73, 76, 140
 - entity declarations in, 76, 207
 - in output documents, 175
 - Internet Information Server, *see* IIS
 - ISO (International Standards Organization), 5
 - ISO 8859–1, character encoding, 75, 228
- J**
- Java, programming language, 186, 297
 - in Cocoon, 364, 376
 - extension classes in, 17, 355
 - declaring, 222
 - installing, 221, 381
 - XSLT processors in, 169, 176, 338–339, 342
 - Java applets, 18, 117, 123
 - see also* images
 - JAVA_HOME, environment variable, 378
 - Java runtime, 365, 378
 - Java Server Pages, *see* JSP
 - Java Servlet, technology, 361
 - JavaScript, programming language
 - in Cocoon, 376
 - EXSLT implementations in, 171
 - link's behavior in, 109
 - submenus in, 218
 - template for, 213
 - jd-xslt, XSLT processor, 339
 - Jelliffe, Rick, 195
 - JPG, format, 6
 - JSP (Java Server Pages), 361, 364
 - reusing in Cocoon, 376
- K**
- Kay, Michael, 171–172
 - kerning pairs, 241, 243
 - keywords, 92, 137, 213
 - Kirsanova, Alina, xxxvi
 - Knuth, Donald, 173
 - KOffice, suite, 327

L

`label`, XHTML element type, 126

labels, 54, 121, 139, 143

- in different languages, 140, 217

languages of content, 98, 116, 131, 140, 147, 190, 198, 203

- global parameter for, 98
- identifiers of, 116, 190–191, 194, 211

L^AT_EX, typesetting system, 6, 249, 322

Latin 1, character encoding, *see* ISO 8859–1

layout of web pages, 17, 84, 119, 179, 211

- with frames, 211
- images for, 10, 239
- with tables, 10, 123, 179, 211

lazy evaluation, 179

Lenya, content management system, 284

`li`, HTML element type, 100

libxslt, XSLT processor, 340

`line-number()`, Saxon function, 174, 195, 197

`link`, HTML element type, 212

links

- behavior of, 109
- broken, 42, 114, 187, 200–202, 226
- to a dictionary, 109, 111, 113
- external, 109–110
 - abbreviated, 112–113, 193
 - protocol specifications in, 114
- featured, 51
- inline, 107–116
 - attributes for, 108, 110, 122
 - element types for, 110–111
 - textual, 108–109
- internal, 92, 109–110, 137
 - abbreviated, 96–97, 115–116, 128–132, 142, 193–195, 200, 313
 - to other language version(s), 116, 203

links (*continued*)

- mailto, 143
- to paragraphs, 100–101, 201
- in plain text, 318
- presentation of, 375
- thumbnail, 110–111
- types of, 109–111, 226

listings, *see* programming code fragments

lists, 100

- in plain text, 318, 329

log files, 254, 367

logic (as opposed to content and style), 22, 363, 374, 377

logicsheets, 377

Logictran, Word-to-XML converter, 323

logos

- hard-coding in a stylesheet, 136, 265
- specifying in a master document, 49

`longdesc`, XHTML attribute, 120

loops, 167, 177, 180

lowercase letters, 163

`<`, entity reference, 75

M

Macromedia, 247

macros, 61

`mailto:`, in URLs, 143

Majix, Word-to-XML converter, 323

make, build tool, 347–355

- portability of, 46
- running, 354
- super-document checks in, 46

makefile, 347, 350–353

- generating by a stylesheet, 354
- pattern rules in, 353
- variables in, 350–352
- wildcards in, 353

markup

- adding, 233–234, 329
- editing, 68, 310
- errors in, 58, 66–67, 70, 319

markup (*continued*)

- examples of, 71, 229
 - formatting-related, 329
 - presentation-oriented, 102–103, 107, 126, 319
 - rich, 103–105
 - semantic, xxix, 7, 9–10, 47, 77–78, 86, 102–103, 107, 126, 233, 319
- Marvell, Andrew, 280
- master document, 15, 49–50, 127–139, 263, 375
- access to, 188, 214
 - environment groups in, *see* environment groups
 - list of images in, 118, 128
 - list of pages in, *see* site directory
 - metadata in, 49, 92, 131, 136–137, 179
 - referenced content in
 - dynamic, 128, 135, 204
 - orthogonal, 52, 128, 131–134, 143, 203–204
 - site-wide content in, 139, 143, 179
 - validating, 49, 198–200
 - visual presentation of, 297
- match, Cocoon element type, 368, 379
- match, XSLT attribute, 176–177, 214, 225, 341
- matchers (Cocoon), 368–371
- matches(), XPath function, 64
- mathematical formulas, 101
- memo-function, Saxon attribute, 172
- menu items, 84–85, 129–131, 142
- graphic, 217
 - labels of, 129–131, 142, 193, 239
 - states of, 217
 - target links of, 129
 - vs. web pages, 129–130
- menus, 17, 129, 215–219
- dynamic, 219–223, 265
 - submenu in, 84–85, 129, 218–219
- message, XSLT instruction, 180–181, 210, 245, 252
- meta, HTML element type, 92, 213–214
- metadata
- in attributes, 80, 82–83
 - in a master document, 49, 92, 131, 136–137, 179
 - in page documents, 92–93, 131
 - in schemas, 72
 - in static templates, 73
 - in stylesheets, 136
- methods, in Java, 220
- Microsoft InfoPath, editor, 299–300, 309, 327
- Microsoft Internet Explorer, browser, 10, 26
- PNG support in, 243, 267
- Microsoft Office, 322, 326
- Microsoft Word, 322
- converting data to XML, 316, 323
 - styles in, 323–326, 329
 - templates in, 325
 - Word 2003, 298, 320, 326
- Milton, John, 358
- Ming, library, 248
- mixed content, 14, 28, 137, 295, 309, 341
- mode, XSLT attribute, 168, 208, 214, 252
- modes, 167–168, 214
- modules, on a web page, 93
- see also* blocks
- Moore, Elizabeth, 40
- Morphon, editor, 284, 298, 313
- Mozilla, browser, 26, 313
- PNG support in, 243
 - SVG support in, 240
- MSIE, *see* Microsoft Internet Explorer
- Multipurpose Internet Mail Extensions, *see* MIME

N

name, HTML attribute, 100
 name, XSLT attribute, 176
 namespace, XSLT instruction, 195
 namespace declarations, 207, 222
 namespace-alias, XSLT instruction, 197
 namespaces
 aliases for, 197
 for custom vocabularies, 87–88
 default, 87
 and DTDs, 74
 navigation, 43, 128
 buttons for, 139, 143, 245
 menus for, 129
 in sequences of pages, 139
 , entity reference, 76
 NekoDTD, converter, 337
 Netscape Communicator, browser, 10
 newline characters, in attribute values, 79
 news blocks, 51, 94, 132–133
 dynamic list of, 136
 latest, 133
 News Industry Text Format, *see* NITF
 newsletter subscription, 125
 next-match, XSLT instruction, 164
 Nikšić, Hrvoje, xxxvii
 NITF (News Industry Text Format), 105
 no-break spaces, 76
 nodes, 157, 171
 absolute paths to, 173
 adjacent, 162
 grouping, 162
 treating like a file system, 335
 nodesets, 161
 in EXSLT, 171
 in Saxon, 174, 220
 treating like a file system, 335
 normalize-space(), XPath function, 58
 numeric data, 80

O

OASIS consortium, 327
 object, HTML element type, 80
 objects, 18, 117
 generating by a stylesheet, 18
 see also images
 office document formats, 319–321
 converting to XML, 321–326
 ontologies, 13
 OpenOffice.org, suite, 327
 optimization, 172–173, 179, 199
 orthogonal content, 51–53, 224–225
 checking presence of, 133
 extracting with XPath, 133
 forms as, 125
 generic element types for, 94, 132–133,
 224
 hard-coding in a stylesheet, 51
 IDs of, 52, 224
 referenced, 193
 in a master document, 52, 128,
 131–134, 143, 203–204
 in page documents, 52, 132, 267,
 375
 Oussov, Ilya, xxxvii
 output, XSLT instruction, 164, 175, 207
 output documents, xxxvi, 180
 absolute pathnames of, 375
 encoding of, 228
 multiple, 160, 164, 171, 207
 root directory for, 141, 189
 <oXygen/>, editor, 290–293

P

p, HTML element type, 99, 225
 page documents, 15, 49, 92, 263, 267
 accessing, 93, 130
 IDs of, 92, 115, 130, 142, 194
 metadata in, 92–93, 131
 referencing orthogonal content in, 52,
 132, 267, 375

page documents (*continued*)

- simplicity of, 140
- titles of, 98, 143
- top-level structures in, 92–94
- validating, 49
- pages, *see* web pages
- Pajas, Petr, 335
- paragraphs, 99–101, 225
 - element types for, 83
 - formatting hints for, 120
 - as link targets, 100–101
 - in lists, 100
 - in plain text, 318, 321
- param, XSLT instruction, 187
- parameter entities, 61–62
- Paratype, 241
- parse(), Saxon function, 175
- part, Cocoon sitemap element type, 373
- passing parameters, 166, 177
- patch, utility, 330
- patchxml, utility, 331
- path(), Saxon function, 173
- pathnames, 115
 - constructing by a stylesheet, 116, 119, 130, 137, 142, 198
 - for multilingual sites, 143
 - specific to an environment, 189–192, 351
 - on Windows, xxxiv, 142, 264
- PDF (Portable Document Format), 249
 - generating
 - from XML, 10, 47, 120, 369
 - from XSL-FO, 25, 249–250, 291, 367
 - size of documents in, 8
- Penzin, Vadim, xxxvii
- Perl, programming language, 160, 229, 248, 364
- person names, 104
- PfaEdit, font editor, 241
- photos
 - credits for, 121
 - watermarks on, 245
- PHP, programming language, 31, 248, 362, 364, 377
 - reusing in Cocoon, 376
- pipeline, Cocoon sitemap element type, 379
- pipelines (Cocoon), 366, 368, 372–374
- plain text, 321–322
 - converting
 - to HTML, 318
 - to XML, 316–318
 - exporting from HTML, 7
 - producing by a stylesheet, 207
- PNG, format, 243, 346
- Pollo, editor, 295–297, 312
- Ponton XE, editor, 299
- PostScript, page description language, 6–8, 239, 249
- pre, HTML element type, 72
- prerequisites, in a makefile, 347, 351–352
- presentation, xxviii, xxix, 4, 47, 77, 122, 136, 164, 377
 - CSS-controlled, 297, 310
 - see also* style
- processing parameters, 187–188, 190, 348
- programming code fragments, 101, 324
- project management, 287
- PSGML, Emacs package, xxxvii, 288
- Pushkin, Alexander, 241
- pushkin.ttf, font file, 241
- Python, programming language, 248, 297
 - XSLT processors in, 339

Q

- quantified expressions, 204
- quotes, 101, 232
 - of the day, 51
 - within quotes, 107

R

Raggett, Dave, 319
 RDF (Resource Description Framework),
 12–13, 93
 readers (Cocoon), 368, 370
 recursion, 229
 regexp matcher, 370
 regular expressions (regexps), 163, 229,
 329
 in Cocoon, 370
 in EXSLT, 171
 for whitespace characters, 200
 RELAX NG, schema language, 56, 339
 RenderX, xxxvii
 repeat, XForms element type, 307
 report, Schematron element type, 199
 Request For Comments, *see* RFC
 Resource Description Framework, *see*
 RDF
 result-document, XSLT instruction, 164,
 168, 180, 211, 254, 375
 RFC (Request For Comments), 112–113
 RFC 2396, xxxvi
 robots.txt, spider control file, 131, 254
 root element, xxxv, 52, 75, 92–94, 128,
 188, 190, 208
 root node, xxxv
 RSS, format, 86
 rsync, utility, 352
 RTF, format, 10, 323
 rule, Schematron element type, 198
 rules, in Schematron, 64, 147–154
 abstract, 62
 dummy, 148
 order of, 57
 vs. separate schemas, 198

S

Sablotron, XSLT processor, 340
 SAX (Simple API for XML), 366, 382

Saxon, XSLT processor, 171–175, 263,
 337
 assignments in, 172
 built-in extensions in, 171
 debugging in, 173–174, 342–344
 entity references in, 175
 and EXSLT, 171
 extension Java classes in, 17, 171, 175,
 219
 internal DTD subset in, 175
 line numbers in, 195, 197
 loops in, 172
 nodesets in, 174
 output documents in, 175
 performance of, 172–173, 364
 processing instructions in, 175
 running, 264–265
 on server, 360–361
 versions of, 171, 337, 380
 XPath expressions in, 134, 173–174
 SaxonServlet, class, 360
 schema definitions, *see* schemas
 schema languages
 choice of, 16, 56–66
 grammar-based, 56–57, 60, 66–68, 72,
 111, 286, 336
 see also DTDs, XSDL
 modularity of, 60–62
 rule-based, 16, 57–60, 72
 see also Schematron
 schemas, 42
 diagnostics in, 63
 documentation in, 45, 63, 68–73
 expressiveness of, 62
 metadata in, 72
 releases of, 72
 role of, 68, 187
 strictness of, 64
 when to work on, 66–69
 wildcards in, 65

- Schematron, schema language, 57–60, 67
 - broken links checks in, 114, 187, 200–202
 - compiled schemas in, 195, 197, 260, 263
 - context-sensitive checks in, 148
 - diagnostics in, 64, 70, 206, 349
 - documentation in, 64, 70, 72
 - document-level checks in, 48, 58–59, 198
 - dynamic values checks in, 204
 - element types checks in, 148
 - extension functions in, 47
 - grouping in, 62
 - images checks in, 202
 - language versions checks in, 147
 - line numbers in, 174
 - loops in, 198
 - orthogonal content checks in, 203–204
 - patterns in, 58, 62, 147
 - phases in, 62
 - rules in, *see* rules
 - strictness of, 65–66
 - super-document checks in, 48, 59, 195, 197–207
 - uniqueness checks in, 205–206
 - wrappers for, 195–197
 - XPath in, 16, 47, 59
- `schematron-basic.xsl`, wrapper, 195
- Scheme, programming language, 165
- `script`, HTML element type, 160, 213
- `script`, XSLT instruction, 160, 164, 175
- search engine spiders, 131, 254
- search, on a web site, *see* site search
- section, XHTML element type, 96
- sections, 93–94
 - grouping content for, 162–163
 - headings of, 95–96
 - IDs of, 96–97
 - menus for, 129
 - in XHTML 2.0, 96
- `select`, XSLT attribute, 208, 226
 - absent, 224
- `select1`, XForms element type, 307
- Semantic Web, 12, 93
- semantic XML, xxix, 7, 47, 77–78, 86, 102, 126
- separator, XSLT attribute, 162
- sequences, in XSLT, 161
- Sergeant, Matt, 332
- serialization, 164, 175, 366
- `serialize`, Cocoon sitemap element type, 369
- `serialize()`, Saxon function, 175
- serializers (Cocoon), 367, 369
- servers, 19
 - performance of, 19, 23–24
 - security of, 23, 365
 - software on, 365
 - staging areas on, 24, 138, 346
 - transformations on, 21–24, 34, 359–383
 - uploading files to, 346
- servlets, 360–361
- session tracking, 364
- SGML (Standard Generalized Markup Language), xxxvii, 5, 12, 16
- shared XSLT libraries, 17, 48, 187–195, 256, 263
 - under Cocoon, 382
 - importing, 195, 207
 - source document's identification in, 190, 199
 - variable checks in, 192
- shell, scripting language, 254, 335, 348
- ShockWave Flash, *see* Flash animations
- sidebars, on a web page, 51
 - headings of, 95–96
 - see also* blocks
- Simple API for XML, *see* SAX

- site directory, 17, 49, 84–85, 93,
 - 128–136, 179
 - adding a new page to, 44
 - using for batch processing, 253
- site map, 49, 129, 135, 254
- site search, 129, 364
 - forms for, 125
 - pages available for, 131, 254
 - results of, 98–99
- sitemaps, in Cocoon, 50, 297, 368–371,
 - 379–380
 - default, 381
- sites, *see* web sites
- Slashdot, xxvii
- Smith, Daniel, xxxvii
- source definition, xxxi, 42
 - backward-compatible, 69
 - changes in, 68
 - developing, 60, 77–88
 - hierarchical, 78–79
 - modularity of, 60–62
 - releases of, 68, 72, 82
 - semantic, 77–78, 103–105
 - static templates in, 72–73
 - see also* vocabularies
- source documents, xxxv, 15
 - access to, 21, 23, 26, 193, 199
 - checking presence of, 47, 198–200
 - conformant, 43
 - current, 174, 187, 190–191, 211, 382
 - DOCTYPE-less, 75
 - encoding of, 228
 - linking to DTDs, 75
 - mapping to multiple HTML pages, 54
 - organizing, 48–55
 - reusing materials from, 104
 - root directory for, 140
 - sequential, 84
 - updating, 326, 330
 - well-formed, 55, 75, 198–200, 330
 - see also* page documents
- source editing of XML, 285–293, 297
- span, HTML element type, 84
- special characters, 207, 226–234, 286
- spiders, *see* search engine spiders
- spreadsheets, 125, 318
- stairway of abstractions, 5–8, 86, 328
- Standard Generalized Markup Language,
 - see* SGML
- standards, 319
- StarOffice, suite, 327
- static templates, 28–29, 67, 72–73
 - comments in, 79
 - dynamic values in, 32, 134
 - metadata in, 73
 - reusing in Cocoon, 376
- stories, on a web page, 93
 - see also* blocks
- string(), XSLT function, 223
- string-join(), XPath function, 201
- structural information, 72
- Structured Query Language, *see* SQL
- style, CSS attribute, 329
- style, HTML element type, 212
- style (as opposed to content), 4, 7, 22, 77,
 - 363, 374
 - see also* presentation
- style sheets, *see* CSS
- styles, in a word processor, 323–326, 329
- stylesheet, XSLT instruction, xxxv, 179,
 - 207, 222
- stylesheet generators, 340–341
- stylesheet parameters, *see* processing parameters
- stylesheets, xxxv, 16–17, 176–181,
 - 207–214, 262–277
 - accessing source documents, 46, 93,
 - 130, 135
 - auxiliary data in, 53
 - custom instructions in, 175
 - data types in, 162, 171

stylesheets (*continued*)

- debugging, 173–174, 180–181, 341–344
- diagnostics in, 47, 210
- documentation in, 45, 181
- metadata in, 136
- optimizing, 344
- preprocessing in, 169
- producing another stylesheet, 197
- super-document checks in, 46
- temporary XML documents for, 168, 207
- URIs in, 174
 - see also* transformations, XSLT
- Stylevision, editor, 340
- submenus, 84–85, 129–130, 218–219
- submission, XForms element type, 305
- super-document layer (of a source definition), 44–48
 - back-end checks of, 45
 - human-readable instructions for, 45, 48
 - Schematron checks of, 48, 59, 195, 197–207
 - stylesheet checks of, 46
- svg, SVG element type, 242
- SVG, format, 239–243, 328, 346
 - generating by stylesheet, 10, 207
 - rasterizing, 367
- SWF, *see* Flash animations
- SWFML (SWF Markup Language), 248
- syntax coloring, 286, 295, 309, 342
- systemId(), Saxon function, 174, 190–191, 263, 382

T

- tab completion, 336
- table, HTML element type, 211

- tables, 123–125, 300
 - columns in
 - alignment of, 124
 - width of, 179
 - empty cells in, 124
 - in plain text, 318
 - sorting, 124
 - from triplets, 124
 - in XML, 123
- taglibs, 377
- tags, xxxiv
- target, HTML attribute, 109
- targets
 - in Ant, 355
 - in make, 347, 352
 - explicit, 354
- Taub, Mark, xxxvii
- TEI (Text Encoding Initiative), 102
- template, XSLT instruction, 341
- templates, 166, 176–179
 - applicable, 176, 178, 214
 - branch, 17, 102, 178, 225–234
 - callable, 166, 176, 180, 212–213
 - context-independence of, 177
 - named, *see* templates, callable
 - pull-style, 102, 177–178, 208, 215
 - push-style, 102, 177–178, 180, 225–234
 - recursive, 167, 219
 - root, 178
 - static, 212–213
 - trunk, 17, 102, 178, 208, 215
- TeX, typesetting system, 6, 239, 249–250
- text, 80, 101–107
 - checking presence of, 58
 - formatting hints in, 103
- text editors, 45
- Text Encoding Initiative, *see* TEI

text, SVG element type, 243
 text:typography(), extension function, 232
 text(), node test, 230, 234
 textarea, XForms element type, 309
 text-only user agents, 239
 thumbnails, 110–111
 Tidy, utility, 319, 322
 title, HTML element type, 98–99, 213
 to, XPath operator, 168
 tokenize(), XPath function, 194, 200, 223, 255
 Tomcat, servlet engine, 361, 365, 378, 381
 installing, 378
 tooltips, 54, 375
 transform, Cocoon element type, 369
 transform, XSLT instruction, xxxv
 transformation applets, *see* translets
 transformations, xxxv, 366
 after compilation, 32–36, 374
 before compilation, 36
 in a browser, 11, 24, 359
 multidocument, 168
 offline, 19, 35, 359, 364, 382
 running, 252–255, 264–265, 349
 on a group of pages, 255, 346
 on server, 21–24, 34, 359–383
 testing, 24
 between vocabularies, 68, 86, 159, 315–317, 327–329
 transformers (Cocoon), 367, 371–376
 Transforming Editor, 292
 translets, 339
 tree view, 293–295, 300
 Treebeard, IDE, 341–342
 triplets
 in RDF, 13
 in table markup, 124
 txt2html, Perl script, 318
 txt2xml, Java library, 318

U

unabbreviation of links, 113–114, 128, 130–132, 187, 192–195, 201, 226
 Unicode, character encoding, 75, 233, 297
 unique identifiers, *see* elements, IDs of
 Universal Resource Identifiers, *see* URIs
 Universal Resource Locators, *see* URLs
 Unix, operating system, 282, 347–348, 354
 shells in, 335–336
 unparsed-text(), XSLT function, 164, 175, 201–202
 Upcast, Word-to-XML converter, 323
 uppercase letters, 163
 converting by a stylesheet, 233
 in names, 80
 URIs (Universal Resource Identifiers), xxxvi
 absolute, 115, 137, 142, 174, 367
 constructing by a stylesheet, 115, 119, 137, 179
 fragment identifiers in, 201
 in RDF, 13
 parameters in, 114
 protocol specifications in, 114
 relative, 115, 137, 142, 163, 174, 367
 virtual, 369–371
 URLs (Universal Resource Locators), xxxvi, 112
 pathnames in, xxxiv
 Usenet, 318
 user environment, 19
 UTF-8+names, character encoding, 75

V

validating parsers, 338
 DTD checks in, 74–75
 uniqueness checks in, 204

validation, 16, 24, 55
 choice of a schema language for, 16
 with DTDs, 16, 44–45, 54, 74–75, 83, 111, 263
 of forms, 300
 of a master document, 198–200
 running, 252–254, 348
 with schemas, 16, 42
 on server, 382
 against a subset of rules, 57
 with XSDL, 45, 54, 111
see also Schematron

value-of, Schematron element type, 200
 value-of, XSLT instruction, 181, 224
 variable, XSLT instruction, 172, 179–180

variables, in XSLT, 17, 159, 162, 166
 error messages in, 192
 global, 166, 179, 211, 251
 local, 166
 values of, 179, 181

visual design, 43

vocabularies, 5, 42
 custom, 15, 87–88
 existing, 15, 85–87
 changes in, 88
 for forms, 125–127
 for metadata, 93
 for news markup, 105
 for text markup, 102

hierarchical, 78–79, 106
 human-readable specifications of, 69
 transformations between, 68, 86, 159, 315–317, 327–329
see also source definition

W

W3C (World Wide Web Consortium), 5, 12
 site of, 73, 113

W3C XML Schema, *see* XSDL

Walsh, Norman, 331

web clients, *see* browsers

web pages, xxxv
 available for search, 131
 correctness of, 42
 credits for, 137
 loading time of, 235
 meaningfulness of, 42
 vs. menu items, 129–130
 metadata in, 92, 213
 missing, 42
 missing components of, 42
 printer-friendly versions of, 211
 sequences of, 139, 211
 testing, 24, 137, 382

web servers, *see* servers

web sites
 components of, 15–18
 design of, 43
 dynamic, 21, 23, 27–36, 134–136, 359, 362–364, 376, 383
 integrating with existing schema libraries, 68
 multilingual, 82–83, 98, 116, 131, 140, 143, 147, 190–191, 194, 198, 203, 213
 portability of, xxix
 setting up, 18
 updating, 17, 21, 24, 35, 52, 140, 344, 382
 usability of, xxix

well-formed documents, 55, 75, 198–200, 330

while, Saxon instruction, 172

width, HTML attribute, 120, 235, 244

Wiki, dynamic content engine, 28, 381

wildcard URI matcher, 368

Windows, operating system
 pathnames on, xxxiv, 142, 264
 running make on, 347–348

WML, format, 10, 47

word processors, 286, 298, 309–311
 as source of XML, 326
 WordML (Word Markup Language),
 326–327
 World Wide Web Consortium, *see* W3C
 writeups, on a web page, 93
see also blocks
 wv, library, 322
 WXS, *see* XSDL
 Wyona, content management system, 284

x

Xalan, XSLT processor, 338, 380
 debugging in, 342–344
 performance of, 364
 Xalan-C++, 333, 338
 Xalan-J, 333, 338
 XEmacs, editor, xxxvii, 286–288
 XEP, formatter, xxxvii, 249
 Xerces, XML parser, 44, 338
 XForms, vocabulary, 85, 126, 301–309
 XHTML (Extensible HyperText Markup
 Language), xxxvi
 converting to XML, 318
 forms in, 125
 headings in, 96
 sections in, 96
 XInclude (XML Inclusions), 371, 374
 XInclude transformer, 371, 374–375
 Xindice, database, 54, 338
 XLink, vocabulary, 85, 109, 339
 XML (Extensible Markup Language),
 xxviii, 5, 9, 16
 combined with a dynamic engine,
 30–36
 simplicity of, 3
 size of documents in, 8, 159
 XML declaration, 73, 228
 XML editors, 45, 282–315
 XML Inclusions, *see* XInclude

XML Path Language, *see* XPath
 XML Pointer Language, *see* XPointer
 XML Query, *see* XQuery
 XML Schema, *see* XSDL
 XML Shell, *see* xsh
 XML Spy, editor, 340
 XML Update Language, *see* XUpdate
 xmldiff, utility, 332
 xml-stYLESHEET, processing instruction,
 73
 xpath, utility, 332
 XPath (XML Path Language)
 loops in, 167, 199
 numeric indices in, 78
 quantifiers in, 164, 204
 in Schematron, 16, 47, 59
 text strings in, 133, 173, 188
 version 1.0, 158
 version 2.0, 158, 161–165, 170, 199,
 229, 336, 380
 in XML databases, 54
 in XSLT, *see* stylesheets
 XPath Explorer, *see* XPE
 XPath tools, 287, 332–336
 XPathScript, programming language, 160
 XPathWrapper, utility, 333
 XPE (XPath Explorer), utility, 333–335
 XPointer (XML Pointer Language), 339,
 371, 374–375
 XSDL (XML Schema Definition
 Language), xxxvi, 56
 data types in, 61, 162
 documentation in, 69, 72
 in Office 2003, 326
 Schematron modules in, 60
 validation with, 45, 54, 111
 xsh, shell language, 160, 335–336
 XSL (Extensible Stylesheet Language),
 158

- XSL-FO (Extensible Stylesheet Language Formatting Objects), xxxvii, 239, 328
 - block elements in, 102
 - converting to PDF, 25, 249–250, 291, 367
 - inline elements in, 102
 - size of documents in, 8
 - version 1.0, 159
 - vocabulary of, 86
- XSLT (Extensible Stylesheet Language Transformations), 157, 341
 - assignments in, 159, 165–170, 172
 - client-side, 26
 - data model of, 157, 159
 - limitations of, 159–160
 - performance of, 159, 167, 179
 - version 1.0, 158, 171, 229, 338
 - version 1.1, 160–161, 175
 - version 2.0, 158, 161–165, 170–171, 180, 229, 263, 380
 - see also* stylesheets, transformations
- XSLT processors, 337–342
 - in C++, 340
 - in Java, 338–339, 342
 - in Python, 339
 - performance of, 338, 364
- XSLTC, XSLT compiler, 339
- XSLTMark, benchmark, 338
- XSLT-process, IDE, 342
- X-Smiles, browser, 302, 308
- XSP (Extensible Server Pages), 376–377
- XT, XSLT processor, 339
- XUpdate (XML Update Language), 332
- X-Wave, SWF generator, 248