

Index

A

- abstract domain 235
- abstract syntax tree 147
- acceptance office 275, 276
- acceptor 173
- ad infinitum 29
- adapter 179
- adaptive maintenance 348
- affinity diagrams 351
- agile development methods 352
- anonymous union type 151
- application programming interface 167
- Apriori algorithm 242
- architectural behavior 201
- architectural customization 266
- architectural dependence graph 204
- architectural design 265
- architectural diagrams 212
- architectural evolution 112
- architectural pattern 230, 243
- architectural slicing 198
- architectural views 230
- architecture 212
- architecture description languages 198
- architecture query language 243
- architecture recovery 213
- asset identification 265
- assignment conflict 150
- association rules 242
- asynchronous invocations 168
- atrophy 346
- attachments 201
- attributed graph 216
- automatic/semiautomatic clustering 237
- average coverage 129

B

- back-end support 76
- backlogs 26
- behavior 231
- boolean selections 218
- bootstrap 352
- browser 168
- budget analysis model 114
- business direction 302
- business goals 273
- business innovative 301
- business logic 139
- business operations 302
- business orientation 329
- business parties 332
- business process evolution 296
- business process reengineering 296
- business processes 295, 345
- business resources 302
- business value 328

C

caching 186
 capability maturity model 52, 352
 CGI programs 169
 change impact analysis 197
 change-free 25
 change-intensive 25
 channel abstraction 168, 181
 class associations 147
 class creation 148
 cleanroom software engineering 354
 client proxy 176
 client-side state 182
 closed change 27
 clustering algorithms 238
 clustering analysis 116
 clustering techniques 229, 237
 clusterings 216
 code profiling tools 121
 commercial off-the-shelf 145
 common gateway interface 141
 commonality management 260
 compliance checking 237
 compliance checking techniques 244
 component 230
 component wrapper pattern 178
 component-based development 354
 component-based software engineering 111
 component-connector dependence arcs 205
 components 201
 computation 201
 computing management 2
 concept assignment 213
 concept lattice 237
 concept model 235
 concept-lattice analysis 229
 conceptual level 310
 concurrency handling 168
 conditional selections 218
 configuration 201
 congruence measure 248
 connectivity 232
 connector 173, 230

connectors 201
 consistency and traceability 249
 constraint satisfaction problem 245
 contained change 27
 content cache 186
 content creator 185
 context table 239
 continuous learning 45
 control measures 27
 control structure 330
 conversion 168
 cookies 182
 CORBA 138, 170
 correction request 275
 corrective maintenance 348
 corrective maintenance maturity model (CM3) 75
 correctness measure 44
 customer profile 86
 customer satisfaction 88

D

data assessment 304
 data field cloning 151
 data field mapping 151
 data mining 237
 data type analysis 149
 data type casting 151
 datasets 215
 DCOM 138, 170
 decision management 261
 decision tables 295
 decorator 179
 development 51
 development methods 347
 discrete simulation 273
 distributed and heterogeneous systems 249
 distributed object technologies 138
 diversity of front-end support 77
 domain dependent 31
 domain independent 31
 dynamic content generation 168
 dynamic design 25
 dynamic ecology 30
 dynamic run-time analysis 249

dynamic systems development methodology 352

E

e-business 295
 ecopoiesis 28
 emergency corrective maintenance 86
 encapsulated state 123
 encapsulation 233
 encrypted connection 188
 enterprise JavaBeans 142
 entropy 28, 346
 environment 231
 event management 58, 65
 event-based, distributed systems 174
 evolution threshold 119
 external dependencies 124
 extraction phase 229
 extractive approach 262
 extreme programming 352

F

factorization process 264
 feature engineering 110
 feature implementation 115
 feature model 113
 fine-grained component model 113
 fine-grained components 111
 “fixed” specification 32
 formal concept 239
 formal model 114
 formal parameter 150
 fragments 187
 front-end support 76
 function code cloning 151
 function splitting 150

G

gap 52
 gap analysis 304
 generation of method code 155
 global data structure 147
 global data types 148
 glyph factories 220
 glyphs 220

goal-question-metrics 297
 granularity 122
 graph topology 216
 graph-theoretic algorithms 238

H

help desk 79
 heterogeneity 52
 heuristic analysis rules 151
 heuristics 118
 hierarchical 216
 hierarchical algorithms 238
 hierarchy trees 351
 house of quality matrix 351
 HTML markup 167, 168
 HTTP 139, 171
 HTTP basic authentication 188
 HTTP client 172
 HTTP digest authentication 188
 HTTP protocol 168
 hypertext electronic form 141

I

IDL 157
 incremental evolution 109
 incremental reconstruction 245
 incremental resolution 33
 information and communication technologies 2
 information systems 345
 information technology 326, 345
 infrastructures 80
 inheritance 148
 integration of the legacy system 139
 intellectual assets 45
 interactive Web 168
 interfaces 146
 intergroup coordination 69
 internal business agreements 329
 internal dependence arcs 205
 invoker 176
 IS delivery approaches 346, 347
 IS delivery methods 349
 IS delivery paradigms 349
 IS development process 349
 IS maintenance 345

IS process management 351

IS quality 348

J

Java native interface 142

L

layered graph 216

layered program 213

layout computation 218

leases 183

legacy system 295

legacy system evolution 296

level selections 217

lightweight product line architectural
256

line operations 329

M

maintenance 51, 328

maintenance contracts 337

maintenance office 275

maintenance plan 330

maintenance practices 346

management concerns 2

map of business 332

mappers 220

mapping 279

marshaller 177

mathematical concept analysis 239

matrix 116

matrix organization 338

maturity 51

measurable service 57

measurement framework 295

message interceptor 180

method attachment 150

metric computation 218

metrics 297

migrating a legacy system 229

migration of legacy system 139

migration to the Web 140

modification report 275

modification request answer 276

module dependency graphs 212

monitor object 175

monitoring 9

monolithic systems 145

multi-tier architecture 141

N

neighboring features 119

nested layouts 219

network-centric architectures 138

O

object model 328

object model extension 148

object-oriented design 144

object-oriented development 353

open-ended change 27

operation level agreement 98

operational level 310

optimization algorithms 238

orthogonal defect classification 355

oversight 64

P

parameter type analysis 150

participatory design 349

pattern based techniques 243

pattern generation 247

pattern language 170

pattern matching 237

pattern-based 237

patterns 168

perfective 26

perfective maintenance 348

persistence of change 44

personal software process 352

pervasive computing 138

plan recognition 213

polymorphism 148

pooling 175

portfolio analysis 299

preventive maintenance 85, 348

proactive approach 261

problem analysis 92

problem management 70

problem reporting 92

- process driver 44
- process efficiency 272
- process improvement 273
- process innovative 301
- process maturity 273
- process modeling 279
- process parameters 291
- process performances 273
- product line 255
- product line scoping 257
- product support 79
- profiling 112
- program analysis 213
- program understanding 211
- project organization 338
- prototyping 29, 349

Q

- quality function deployment 349
- quantitative level 310
- query-based techniques 229
- queuing network 280

R

- rapid application development 352
- reactive approach 261
- reconstruction 229
- reconstruction technique 230
- redocumentation 213
- reengineering 111, 168
- reengineering to the Web 183
- refactor 111
- refactoring 112
- registering office 275
- regression test cases 112
- relationships 238
- remoting frameworks 170
- request decoder 169
- requirements elicitation 85
- resource management 71
- reverse engineering 212
- reverse reengineering 111
- RMI 170
- root cause analysis 355

S

- schema 235
- scope of support 95
- scripting front-end 215
- separation of concerns 230
- sequential execution degree of the
 - process 306
- sequential resolution 33
- server utilization 280
- server-side 184
- service 51
- service abstraction layer 171
- service commitment management 63
- service level 79
- service level agreement 98
- service quality assurance 65
- service tracking 64
- servlet 185
- session management 168
- shared functions 120
- snapshot 233
- SOAP protocol 140
- socio-technical systems 349
- software architecture 230, 256
- software architecture analysis 229
- software architectures 198
- software artifacts 216
- software defects 355
- software design 198
- software evaluation process model 352
- software evolution 111, 255
- software frameworks 213
- software life cycle 274
- software maintenance 198, 256, 273
- software management 2
- software problem management 84
- software quality 348
- solution delivery 95
- solution domain 109
- source model 229
- stacked layouts 219
- standard deviation 116
- statefull function 120
- stateless function 120
- statistical metrics 247
- structure 231

- structure view 232
- sub-features 122
- subcontract management 64
- success factors 331
- support line 79
- synchronized access 174
- system 2
- system analysis methods 197
- system evolution 197, 301
- system features 110
- system graph 243
- system maintainability 346
- system structure 198
- system's architecture 198
- systems deployment 357
- systems development life cycle 351
- systems development methodology 351
- systems maintenance 326
- systems maintenance activities 333

T

- telecommunication 274
- telecommunication software maintenance process 273
- threshold 129
- tree selections 218
- trial-and-error 40
- trouble reports 275

U

- URL encoding 182
- URL encryption 188
- user interface 139, 215
- user involvement 349
- utility trade-offs 45

V

- variable analysis 149
- viewers 220
- virtual IT enterprise 76
- visibility 233
- visualization 213

W

- waiting time 281
- waterfall approach 26
- Web browser 167
- Web content management 187
- Web engineering 169
- Web interface 167
- Web products 255
- Web services 138
- Web-enabled 169
- wrapper 169
- wrapper code generation 162
- wrapper facade 172
- WSDL 139

X

- XML 139