Index

Α

abstract user interface description language 167 action portions 9 activities ontology 270 adaptive maintenance 35 application logic components 160 association 123 Atos ODS 228

В

Babel Fish 107 behavior diagrams 117 Big-M Methodology 258 Business Process Reengineering (BPR) 151, 152 business rule 9 Butterfly methodology 162

C

Capability Maturity Model (CMM) 28 categorical data analysis 193 Change Control Board (CCB) 48 Chicken Little methodology 162 closedown 256 CM³: Problem Management 36 code 81 code metrics 182 coding standards 79 collaboration diagram 117 collective ownership 78 communication technology 152 complexity factors 191, 215

Component Based Software Engineering (CBSE) 119
composite (indirect) corrective maintenance 44
Computer Assisted Software Engineering (CASE) 27
concept lattices 209
conceptual tools 266
constant maintenance cost 82
control flow complexity 215
corrective maintenance 32, 257
Corrective Maintenance Maturity Model
(CM3) 33
critical reference group 231
criticality of change factors 191

D

data usage complexity 215
database components 160
decision framework 158
decision portion 9
decisional complexity 215
decomposability 160
Document Object Model (DOM) 127
dynamic impact analysis 208

Ε

evolutionary programming paradigms 79 eXtensible Markup Modeling Language(XML) 121 external problem reports 51 eXtreme programming (XP) 75

Н

Help Desk Process (HDP) 39 horizontal decomposability 160 hypertext 209

I

Immediate (direct) corrective maintenance 43 impact analysis 206, 207 impact domain 213 implementation diagrams 117 individual problem report process instance level 47 integration and test 81 interacting systems 7 interface complexity 215 interface components 160 internal problem reports 51 internal stimuli 4

L

legacy systems 152, 156 life cycle of an XP project 79 locality of change factors 192

M

MAINCOST 220 maintenance cost estimation 202 Maintenance Demand Administration Process (MDAP) 40 Maintenance Demand Realisation Process (MDRP) 40 maintenance impact domain 216 management-specified change 15 MANTEMA 230, 264, 279 MANTICA 286 MANTIS Big-E Environment 255, 264, MANTOOL 251, 285 measures ontology 275 meta-metamodel layer 262 metamodel 262 metamodel layer 262 Meta-Object Facility (MOF) 256 methodology 228, 278 migrating business processes

152, 153
modeling constructs 74
modeling techniques 120
Modeling Transfer 120
Modification Requests (MR) 240
MORPH methodology 167
multilevel conceptual architecture 260

O

object modelling 153
Object-oriented (OO) technology 116
Object-Oriented Analysis and Design
(OOA/D) 116
object wrapping 173
online transaction processing (OLTP) 7
ontology of SM 269
operational performance 12
organisation-wide process level 47
organizational health and fitness 1

P

pair programming 78 patterns for software maintenance 100 patterns in software design 96 perfective maintenance 35, 257 performance factors 192 planneable maintenance 233 preserve boundary integrity 3 problem management process 47 Problem Report Administrator (PRA) 48 Problem Report Engineer (PRE) 48 Problem Report Owner (PRO) 48 Problem Report Repository and Tracking System (PRR) 48 problem report submitter 48 process engine 260 process flexibility 63 process maturity 28 process metamodel 276 process reverse engineering 153 Process-Sensitive Software Engineering Environment (PSSE) 256, 258, Product Support Process (PSP) 39 products ontology 270 project influence factor 217 project management 268

Q

qualitative risk assessment 190 quality factor 216

R

reeingineering 158
refactoring 80
repository management 286
requirements risks 187
risk assessment 190
risk management 268, 283
root cause analysis 58

S

SoftCalc 210 SoftRepo 220 software component 119 Software Engineering Environment (SEE) 255 Software Engineering Institute (SEI) 28 Software Enhancement Administration Process (SEAP) 40 software lifecycle 45 Software Maintenance (SM) 1, 19, 93, 134, 201, 223, 228, 255 Software Maintenance Process (SMP) 255 software organisations 33 Software Problem Administration Process (SPAP) 40 software process technology 259 Software reengineering patterns 105 software requirements 184 software standards 114 software system owners 202 software systems 115 Space Shuttle Flight Software 191 strategy pattern 103

Т

task structure 235 test-Integration 80

U

UML 115 UML Exchange Format (UXF) 122 unification relation 123
Unified Modeling Language (UML) 115
upfront maintenance 33
use case diagram 117
use case modelling 153
user interface reengineering 166
user object layer 262

V

verification 120 vertical decomposability 159 vertical tools 284

W

web-centric architecture 152, 153
Workflow Management Systems
(WFMS) 271
workflows ontology 271
wrapping and integration 168
write-tests 80

X

XML 115 XML-based Unified Meta-Model (XUMM) 116, 122 XML-based Unified Model (XUM) 127 XML Schema 122 XUMM Schema 143