Index

A
A-box 12
abnormal entities 52
abstract merging task 60
abstract roles 303
action 91, 111, 145
action concept 147
action dependency 138
action direction 81
action modus 82
action objects 74
actions in contract phase 82
action workflow (AW) 75
Active Badge System 279
activities 108
activity-oriented models 125
activity theory (AT) 104
actor 89, 124, 130, 313
actor, data, and process-oriented (ADP) approach 301
actor, data and process-oriented (ADP) framework 295
actor network theory (ANT) 96
actor properties 199
adaptive and autonomic computing 6
adaptive autonomic computing 5
adaptive business networks 327, 332
ADONIS 357
ADP-based KM analysis 304
agency 103
agency-structure duality 102
agency theory 163
agency theory and ICT management 163
agent 193
agent-driven modeling 127
agent-orientation 123
agent-oriented enterprise model 122, 128
agent-resource duality 109
agent architecture 110
agent cognitive architectures 107
agentified group 134
agentify group function 136
agent interactions 112
agent orientation 124
agent oriented software engineering (AOSE) 106
agent role set 110
agents 93, 124
AI (artificial intelligence) 250
alternate task 60
ambient intelligence 279
ANSI 3-level architecture 355
ANSI 3-schema architecture 354
ANSI reference model 355
answer set programming (ASP) paradigm 198
ANT approach 96
application domains 278
application level 355
application ontology 281
APQC process classification framework 242
architecture of integrated information systems (ARIS) 357
Aristotelian approach 23
Aristotelian ontologies 21, 23, 24
Aristotelian ontologies, logical point of view 25
Aristotelian ontologies in OWL, simulating 26
Aristotelian ontology of Condillac Research Group 26
artifacts 89
artificial intelligence (AI) fields 102
artificial intelligence techniques 383
association relations 199
assumption of inherent classification 41
attributes 217
authorization 150
authorization concept 150
automated deductive reasoning 1
automated system cooperation 224
automatic actions 92
autopoiesis 102
axioms 200

B
B2B (business-to-business) 73
B2C (business-to-consumer) 73
back office system (BOS) 61
banking industry 311
basic description and situation (DnS) CODEP 55
basic formal ontology (BFO) 39
BAT model 71
Index

BAT model, assessment phase 83
BAT model, contractual phase 82
BAT model, essential concepts 74
BAT model, fulfillment phase 82
BAT model, overview 73
beginning task 59
behavioral knowledge 211
behavior of a system 353
belief 151
belief concept 151
BFO instantiation 44
BFO ontology 41
bona fide entities 39
boundary condition 145
boundary condition concept 146
BPI (business process improvement) 295
BPR (business process reengineering) 295
building information support system 263
Bunge-Wand-Weber (BWW) ontology 54
business-IT gap 238
business action 74
business action theory (BAT) 70
business engineering methods 353
business interaction 22, 49, 351, 360, 369
business interaction, levels of 73
business interaction models 70
business life worlds 208
business modeling 52
business modeling, example of 60
business partner management with ontologies 327
business partner profiles 340
business partner relationship management 336, 338
business phase 74
business process chain 351
business processes 223, 351
business process execution language (BPEL) 22
business process execution language for Web services (BPEL4WS) 53
business process management notation (BPMN) 53
business process modeling (BPM) 125
business process modeling language (BPML) 353
business transaction 73, 74
business transformation 237
business value level 312
C
capability 132
capability concept 134
cardinalities 9
CATWOE 214
causal cognitive mapping 208
causal cognitive maps 212
causal mapping 212
center ontology 372
CEO framework 106
CEO framework, concepts of 108
choreographies 37
CIMOSA models 190
Cisco Systems 311
classes 8, 9, 217
classes in the OWL ontology 27
classification 23
classification analysis 23
class popularity 296
CM applications 36
CM technology 36
coded application procedure 5
cognitive map 212
cognitive mapping workshops 214
cognitive modeling 107
cognitive models 108
collaborative learning 213
collective memory 36
COMA 367, 368
commercial business engineering 351
common understanding 21
communication 93
communication and ontology 333
communication language 266
communities of practice (CoP) 299
comparison function COM 388
COMPASS2008 project 280
COMPASS system 281
compatibility vectors 373
compatibility vectors, dynamic adjustment 374
compatibility vectors, experiments 380
compatibility vectors, features of 376
compatibility vectors, utilities of 375
compatibility vector system 371
completeness 180
component business modeling (CBM) 244
computational language 262
computer-aided ontology editors 383
computer-integrated manufacturing open-system architecture (CIMOSA) 190
computing 1
concept distance 372
concept distance calculation 372
concepts 8, 37
conceptual coverage 179
conceptualization 37, 178
concrete roles 303
concurrency task 60
Condillac Research Group 26
Conference Assistant, The 279
confidence of entitlements 202
confidence of execution 202
confidence of satisfaction 202
configuration of the activities 315
conflict concept 143, 144
conflict submodel 130, 143
consensual ontology 23
consequential actions 92
content ontology 283
corpus ontology design pattern (CODeP) 54
content ontology design patterns (CODePs) 49, 52
corpus-aware applications 279
corpus-awareness 299
corpus and situation awareness 287
corpus aware systems 351
corpus changes 285
corporate clients 319
corporate knowledge 218
corporate knowledge portals 218
corporate memories (CM) 35, 36, 174
corporate memories (CM), environmental model 35
corporate memory, referent tracking 35
corporate memory systems 36
corporate process model 214
CRM (customer relationship management) 245
cross-organizational business processes 223
cross-organizational business process integration 312
Cupid 367, 368
customer management 327
customer relationship management (CRM) 328
customer service representative (CSR) 61
Cyberguide project 280

daisy-chain of models 242
DAML+OIL 384
data 4
database management systems (DBMS) 354
database management system supports 237
Databases 15
data interoperability 1
data manipulation and querying 18
data mining 23
data model 15
data model patterns 53
data query engine 266
data representation structure 266
data type properties 28
del.icio.us 18
delegation 196
delegation and trust 199
delegation of execution 197
delegation of permission 197
deliberation task 60
Dell Computers 311
dependency analysis 243
dependency path 313
dependent entities 39
dependum 138
dependum concept 139
description 55
descriptive ontology for linguistic and cognitive engineering (DOLCE) 191
design ontologies 209
design parameters (DP) 261
design science paradigm 172
difference 23
differentia specifica 24
digital business ecosystem 345
directly related actions 97
DnS CODEP 56, 57
document location 208
DOLCE 54
domain-independence 299
domain ontologies 337, 281
domain ontologies, approaches to 23
domain ontology modeling languages 21
domains 9, 217
draft portal 218
dynamically adjusting vectors 374
dynamic business ecosystems 330
dynamic service offers 278

E
e-action 92
e-business 367
e-business capabilities 366
e-business community (EBC) 369
e-business environment 369
e-business partners 366
e-service environments 368
e\'value 312
e\'value modeling concepts 312
e\'value ontology 311, 312
e\'value constructs 316
e\'value construct set 316
e\'value model 314
e\'value ontology 324
EA modeling framework 106
early requirements engineering 122
ebXML 53
eclipse modeling framework (EMF) 250
electronic commerce 392
electronic data interchange (EDI) 360
electronic health record (EHR) 41
electronic markets 223
electronic store 94
emergency response support 281
emerging business opportunities 327
ending task 60
English syntax 18
enriched contextual matching 371
enterprise-scale ontology management system 238
enterprise application integration (EAI) 328
enterprise architectures (EA) 102, 105
enterprise business interaction modeling 49
enterprise business modeling 52
enterprise distributed object computing (EDOC) 353
enterprise distributed systems 294
enterprise engineering 190
enterprise engineering methodologies 190
enterprise knowledge development (EKD) 126
enterprise knowledge management (EKM) 328
enterprise memory 174
enterprise model 35, 123
enterprise model, overview of 128
enterprise modeling 122
enterprise modeling, small-scale roadmap 52
enterprise ontology (EO) 36, 37, 54, 106, 125, 190
enterprise ontology systems 35
enterprise portal 343, 344
Enterprise Project, The 37
enterprise representations 107
enterprise resource planning (ERP) 328
entities 108
entity-relation (ER) modeling 250
entity-relationship (E/R) diagrams 53
environmental actor 319
environmental data integration 362
environment model 35
EPC (event-driven process chains) 359
epistemological approach to ontologies 21
epistemological ontologies 24
equity investment 314, 316
European Research Project CIMOSA 44
evaluation subsystem 290
event 152
event-driven process chains (EPC) 53, 353
event concept 152
event driven process chain markup language (EPML) 360
exclusive choice 62
existing business modeling language 88
existing enterprise representations 107
expert knowledge 22
expert systems 15
explicit representation of meaning 1
extensible business reporting language (XBRL) 31
extensional predicates 198
externalization 104

F

FBPML process model 306, 307
FBPML workflow engine 304, 305
FEA reference models 7
federal enterprise architecture (FEA) 7
federal enterprise architecture (FEA), reference models 7
fiat entities 39
FlickR 18
formal analysis techniques notations 210

formal conceptual systems 23
formal description languages 223
formal logical semantics 1
formal ontologies 22
formal semantics 12, 198
frames 55
front office value activities 320, 322
functional relationships 302
functional requirements (FR) 261
function view 190
fundamental business process modeling language (FB-PML) 303

G

G-SDAM 353
G-SDAM Grid data middleware 362
genera 23
generalized enterprise reference architecture and methodology (GERAM) 190
genus 23
genus proximum 24
GFO-GOL 54
global conceptual model 241
global data structure (GDS) 361
global economy 366
global repository node (GRN) 361
global semantic model 241
GLUE 367, 368
goal 140
goal, temporal behavior of 142
goal-based modeling 126
goal-driven modeling 126
goal analysis 199
goal concept 141
goal diagram 195
goal refinement alternative 143
goal refinement alternative concept 143
goals submodel 130, 140
granular partition theory 40
graphical e3value ontology editor 312
GRID environment 356
Grid infrastructure 353, 360
Grid semantic data access middleware (G-SDAM) 360
Grid technology 360
group 134
group concept 135
group memory 174
group structure 134, 136
group structure concept 137

H

heat map analysis 244
hierarchical relationship 302
high-level Petri nets 353
high level enterprise process model 215
high level ontology diagram 217
Index

highly specialized knowledge bases 351
human actions 89
human beings 101
human driven business interactions 22
human inner world 89
human multitasking 115
humans 89
hybrid matching technique 368

I
i* modeling framework 127
i* modeling language 191
ı-actions 91
ICT assets 159
ICT core constructs 156
ICT evaluation 159, 160
ICT infrastructure 327
ICT infrastructure collaborative data 336
ICT infrastructure layer 332
ICT literature 158
ICT management (ICTM) 156, 161
ICT management core constructs 159
ICTM core constructs 156, 163
ICTM ontological framework 161
ICTM theories 161
ICT ontologies 157
ICT policy 159, 160
ICT projects 159
IFCS taxonomy 53
IMAGE 256
implicit knowledge 13
indefinite actions 91
independent entities 39
indirectly related actions 97
individual, family, city, and state (IFCS taxonomy) 53
individualized marketing 327
individual memory 174
industry-strength ontology management system 246
inference engine 247
information-logistical evaluation 287
information-system perspective 129
informational dependency 51
informational resources 149
information and communication technologies (ICT) 156
information collection, overview 212
information collection method 213
information extraction 368
information integration and interoperability 5
information modeling 257, 267
information objects 55
information organization framework 254
information overload 299
information processing 2, 197
information quality 150
information retrieval (IR) 352, 354
information retrieval techniques 351
information services 1
information support reference model 264
information system (IS) 122, 264
information system architecture (ISA) 256
information system infrastructures 259
information system requirements engineering 122
information systems (IS) 88, 102, 172, 188
information system support (ISS) 254, 255
information technology (IT) 352
information view 190
instance popularity 296
instances 8, 9
instance unique identifiers (IUIs) 41
intelligent agents 5
intelligent reasoning 5, 6
intelligent search 6
intentional collectives 96
intentional predicates 199
interaction model 191
interface-semantic Web 265
internal business processes 37
internalization 104
interoperability 22
interorganizational business process 224
interorganizational business process models 223
intranet design schema 218
intranet knowledge portals 208
inventory level (IL) 266
inventory replenishment 258
IT semantics 239
IUI-repository 42

J
Java API 247
Java Data Base Connector (JDBC) 246, 247
Java Ontology Base Connector (JOBC) 246, 247, 248
JOBC query 249
JOBC statement 249
jointly performed value activity 316
joint venture 314, 316

K
KAON2 233
KAON infrastructure 334, 343
KAON ontologies 334
KAON query module 344
KAOS framework 126
KAOS specification 126
key performance indicators (KPI) 239
kind of contracts (KoC) 63
kinds of contracts (KoC) 60
knowledge, eliciting 211
knowledge, expressing 8
knowledge-based control 51
knowledge-based economy 52
knowledge acquisition 368
knowledge buildup 383
knowledge conceptualization 261
KnowledgeEco 171
KnowledgeEco, SM lifecycle 177
KnowledgeEco evaluation rules 182
KnowledgeEco in detail 174
KnowledgeEco ontology 172, 177
knowledge elicitation 215
knowledge elicitation methodology 214
knowledge management (KM) methods 295
knowledge management functions 294
knowledge management support 294
knowledge management system 209
knowledge management systems solutions 208
knowledge management tools 216
knowledge objects 219
knowledge of the system 353
knowledge ontology 208
knowledge portals 218
knowledge repository 176
knowledge requirements for information systems 210
knowledge resource 171
knowledge support for OM 385
knowledge technology 176
knowledge technology solutions 211
knowledge work 208, 210

L
language/action (L/A) community 75
language action perspective (LAP) 88
language game 211
large scale data manipulation and querying 18
large scale semantic markup of existing data 18
library of matching algorithms 368
linguistic and structural schema-matching techniques 368
linguistic similarity matches 367
Linnés taxonomies 23
local data node (LDN) 361
location and time ontologies 278
location ontology 282
logic oriented ontology languages 22
loosely coupled business processes 223

M
management-software agents 265
management pyramid 157
mapping rules 361
market segment 313, 319
material commission 225
meta-model 89
meta-model of SIP 95
metadata 3, 4, 338
metadata tags 3
MetaKnowledge 176
mobile computing 287
Mobile Emergency Assistant 281
mobile users 278
mobile users, dynamic demands 278
model-driven applications 5, 6
model-driven approach 237
model-driven architecture 240
model-driven business transformation 238, 239
model-driven business transformation approach 241
ModelAccess 288
model driven architecture (MDA) 53, 250
modular application ontology 278
modular ontology architecture 282
modular service ontology schema 284
MOISE+ 191
MONA system 281
money market 319
multi-agent systems (MAS) 190
multi metamodel process ontology (m3po) 37
multiple machine learning strategies 368
multitasking behavior 115
MUSING (MUlty Industry Semantic based Next Generation Business Intelligence) 32

N
natural environment 89
natural kinds 23
natural language analysis techniques 179
natural language semantics 23
nature of the activities of a partnership 315
NeOn project (NeOn) 65
network typology 338
new vector generation 376
nonagentified group 136

O
object-orientation 104
object-oriented system design 255
object dependency 139
object property classes 28
objects 90
objects submodel 130
object submodel 149
occurrences 39
ODAMY 331, 342
OM (ontology merging) algorithm 389
OM algorithm 385
OM algorithm for automatic merging of ontologies 387
OM components 174
OM in real-world examples 401
OM notation 384, 385, 386
OM notation, contributions in 387
on-demand business 21
ontological categories 89
ontological conceptions 208
ontological modeling 125
ontologies 1, 3, 4, 49, 211, 255, 354
ontologies, Aristotelian 21
ontologies, automatic merging 383
ontologies, components 10
ontologies, epistemological approach 21
ontologies, exploring 8
ontologies, features of 12
ontologies, rules 13
ontologies, tools 13
ontologies, virtual structures 12
ontologies for business interaction 49
ontologies for model-driven business transformation 237
ontologies vs. databases 15
ontologies vs. data models 15
ontologies vs. expert systems 15
ontologies vs. taxonomies 15
ontologies vs. unified modeling language (UML) 15
ontologies with process modeling techniques 359
ontology 168, 226, 237, 255, 258, 260, 262, 312, 334, 384
ontology, example 10
ontology-based community awareness 51
ONTology-based community of practice identifier (ONTOCOI) 299
ontology-based information retrieval model 368
ontology-based information systems 351
ontology-based partner selection 366
ontology-based querying 338
ontology-based query techniques 352
ontology-based service provision 280
ontology-based service selection 281
ontology-driven approaches to enterprise modeling 125
ontology-driven information system 255, 260
ontology-driven information system (ODIS) 255, 262
ontology-merging algorithm 366, 370
ontology-ontology server 266
ontology application in e-service 368
ontology as information system support 254
ontology as knowledge map 216
ontology based communities of practice identifier 300
ontology changes 286
ontology compatibility vector system 370
ontology components 11
ontology construction of ICTM 158
ontology constructs 9
ontology constructs, classes 9
ontology constructs, typical 9
ontology content 12
ontology definition metamodel (ODM) 250
ontology design for interaction 49
ontology design patterns 51
ontology development 173
ontology development framework for information modeling 267
ontology directory 247
ontology editor 255
ontology engineering 51, 52
ontology engineering projects 51
ontology evolution 40
ontology for modeling organizations 190
ontology for secure socio-technical systems 188
ontology inference engine 266
ontology in OM notation 386
ontology languages 11, 12
ontology languages, annotation 15
ontology management 356
ontology matching 367
ontology merging 384
ontology modeling languages 21
ontology model structure 11, 12
ontology network analysis (ONA) 296
ontology network analysis in organizational memories 297
ontology of ICT management 156
ontology of organizational memory 171
ontology reference model 276
ontology server 266
ontology source connectors 248
ontology structure 281
ontology structure of the business partner profiles 339
ontology usage 285
ontology views in POV2O 356
open infrastructure 287
OperA framework 191
operational goal 142
ORACLE 18
order 225
organization 136
organizational actions 92, 93
organizational agency 103
organizational complexity 102
organizational consciousness 104
organizational constructionism 102
organizational evolution 102
organizational goals 124, 160
organizational intelligence 102
organizational memories (OM) 36, 171, 174, 294, 295
organizational model 191
organizational performance 160
organizational predicates 108
organizational role 124, 132
organizational role concept 133
organizational rules 151
organizational self-awareness 101, 102
organizational structure 259
organizational structure concept 138
organizational submodel 130
organizational theories 156
organization concept 137
organization structure 136
organization theory 166
organization view 190
organizational-goal dependency 138
OWL (Web ontology language) 7, 26, 237, 384
OWL-DL 12, 13
OWL-Lite 12, 13
OWL-QL (OWL query language) 357
OWL-S 6, 22
OWL-S (OWL for services) 233
OWL API 335
OWL DL 334
OWL Full 12, 334
OWL Lite 334
OWL modeling 21
OWL ontologies 7
OWL Services Coalition 6
OWL syntax 227
OWL tools 23

P

participative simulation environment for integral manufacturing renewal ontology (PSIM) 44
particulars 39
partition units 40
partnership relationship management 329
personal action contexts 116
personal goal 142
personalization 287
Petri Net markup language (PNML) 224
Petri Net ontology 228, 230
Petri Nets 53, 223, 225
Petri Net variants 225
philosophical theories of meaning 23
physical data 3
physical domain representation 261
physical resources 149
plan 57, 148
plan concept 148
plan elements 58
plan execution 58
Plans CODEP (PO) 57
plan tasks taxonomy 59
portion of reality (POR) 40
POVOO 351, 352
POVOO, IR mechanism 359
POVOO, view-based query process 359
POVOO ontologies 358
POVOO querying mechanisms 358
POVOO scenario virtual organizations 361
precondition 145
predefined actions 91
Predicate/Transition Nets 225
predicates 198
problem-solving knowledge 353
problem classification 261
problem domain reference model 274
problem model taxonomy 258
problem solving methods 266
problem taxonomy (PT) 255, 257, 260, 261
process modeling 219
process models 357

process oriented view on ontologies (POVOO) 351
process submodel 130, 145
PROMPT 367
properties 8, 9
properties, defining 24
propositional contents 82
Protégé 3.2 class 30
Protégé 3.2 property individuals 31
Protégé ontology editing tool 14
Protégé ontology editor framework 357
pseudocode for new vector generation 357
PSIM Ontology 44
purchase order 225
Puzzle 367, 371

Q

QoS-aware service selection 369
QoS classifications 284
qualities 24
quality of service (QoS) 369

R

r-actions 91
RACD role modeling 302
ranges 9
RDF (resource description framework) 13, 237, 241, 334
RDF-schema 11
RDF/XML 226
RDF Schema 241, 334
RDF view language (RVL) 354
RDQL (RDF query language) 357
REA enterprise ontology 37
real-world ontologies 379
reasonable enterprise 49
reasonable entities 52
reasoning engines 13
reciprocal value transaction 316
reference ontology 341
referent tracking (RT) 35, 41
referent tracking (RT), paradigm 41
referent tracking database (RTDB) 42
referent tracking system (RTS) 42
referent tracking system (RTS), services of 42
relations 8
relationships 217
relevance 150
relocate function 370
representational units 40
requirements engineering (RE) 122, 189
requirements engineering (RE) effort 123
resource 108, 149
resource concept 149
resource description framework (RDF) 11, 224
resource discovery 176
resource view 190
return on investment (ROI) 164
role-driven modeling 127
role activity and communication diagram (RACD) 302
roles 109
S
S-Match 367, 368
sales order process (SOP) 60
sales order process CODeP-based description 63
sales order process possible workflow 62
sales order use case 61
SC-ISS reference model 254
schema-based ontology-merging algorithm 370
SC information support reference model 260
secure socio-technical systems 188
SecureUML 192
security 188
security engineering 190
self-organization 328
semantic-based formal framework (ADP) 294
semantic analyses for business transformation 243
semantic brokers 5
semantic business process models 223, 225, 227
semantic data interoperability 5
semantic enrichment 351
semantic interoperability 5
semantic interoperability community of practice (SiCoP) 5
semantic level 2, 355
semantic map 3
semantic markup languages 241
semantic markup of business process models 224
semantic markup of existing data 18
semantic metadata 227
semantic model for business transformation 242
semantic models 237
semantic models for business transformation 241
semantic reference model 278
semantics 1
semantics, harnessing 2
semantic service platform 289
semantic services 5
semantic similarity 368
semantic technologies 1, 2, 6, 295
semantic technologies, and the semantic Web 15
semantic technologies, applications 5
semantic technologies, benefits 5
semantic technologies, case study 7
semantic technologies, challenges 18
semantic technologies, issues 18
semantic technologies, key strategies 3
semantic technologies, overview 1
semantic technologies overview 3
semantic toolkit 249
semantic Web (SW) 15, 190, 295, 333, 368, 391
semantic Web “layer cake” 16
semantic Web components 18
semantic Web ontology 354
semantic Web ontology language (OWL) 8
semantic Web services 6, 353
semantic Web services modeling 22
semantic Web services support 54
semantic Web technology stack 339
SemPeT 232
SemPeT, graphical user interface of 233
sense-making 104
sequence 62
service-orientation 328
service-oriented information-logistical platform 278
service level agreements (SLA) 161
service matching 286
service ontology 283, 285
service query and manipulation language (SWSQL) 369
service retrieval 284
service roaming 286
service set changes 285
service subsystem 288
situation detection 286
situation ontology 285
situations 55
smart organization ontology 338
SM lifecycle 176
SnoBase driver 247
SnoBase ontology management system 238, 245, 246
SnoBase ontology management system architecture 246
SnoBase system 245
SOA (service oriented architecture) 328
social action 75
social dependency 51
social grounds 76, 81
social interaction 77
social model 191
social purposes 76
social relation 78
social rules 94
social rules 104
social world 75
socio-instrumental action 76
socio-instrumental pragmatism (SIP) 70, 72, 75, 88
socio-technical system analysis 189
sociotechnical entity 102
softgoal 142
soft systems methodology (SSM) 208, 212
software-engineering-driven techniques 53
software agent 131
software assets 160
software development environments (SDE) 53
sourcing agreement 315, 316
SPARQL 361
SPARQL query 248
SPARQL query language 246
SPARQL query language for RDF 247
specialized domain ontologies 356
species 23
specific differentiation principle 23
stakeholder theory 161
stakeholder theory and ICT management 161
standard ontology languages 238
standards setting 315
Stanford Medical Informatics 14
statistically-based cluster analysis 23
strategic partnerships 311, 314
structural memory (SM) 171, 174
structure 103
structure, mechanisms, and policies (SMP) 53
subtyping 44
supply chain (SC) 254
supply chain challenges 259
supply chain collaboration 265
supply chain information system support 265
supply chain management (SCM) 254, 255
supply chain relationship 315
supply chain system 257
Sydney OWL Syntax 18
symmetry 342
synchro task 60
syntactic level 355
system design methodologies 257
system design process 261
system processes 255
system taxonomy (ST) 255, 257, 260
system taxonomy reference model 273
T
T-box 11
tacit expertise 208
tacit knowledge 211
tacit knowledge mapping 212
tacit routines 212
TANGO 368
task knowledge 353
task ontologies 281, 353
taxonomies 15
taxonomy analysis 23
temporal data 5
terminology construction 23
tertium non datur principle 25
test ontologies 379
theory of behavioral integration 162
tension of behavioral integration and ICT management 163
tension of fit 162
tension of fit and ICT management 162
tension of images of organization 164
tension of images of organization and ICT management 165
tension of knowledge 23
time ontology 283
top-level procedure 370
Top Management Team (TMT) level 163
total cost of ownership (TCO) 164
tourism 280
TOVE ontology 106
TOVE project 37, 106, 125
transactional systems 210
transaction cost theory 164
transaction cost theory and ICT management 164
transparency 51
Tropos methodology 191
trust of execution 198
trust of permission 198
trust propagation 200
trustum 197
type predicates 198
U
U.S. DARPA-funded Air Operations Enterprise Modeling (AOEM) 302
U.S. Federal Government 7
U.S. Federal Government, case study 7
U.S. Office of Management and Budget (OMB) 7
ubiquitous computing 279
UDDI 22
UML class diagrams 88, 208
UML diagram 217
UML generalizations 55
UML interface notation 176
unified foundational ontology (UFO) 54
unified KoC/SOP ontology 65
unified model 65
unified modeling language (UML) 15, 53, 250
unique resource identifiers (URIs) 4
universal description discovery and integration (UDDI) 6
universal modeling language 240
universals 39
Université de Savoie machining ontology 27
upper ontology 281
use concepts 55
user profile changes 285
user profile ontology 283
user subsystem 289
Index

V

value activity 313
value interface 313
value object 313
value port 313
value structure of a joint venture 316
value transaction 313
value transfer 313
VIOLA 241
VIOLA, business map views 243
VIOLA semantic model 243
VIOLA system 242
virtual conceptual structure 12
virtual enterprises 327
virtual inter-organizational business process 361
virtuality 338
virtual learning 392
virtual structures 12

W

W3C-endorsed recommendations 16
Web ontology language (OWL) 21, 22, 223, 224, 226, 335
Web ontology language service specification (OWL-S) 6
Web service modeling ontology (WSMO) 54, 285
Web services 22
Web services description language (WSDL) 6
Web services modeling ontology (WSMO) 22
Web services protocol stack 22
weight learning through artificial neural networks 371
well-known Petri Nets 353
work duplication 208
workflow engine 304
workflow management systems (WFMS) 353
workflow ontology 62
workflow patterns 53, 62
work practice 211
worldwide digital data 2
World Wide Web 1, 6
World Wide Web Consortium (W3C) 7, 16, 18, 226

X

XML 241
XML-based notations 18
XML metadata interchange (XMI) language 250
XML schema 241