
Index

Symbols

A	.....	<i>see</i> atomic concept
C	.....	<i>see</i> concept
$C_1 \sqcap C_2$	.....	<i>see</i> intersection of concepts
$C_1 \Rightarrow C_2$	.....	<i>see</i> trigger rule
$C_1 \equiv C_2$	.....	<i>see</i> equality axiom
$C_1 \equiv_T C_2$	.....	<i>see</i> equivalent w.r.t. TBox
$C_1 \sqsubseteq C_2$	.....	<i>see</i> inclusion axiom
$C_1 \sqsubseteq_T C_2$	.....	<i>see</i> subsumption
$C_1 \sqcup C_2$	.....	<i>see</i> union of concepts
$C(a)$	.....	<i>see</i> concept assertion
P	.....	<i>see</i> atomic role
\mathbf{P}	.....	<i>see</i> atomic relation
R	.....	<i>see</i> role
\mathbf{R}	.....	<i>see</i> relation of arbitrary arity
R^*	<i>see</i> reflexive-transitive closure of roles
R^+	.....	<i>see</i> transitive closure of roles
R^-	.....	<i>see</i> inverse role
$R_1 = R_2$	.....	<i>see</i> equality role-value-map
$R_1 \sqsubseteq R_2$	.....	<i>see</i> containment role-value-map
$R_1 \sqcap R_2$	.....	<i>see</i> intersection of roles
$R_1 \sqcap \mathbf{R}_2$	.....	<i>see</i> intersection of relations
$R_1 \circ R_2$	.....	<i>see</i> composition of roles
$R_1 \equiv R_2$	.....	<i>see</i> equality axiom
$R_1 \sqsubseteq R_2$	.....	<i>see</i> inclusion axiom
$R_1 \sqcup R_2$	.....	<i>see</i> union of roles
$R_1 \sqcup \mathbf{R}_2$	.....	<i>see</i> union of relations
$R|_C$	.....	<i>see</i> role restriction
$R(a_1, a_2)$	.....	<i>see</i> role assertion
$T \models C_1 \equiv C_2$	.....	<i>see</i> equivalent w.r.t. TBox
$T \models C_1 \sqsubseteq C_2$	.....	<i>see</i> subsumption
$(\$i/n; C)$	.....	<i>see</i> selection on relations
$\geq k[\$i]\mathbf{R}, \leq k[\$i]\mathbf{R}$	.....	<i>see</i> number restriction on relations
$\geq n R$	.....	<i>see</i> at-least restriction
$\geq n R.C, \leq n R.C$	.....	<i>see</i> qualified number restriction
$\leq n R$	.....	<i>see</i> at-most restriction
\perp	.....	<i>see</i> bottom concept
$\Delta^{\mathcal{I}}$	.....	<i>see</i> interpretation domain
f	.....	<i>see</i> feature chain
$f_1 \doteq f_2$	.....	<i>see</i> agreement
$f_1 \neq f_2$	.....	<i>see</i> disagreement
$\forall R.C$	.....	<i>see</i> value restriction
$id(R)$	.....	<i>see</i> role identity
$\mu X.C$	.....	<i>see</i> least fixpoint operator
$\neg A$	.....	<i>see</i> atomic negation

$\neg C$	.....	<i>see</i> complement of concepts
$\neg R$	.....	<i>see</i> complement of roles
$\neg \mathbf{R}$	.....	<i>see</i> difference of relations
$\nu X.C$	.....	<i>see</i> greatest fixpoint operator
$\exists R.C$	.....	<i>see</i> full existential quantification
$\exists R.T$	.....	<i>see</i> limited existential quantification
$\exists[\$i]\mathbf{R}$	.....	<i>see</i> existential quantification on relations
\top	.....	<i>see</i> top concept
2+2-SAT	.....	136
2ATA	.....	<i>see</i> two-way alternating tree automaton

A

ABox	.....	17, 50, 64, 204, 379
absorption	.....	333
acceptable solution	.....	218
accessibility relation	.....	42, 159, 236
between intervals	.....	248
equivalence	.....	239
reflexive and transitive	.....	159
transitive	.....	164
transitive, serial, and euclidean	.....	238
universal	.....	241
access to knowledge bases		
advanced application	.....	276
basic	.....	273
concurrent access	.....	279
data structure	.....	277
notification	.....	278
remote access	.....	278
action-guarded fragment	.....	165
acyclic TBox	.....	57, 58, 92, 127
admissible concrete domain	.....	230
advanced application access	.....	276
AE-model	.....	245
AEON	.....	423
agent	.....	159
agreement	.....	99, 224, 290
\mathcal{AL}	.....	51, 53
complexity with axioms	.....	126
complexity with restricted axioms	.....	127
\mathcal{ALC}	.....	54
complexity	.....	120
\mathcal{ALCB}	.....	244
\mathcal{ALCD}	.....	229
$\mathcal{ALCFI}_{\text{reg}}$	.....	192, 202
complexity	.....	199
$\mathcal{ALCI}_{\text{reg}}$	.....	206

- \mathcal{ALCI}_{reg} 186, 191
 complexity 192
 \mathcal{ALCK} 240
 \mathcal{ALCN} 54, 82, 90
 complexity 120
 of ABox consistency 90
 of concept satisfiability 89
 w.r.t. general inclusion axioms 91
 \mathcal{ALCQI} 221
 \mathcal{ALCQI}_{reg} 200
 complexity 204
 \mathcal{ALCQO}_{reg} 206
 \mathcal{ALC}_{reg} 160, 186, 191
 complexity 192
 \mathcal{ALC}_{trans}
 complexity 122
 \mathcal{ALE} 53
 complexity 112
 \mathcal{ALEN} 53
 complexity 121
ALFRESCO 464
 $\mathcal{AL}\text{-LOG}$ 485
 \mathcal{ALN} 53, 82, 93
 complexity with restricted axioms 127
 \mathcal{ALNI} 217
 $\mathcal{ALN}(\sqcap)$
 complexity 120
 $\mathcal{AL}(\sqcap)$
 complexity 116
Alternating Polynomial Space 123
 \mathcal{ALU} 53
 \mathcal{ALUNT} 219
 $\mathcal{ALU}(\sqcap)$
 complexity 120
 \mathcal{AL} family 52, 53
AND-OR-Graph accessibility 123
approximation 260, 263, 267
arity 476
assertion 50
 concept see concept assertion
 inequality see inequality assertion
 membership see membership assertion
 probabilistic see probabilistic assertion
 role see role assertion
at-least restriction 53
at-most restriction 53
AT&T 398, 401, 408
atomic
 concept 10, 51
 negation 51
 relation 211
 role 11, 51
ATP 406
attribute 99, 166, 173, 362
 in the ER model 167, 476
 in XML see XML attribute
 partial see partial attribute
 total see total attribute
autoepistemic logic 244
axiom schema instantiation 199
- B**
- BACK 108, 303, 307
- backjumping 345
backtracking search 345
base interpretation 56
base symbol 56, 94
basic access to knowledge bases 273
basic role 193, 200, 223, 224
Bayesian network 253
BCP see Boolean constraint propagation
belief operator 235
Beth's Definability Theorem 58
blocking 90, 324, 326, 345, 352
Boolean constraint propagation 344, 348
Boolean operators on roles 95, 96, 158, 200, 214, 479
bottom-up approach 260
bottom concept 51
bottom search 337, 338
branching degree 193
breadth first search 337
Büchi
 acceptance condition 194
 automaton 93
- C**
- \mathcal{C} see complement of concepts
 \mathcal{C}^2 79, 96, 97, 156, 221
caching 325, 327, 338, 341, 352
CANDIDE 484
canonical interpretation 87
cardinality constraint 167, 170, 477
CARIN 486
CarsDirect 398
CASE tool 166, 171, 177
CCNF see concept-centered normal form
CG 148
characteristic concept 179
CHIMAERA 280, 458
 \mathcal{C}^k 157
clash 84, 86, 88
class 166
 declaration 173
class-based formalism 40
CLASSIC 111, 228, 272, 298, 320, 404, 410, 437–439, 446, 484
classification 18, 293, 317, 330, 336
classifier 293
CLIN-S 321
Clinergy 425, 431
closed-world semantics 64, 72
code-based management system 390
CODEBASE 388
Common Domain Assumption 76
common knowledge 239
complement
 of concepts 11, 53
 of roles 95, 155, 321
complete 87
 ABox 84, 86
completeness
 of algorithm 79, 82, 87
 of characterization 81
composition of roles 95, 186, 223
compound

- concept 219
 role 219
 computational complexity 14
 concept 50, 143
 assertion 19, **64**
 complement *see* complement of concepts
 conjunction *see* intersection of concepts
 constructor 51
 description 51
 disjointness *see* disjointness of concepts
 disjunction *see* union of concepts
 intersection *see* intersection of concepts
 language 7
 necessary condition 366
 negation *see* complement of concepts
 partial condition 367
 pattern 264
 reified *see* reified concept
 type 149
 union *see* union of concepts
 variable 264
 concept-centered normal form **93**, 261
 conceptual model 360
 conceptual graph 40, 148
 simple *see* simple conceptual graph
 conceptual modeling 475
 concrete domain 38, **229**
 concurrent access to knowledge bases 279
 configuration 28, 272, 281, 397
 conformance 178
 conjunction
 of concepts *see* intersection of concepts
 of roles *see* intersection of roles
 connected model property 190
 CONP-hardness
 in \mathcal{FL} 106
 consistency **70**, 90
 of knowledge base *see*
 knowledge base consistency
 consistent
 ABox *see* consistency
 set of ABoxes 85
 constant domain assumption 236, 244
 constraint satisfiability 345
 containment role-value-map **98**, 128
 converse-DPDL 189, 193
 converse-PDL 188, 200
 counting quantifier 79, 155
 CRACK 306
 CYC 427
 cycle *see* cyclic TBox
 cyclic TBox **57**, 92, 127
- D**
- DAML 417, 436, 441
 DAML ontology library 458
 DAML+OIL 417, 442, **452**
 DAML-ONT 441, 442
 DARPA Agent Markup Language *see* DAML
 data
 complexity 134
 integration 488
 mining 31
- E**
- \mathcal{E} *see* full existential quantification
 edge
- model
 object-oriented *see*
 object-oriented data model
 semantic *see* semantic data model
 semistructured *see*
 semistructured data model
- structure
 access 277
 inductive and coinductive 207
 database 32, **472**
 Datalog 474, 485, 494
 default logic 35, 245
 default rule 36, 255
 defined
 concept **56**, 293
 subconcept 369
 definition 17, **55**, 317
 necessary *see* specialization
 necessary and sufficient *see* definition
 non-primitive *see* definition
 order 337
 primitive *see* specialization
 definitorial **56**, 57, 58
 Dell 398
 dependency set 346
 description language 51
 Description Logic courses 287
 descriptive semantics **58**, 92, 156, 187
 deterministic-converse-PDL *see* *converse*-DPDL
 deterministic program 163
 difference of relations **211**, 212, 479
 Digital Anatomist 418, 426
 digital library 30
 disagreement 99
 discovery software 383, 385
 disjointness
 of concepts 66
 of subconcepts 368
 disjoint union model property 201
 disjunction
 of concepts *see* union of concepts
 of roles *see* union of roles
 DLMS 464
 DLP 309, 314
 \mathcal{DLR} 166, **211**, 479
 complexity 213
 \mathcal{DLR}_μ 166, 213, 214
 \mathcal{DLR}_{reg} 213
 Document Object Model 180
 Document Type Declaration *see* XML DTD
 DOM *see* Document Object Model
 domain 167, 444, 452
 of interpretation *see* interpretation domain
 domino problem *see* tiling problem
 DPDL 189
 DPLL 343
 DTD *see* XML DTD
 DWQ 483
 dynamic backtracking 355

- property *see* property edge
 subclass/superclass *see*
 subclass/superclass edge
 element *see* XML element
 content *see* XML element content
 type *see* XML element type
 enhanced traversal 338
 entity 167, 476
 Entity-Relationship
 model 166, 473, 476
 schema 166, 478
 epistemic
 interpretation 76
 logic 36, 236
 model 77, 242
 modeling 380
 operator 75, 239, 380
 query 242
 equality *see* equality axiom
 equality axiom 55
 equality role-value-map 98, 127
 equivalence *see* equivalent
 equivalent
 concepts 52
 sets of axioms 55
 w.r.t. TBox 66
 ER *see* Entity-Relationship
 error handling 282
 essential property 366
 exact cover 112
 existential predicate restriction 231
 existential quantification
 full *see* full existential quantification
 limited *see* limited existential quantification
 on relations 211, 479
 expanding domain assumption 236
 expansion 57, 69, 70
 explanation 280, 282, 405
 EXPTime-hardness
 in \mathcal{AL} with axioms 126
 in PDL 190
 Extensible Markup Language *see* XML
 extension
 function 209
 of interpretation 56
 extensional knowledge 16
- F**
- \mathcal{F} *see* agreement, disagreement
 FaCT 171, 308, 314, 349, 445, 458
 false positive 385
 feature 99, 290, 308, 362
 chain 99, 290
 fills 65, 206
 FINDUR 273, 285, 438
 finite automaton 93
 finite model
 property 80, 96, 171
 reasoning 171, 216
 finite tree 266
 first-order predicate logic 54
 Fischer-Ladner closure 189, 195
 fixpoint
- construct *see* fixpoint operator
 in the guarded fragment 165
 model 61
 mutual *see* mutual fixpoint
 operator 93, 140, 160, 178, 207
 semantics 58, 161, 178, 210
 greatest *see* greatest fixpoint semantics
 least *see* least fixpoint semantics
- \mathcal{FL}**
- $\mathcal{FL}^-(\circ, \subseteq)$ 128
 \mathcal{FL}_0 52, 80, 92, 93, 261
 \mathcal{FL}_\perp 81
 $\mathcal{FL}^{-\mathcal{E}}$
 complexity 116
 $\mathcal{FL}^{-\mathcal{EN}}$
 complexity 107
 FLEX 303
 $\mathcal{FL}^-(\circ, -)$
 complexity 117
 \mathcal{FL}^- 52
 flow of time 246
 $\mathcal{FL}^-(\sqcap, \circ)$
 complexity 117
 $\mathcal{FL}^-(\sqcap, -)$
 complexity 116
 Ford 399
 frame 8, 145, 443
 system 6, 41, 145, 290
 full existential quantification 12, 52
 functional
 approach to KR 16
 dependency 170
 relation 163
 restriction 192
 role 99
 fuzzy
 Description Logic 37, 253
 logic 253
 set 253
- G**
- GALEN 314, 333, 415, 416, 422
 GAMES 423
 generalized terminology 63
 general inclusion *see* inclusion axiom
 general inclusion axiom *see* inclusion axiom, 90
 Generic Frame Protocol 273
 gfp *see* greatest fixpoint
 global-as-view 491
 graded modality 163, 200
 GRAIL 320, 421, 426–429, 431
 graph-based approach 258
 greatest fixpoint 61, 208
 operator *see* fixpoint operator
 semantics 61, 94, 210, 262
 guarded fragment 164, 214
- H**
- \mathcal{H} *see* role hierarchy
 HARP 346
 hierarchy of roles *see* role hierarchy
 hook 278

- HTML 440, 441
 hybrid
 logic 162
 system 23
- I**
- I* *see* inverse role
 ICD 419, 421
 I•COM 171
 identity of roles *see* role identity
 identity role 158
 IMACS 21, **33**
 incidental property 366
 inclusion *see* inclusion axiom
 inclusion axiom 18, **55**, 318, 430
 in terminology 62
 individual 143, **363**
 identifier 363, 364
 marker 149
 name *see* nominal
 value 363
 inductive learning 38
 inequality assertion 84
 infinite tree 193, 267
 Information Manifold 493
 inheritance 143, 166, 172
 by default 144
 network 9
 instance checking 19, **71**, 133
 complexity 137
 integrity constraint 36, 243, 245
 intensional knowledge 16
 inter-schema relationship 489
 internalization 122, 155, 158, 190, 192, 214,
319, 320, 327
 interpretation 52, 64
 canonical *see* canonical interpretation
 domain 52
 function 52
 intersection
 of complex roles 222
 of concepts 11, **51**
 of relations **211**, 479
 of roles 13, **95**, 152, 155, 223
 interval-based temporal model *see*
 temporal model
 inverse role 41, **95**, 152, 155, 158, 164, 186, 308,
 326, 393
 IS-A 9, 31, 373, 427, 478
 between relationships 170, 478
 in the ER model 167, 477
- J**
- JANUS 464
 Java Theorem Prover 458
 Jeroslow and Wang heuristic 349
 JTP *see* Java Theorem Prover
- K**
- K** 42, **236**
 K operator 75
K4_m 164
 KADS 417
- KANDOR 297
 KEE 21, 146
 key 168, 372
 KL-TWO 296
 KL-ONE 22, 127, 144, 291, 320
K_m 158
 knowledge
 acquisition 284
 base 50
 consistency 19
 vivification 38, 260
 extensional *see* extensional knowledge
 intensional *see* intensional knowledge
 KREME 306
 K-REP 228, 307, 420
 Kripke
 frame 164, 237, 241
 structure 159, 160, 164, 188
 KRIS 305, 314, 330
 KRSS 29, **273**, 417, 420
 KRYPTON 295, 320
 KSAT 321
- L**
- \mathcal{L}^2 79, 155, 156
 \mathcal{L}^3 158
 language-based approach 258
 LASSIE 28, **383**
 lazy unfolding **328**, 331
 lcs *see* least common subsumer
 least common subsumer 38, **259**, 261
 least fixpoint 61, 208
 operator *see* fixpoint operator
 semantics **61**, 178, 210
 legal database state 174, 478
 less expressive 154
 level 86
 lfp *see* least fixpoint
 LILOG 464
 limited existential quantification 52
 linear inequality 217
 \mathcal{L}^k 155
 local-as-view 491
 logical implication 190, 192, 199, 204, 209, 213,
 242, 245
 w.r.t. finite models 221
 LOGICSWORKBENCH 321
 logic of knowledge and belief 35
 LOGIN 485
 LOOM 300, 320, 417, 422, 429
- M**
- MAIA 464
 matcher 264
 matching 39, **264**
 modulo equivalence 264
 modulo subsumption 264
 materialization **27**, **373**
 medicine 29
 medSYNDICATE 422
 membership assertion 19, 63, 204
 MESON 228
 meta-role 367

MKNF 244
 modalized Description Logic 234
 modal logic 35, 42, 80, 158, 234
 model
 epistemic *see* epistemic model
 fixpoint *see* fixpoint model
 of ABox 64
 of concept 66
 of terminological axioms 55
 modeling methodology 378
 model checking 73
 MOMS heuristic 348
 monotone terminology 61
 most specific concept 38, 72, 134, **260**, 262
 msc *see* most specific concept
 μ -calculus 93, 158, 160, 207
 μALCQ 179
 μALCQI 207
 complexity 209
 multi modal logic 159
 mutual fixpoint 209

N

\mathcal{N} *see* number restriction
 name symbol 56
 natural language processing 32, **460**
 DRT/DRS 470
 lexical choice 470
 lexical discrimination 461, 463
 logical form 460, 461, 465
 semantic interpretation 460, 461
 necessary and sufficient definition *see* definition
 necessary definition *see* specialization
 negation
 atomic *see* atomic negation
 of concepts *see* complement of concepts
 of roles *see* complement of roles
 negation normal form 83, 196, 230, 323, 331
 negative introspection 236, 241
 NEOCLASSIC 277
 network-based structure 6, 8
 NIKL 141, 296, 320, 416
 nominal **65**, 162, 206
 non-determinism 327
 non-deterministic rule 84
 non-monotonic
 consequence relation 242
 logic 35, 244, 255
 non-primitive 329
 non-primitive definition *see* definition
 non-standard inference 257
 normalization 331
 notification 278
 NP-hardness
 in \mathcal{AL} with cyclic axioms 127
 in \mathcal{ALE} 115
 in $\mathcal{AL}(\sqcap)$ 116
 in \mathcal{ALU} 103
 in $\mathcal{FL-E}$ 116
 in $\mathcal{FL-EN}$ 108
 in $\mathcal{FL}^-(\circ, -)$ 119
 in $\mathcal{FL}^-(\sqcap, \circ)$ 117
 in $\mathcal{FL}^-(\sqcap, -)$ 117

number restriction 12, **53**, 97, 155, 163, 170
 on complex roles 97, 224
 on relations **211**, 479
 qualified *see* qualified number restriction
 symbolic *see* symbolic number restriction

O

\mathcal{O} *see* nominal
 object-oriented
 data model 41, 172
 correspondence with Description Logics 174
 DBMS 483
 schema 173
 obvious (non-)subsumption 338
 OIL 411, 417, 436, 442, **443**
 OILED 455, 458
 OKBC 273, 417, 443
 oldest-first heuristic 350
 one-of **65**, 134, 152, 155, 158, 162, 206, 446
 ONTOBUILDER 279, 410
 ONTOEDIT 458
 ONTOLINGUA 279, 458
 ontology 32, 359, 460, 462, 467, 470
 open-world assumption *see*
 open-world semantics
 open-world semantics 11, 64, **72**, 380
 Open Knowledge Base Connectivity *see* OKBC

P

part-whole 27, 376, 427
 partial attribute 362
 path tracing 393
 pattern *see* concept pattern
 PCDATA *see* XML PCDATA
 PDL *see* Propositional Dynamic Logic
 PDL 80, 122, 160, 188
 PENNI 296
 PEN&PAD 416, 424, 431
 planning 31
 point-based temporal model *see*
 temporal model
 positive introspection 236, 240
 possible worlds semantics 236, 240
 Post correspondence problem 132
 PRACMA 464
 precision 438
 predicate logic 154
 preferential Description Logic 469
 primitive
 concept 56
 definition *see* specialization
 subconcept 369
 probabilistic
 assertion 252
 Description Logic 37, **251**
 terminological axiom 251
 procedural
 extension 75
 rule *see* trigger rule
 PRODIGY 424
 program 160, 188
 deterministic *see* deterministic program
 projection 151

- property edge 143
 Propositional Dynamic Logic 80, 122, 160, **188**
 complexity 190
 converse-DPDL *see converse-DPDL*
 converse-PDL *see converse-PDL*
 correspondence with Description Logics 191
 DPDL *see DPDL*
 Fischer-Ladner closure *see Fischer-Ladner closure*
 internalization of axioms 190
 logical implication 190
 PDL *see PDL*
 program *see program*
 satisfiability 190
 with graded modality *see graded modality*
 propositional μ -calculus *see μ -calculus*
 propositional reasoning 325
 PROSE 21, 401, 402, 408, 410, **412**
 PROTÉGÉ 417, 423, 455, 458
 pruning 283
 PSPACE-hardness
 in \mathcal{AL} with cyclic axioms 127
 in \mathcal{ALC} 120
 in \mathcal{ALEN} 121
 in $\mathcal{ALN}(\sqcap)$ 112
 in \mathcal{FL} 121
- Q**
- \mathcal{Q} *see qualified number restriction*
 qualified number restriction **97**, 155, 163, 200, 290, 297, 308, 447
 Quantified Boolean Formulae 119
 query
 answering using views 487, 492
 complexity 134
 consistency 484, 492
 containment 491
 epistemic *see epistemic query*
 language 474, 484
 optimization 487
 rewriting 267, **492**
 QUESTAR 408, **412**
- R**
- RACER 309, 314, 355, 445
 range 444, 452
 RDF 441, 452
 RDFS 442, 444, 452
 RDF Schema *see RDFS*
 realization 19, **72**, 134, 293
 realizer 293
 recall 438
 referent 150
 reflexive-transitive closure of roles 122, **186**
 regular expression over roles 122, 160, 186, 316
 reification 169, 172, **200**, 371
 of relations 213
 reified concept 367
 reified counterpart 201, 213
 relation
 component 211
 difference *see difference of relations*
 intersection *see intersection of relations*
- of arbitrary arity 164, 169, 172, 211, 479
 selection *see selection on relations*
 type 149
 union *see union of relations*
 well-typed *see well-typed relation*
 relational data model 473
 relationship
 in the ER model 167, 476
 reified *see reification*
 relationship-role 368, **373**
 remote access to knowledge bases 278
 Resource Description Framework *see RDF*
 retrieval 19, **72**
 rewriting
 concepts 39, **267**
 queries *see query rewriting*
 rewriting system 129
 Rigid Term Assumption 76
 role 50
 agreement *see agreement*
 assertion 19, **64**
 atomic *see atomic role*
 basic *see basic role*
 Boolean operators *see Boolean operators on roles*
 chain **98**, 99, 223
 closure 36
 complement *see complement of roles*
 composition *see composition of roles*
 conjunction *see intersection of roles*
 constructor 95
 depth 86
 description 95
 disagreement *see disagreement*
 disjunction *see union of roles*
 filler 12
 functional *see functional role*
 hierarchy 290, 308, 372, 428
 identity 122, **186**, 321
 inclusion axiom 55, 214
 intersection *see intersection of roles*
 inverse *see inverse role*
 in the ER model 167, 476
 meta *see meta-role*
 negation *see complement of roles*
 reflexive-transitive closure *see reflexive-transitive closure of roles*
 restriction 105
 transitive *see transitive role*
 transitive closure *see transitive closure of roles*
 union *see union of roles*
 universal *see universal role*
 role-value-map **98**, 127, 158, 223
 containment *see containment role-value-map*
 equality *see equality role-value-map*
 rule 302, 403, 404
 ABox 243
 default *see default rule*
 knowledge base 76
 procedural *see trigger rule*
 trigger *see trigger rule*

- S**
- S4** 159
 - same-as 99
 - SAT 343
 - *SAT 321
 - satisfiability . 13, **66**, 87, 89, 190, 192, 199, 204, 209
 - w.r.t. finite models 221
 - satisfiable *see* satisfiability
 - SBONE
 - SB-ONE 306
 - selection on relations **211**, 479
 - semantics 52, 54
 - closed-world *see* closed-world semantics
 - descriptive *see* descriptive semantics
 - fixpoint *see* fixpoint semantics
 - greatest fixpoint *see* greatest fixpoint semantics
 - least fixpoint *see* least fixpoint semantics
 - of rule 243
 - of trigger rule 75
 - open-world *see* open-world semantics
 - possible worlds *see* possible worlds semantics
 - semantic branching 342
 - semantic data model 41, **166**
 - correspondence with Description Logics . 168
 - semantic network 6, 8, 143, 290
 - semistructured data 177, 484
 - semistructured data model 177
 - SEP-triples 428, 429
 - set splitting 108
 - SG 149
 - SGML 440
 - SHIQ* 214, 308, 442, 445, 456
 - SHIQ(D)* **445**, 453
 - SHOE 439
 - SHOQ(D)* 456
 - simple conceptual graph 149
 - simplification 330, 331, 344
 - simulating existentials
 - with role chain and inverse 118
 - with role conjunction 111
 - simulation 178
 - slot 145, 443
 - constraint 443
 - SNOMED 29, 415, 417, 419, 420, 425
 - software
 - engineering 27, 382
 - information system 383
 - maintenance 382
 - soundness
 - of algorithm 79, 85
 - of characterization 81
 - SPASS 321
 - specialization **62**, 219, 317
 - SQL 474
 - state 159
 - structural
 - subsumption 13
 - subsumption algorithm . 13, 78, **80**, 258, 320
 - structured
 - document 179
 - inheritance network 48, 144

T

 - tableau-based algorithm 79, **82**
 - tag *see* XML tag
 - TAMBIS 431
 - TBox
 - acyclic *see* acyclic TBox
 - cyclic *see* cyclic TBox
 - Tell&Ask 16
 - temporal
 - description logic 246
 - logic 37, 161, 246
 - model 247
 - operator 235, 247
 - termination 85
 - terminological
 - axiom 55
 - default 255
 - default theory 255
 - system 7
 - terminology 9, **56**
 - generalized *see* generalized terminology
 - monotone *see* monotone terminology
 - syntactically monotone *see* syntactically monotone terminology
 - thrashing 345
 - tiling problem 222, 223
 - told subsumer 337
 - top-down approach 260
 - top concept 51
 - top search **337**, 338
 - total attribute 362
 - trace 114
 - technique 325
 - transformation rule 84
 - transitive
 - closure of roles **95**, 122, 164
 - role 164, 214, 290, 443
 - tree automaton
 - on finite trees 266
 - on infinite trees 193, 267
 - two-way alternating *see* two-way alternating tree automaton
 - tree model property 87, 193, 216
 - trigger rule 36, **74**, 145, 239, 422
 - Trilogy 398
 - two-way alternating tree automaton 194
 - two variable fragment *see* \mathcal{L}^2
 - typing 172

U

- \mathcal{U} *see* union of concepts
 UML 177
 UMLS *see* Unified Medical Language System
 UNA *see* unique name assumption
 uncertainty 250
 undecidability 99, 127, 222
 - in $\mathcal{FL}^-(\circ, \subseteq)$ 130
 - in $\mathcal{FL}^-(\circ, =)$ 132
 - with intersection of complex roles 222
 - with number restrictions on complex roles 224
 unfoldable knowledge base 317
 unfolding 317
 unification 39, **263**
 Unified Medical Language System 419
 Unified Modeling Language *see* UML
 unifier 264
 union
 - of concepts 11, **52**
 - of relations **211**, 479
 - of roles **95**, 155, 186
 unique name assumption 64, 84, 152, 162, 204, 446
 universal
 - concept *see* top concept
 - quantification over roles *see* value restriction
 - role 158, 192, 214, 319
 UNTANGLE 437

V

- vagueness 250
 value restriction 11, 12, **52**
 varying domain assumption 236
 VERBMOBIL 464
 VerticalNet 410
 view 378, 482, 487
 vivification *see* knowledge base vivification

W

- web-based information system 30
 well-founded 161, 181, **210**, 215
 well-typed relation 211
 word problem 132, 133
 world 159
 - description *see* ABox
 - view 489
 wrapper 490

X

- XCON 398
 XML 178, **179**, 440, 441, 450, 451, 484
 - attribute 179
 - DTD 180
 - element 179
 - element content 180
 - element type 180
 - PCDATA 180
 - tag 179
 XML Schema 456
 XOL 443
 XTRA 464