

f0008:

W_Fdic:

the	: 778	and	: 281	of	: 269	resource	: 244
in	: 240	space	: 240	to	: 240	-rrb-	: 224
-lrb-	: 219	is	: 175	can	: 114	resources	: 114
be	: 112	-lsb-	: 95	-rsb-	: 95	that	: 90
for	: 71	on	: 67	probabilistic	: 61	are	: 57
classification	: 56	...	: 56	rs	: 55	probability	: 55
as	: 53	axis	: 50	point	: 50	membership	: 49
from	: 48	coordinates	: 47	model	: 47	with	: 47
belongs	: 47	coordinate	: 46	rsm	: 46	following	: 45
by	: 45	it	: 42	spaces	: 42	or	: 42
into	: 42	semantic	: 41	between	: 39	each	: 37
at	: 36	if	: 35	points	: 33	x1	: 33
two	: 33	mental	: 33	prob	: 33	p-rsm	: 32
this	: 32	-rcb-	: 32	data	: 31	according	: 31
-lcb-	: 30	users	: 30	set	: 28	axes	: 27
cyber	: 26	2nf	: 25	relational	: 25	xn	: 25
1nf	: 24	where	: 24	search	: 24	operations	: 23
such	: 23	not	: 23	an	: 23	all	: 23
one	: 22	different	: 22	physical	: 21	services	: 21
various	: 21	classifications	: 21	socio	: 20	number	: 20
link	: 20	manage	: 20	will	: 20	xi	: 19
any	: 19	query	: 18	have	: 18	when	: 17
papers	: 17	also	: 17	cyber-physical	: 17	links	: 17
3nf	: 16	normal	: 16	same	: 16	society	: 16
fig	: 15	form	: 15	probabilities	: 15	more	: 15
paper	: 15	its	: 15	rs2	: 15	c1	: 15
other	: 15	uncertain	: 14	then	: 14	we	: 14
has	: 14	represent	: 14	faceted	: 14	multi-dimensional	: 14
rs1	: 14	which	: 14	class	: 14	every	: 13
basic	: 13	information	: 13	max	: 13	multiple	: 13
only	: 13	managing	: 13	recall	: 13	precision	: 13
supports	: 13	consists	: 12	integrity	: 12	example	: 12
satisfies	: 12	enables	: 12	interval	: 12	time	: 12
applications	: 12	topics	: 12	rules	: 12	section	: 12
database	: 12	merge	: 12	c2	: 12	classes	: 11
specialization	: 11	complex	: 11	models	: 11	generalization	: 11
through	: 11	operation	: 11	definition	: 11	p2	: 11
p1	: 11	some	: 11	constraint	: 11	distribution	: 11
they	: 10	network	: 10	been	: 10	forms	: 10
specify	: 10	select	: 10	used	: 10	user	: 10
their	: 10	based	: 10	lemma	: 10	ck	: 10
new	: 9	above	: 9	's	: 9	may	: 9
than	: 9	these	: 9	dimension	: 9	organizing	: 9
method	: 9	y1	: 9	yn	: 9	during	: 9
confidence	: 9	pattern	: 9	attributes	: 9	relevant	: 9
but	: 9	independent	: 8	previous	: 8	support	: 8

node	: 8	topic	: 8	so	: 8	given	: 8
dimensions	: 8	threshold	: 8	there	: 8	certain	: 8
original	: 8	returned	: 8	reflect	: 8	since	: 8
both	: 8	theorem	: 8	let	: 8	reflects	: 8
e.g.	: 8	concerns	: 8	entity	: 8	table	: 8
i.e.	: 8	corresponding	: 8	dependence	: 8	types	: 7
classified	: 7	organize	: 7	another	: 7	uncertainty	: 7
behaviors	: 7	active	: 7	bound	: 7	values	: 7
characteristics	: 7	events	: 7	ontology	: 7	common	: 7
location	: 7	appropriate	: 7	influence	: 7	holds	: 7
quality	: 7	key	: 7	web	: 7	total	: 6
type	: 6	effective	: 6	several	: 6	tree	: 6
contents	: 6	approach	: 6	candidate	: 6	facility	: 6
methods	: 6	''	: 6	upper	: 6	mechanisms	: 6
xj	: 6	xm	: 6	x2	: 6	xml	: 6
represents	: 6	using	: 6	important	: 6	reasoning	: 6
prsl	: 6	event	: 6	most	: 6	experiment	: 6
levels	: 6	follows	: 6	facets	: 6	called	: 6
gender	: 6	zk	: 6	degree	: 6	z1	: 6
36	: 6	management	: 6	relations	: 6	need	: 6
humans	: 6	equal	: 6	patterns	: 6	does	: 6
rule	: 6	simultaneously	: 5	abstraction	: 5	polynomial	: 5
basis	: 5	three	: 5	human	: 5	automatically	: 5
no	: 5	subclass	: 5	layers	: 5	first	: 5
x3	: 5	take	: 5	calculated	: 5	research	: 5
operating	: 5	experience	: 5	denoted	: 5	schema	: 5
fine	: 5	trees	: 5	querying	: 5	due	: 5
defined	: 5	integrating	: 5	networks	: 5	35	: 5
use	: 5	effectively	: 5	constraints	: 5	system	: 5
result	: 5	ability	: 5	general	: 5	because	: 5
lead	: 5	introduced	: 5	function	: 5	sub-coordinates	: 4
represented	: 4	obtained	: 4	suitable	: 4	separated	: 4
room	: 4	concepts	: 4	indicates	: 4	after	: 4
satisfied	: 4	linear	: 4	created	: 4	service	: 4
distance	: 4	mind	: 4	object	: 4	cyber-physical-socio:	4
facet	: 4	merging	: 4	split	: 4	evolve	: 4
uploading	: 4	transformed	: 4	nf	: 4	goes	: 4
change	: 4	navigation	: 4	needs	: 4	mainly	: 4
theory	: 4	queries	: 4	language	: 4	locations	: 4
price	: 4	satisfying	: 4	inserted	: 4	concern	: 4
many	: 4	satisfactory	: 4	lifetime	: 4	students	: 4
includes	: 4	ors2	: 4	ors1	: 4	male	: 4
hierarchy	: 4	item	: 4	reflected	: 4	store	: 4
kind	: 4	relation	: 4	merged	: 4	interface	: 4
while	: 4	belong	: 4	lower	: 4	tables	: 4
like	: 4	individuals	: 4	inserting	: 4	structure	: 4
results	: 4	respectively	: 4	explore	: 4	makes	: 4
attribute	: 4	process	: 4	category	: 4	1.5	: 4
documents	: 4	should	: 4	ct	: 4	addition	: 4

layer	: 4	difficult	: 4	years	: 4	about	: 4
naturally	: 4	problem	: 4	functions	: 4	upload	: 3
second	: 3	even	: 3	established	: 3	browsing	: 3
projection	: 3	organized	: 3	classify	: 3	complexity	: 3
easier	: 3	combination	: 3	solution	: 3	sensors	: 3
target	: 3	proposed	: 3	drawn	: 3	applies	: 3
normalization	: 3	unified	: 3	adding	: 3	depicts	: 3
ensure	: 3	down	: 3	maximum	: 3	role	: 3
digital	: 3	shows	: 3	n.	: 3	assume	: 3
managed	: 3	real-time	: 3	orthogonal	: 3	non-Inf	: 3
usually	: 3	hotels	: 3	main	: 3	retrieve	: 3
increase	: 3	advantages	: 3	programming	: 3	indicate	: 3
continuous	: 3	accurately	: 3	representing	: 3	13	: 3
accessed	: 3	browser	: 3	performance	: 3	falls	: 3
college	: 3	top-level	: 3	parent	: 3	among	: 3
enable	: 3	cluster	: 3	without	: 3	multi-layer	: 3
matching	: 3	entities	: 3	courses	: 3	duplicated	: 3
apartment	: 3	belonging	: 3	evaluation	: 3	texts	: 3
contains	: 3	flat	: 3	share	: 3	fundamental	: 3
help	: 3	existence	: 3	hard	: 3	denotes	: 3
done	: 3	statement	: 3	hotel	: 3	null	: 3
sometimes	: 3	find	: 3	distributed	: 3	dependent	: 3
interfaces	: 3	adaptation	: 3	create	: 3	describes	: 3
entry	: 3	evaluate	: 3	eliminate	: 3	range	: 3
feasible	: 3	2001	: 3	2007	: 3	existing	: 3
categories	: 3	plays	: 3	38	: 3	xn-1	: 3
11	: 3	subset	: 3	out	: 3	integrated	: 3
approaches	: 3	interaction	: 3	tuple	: 3	min	: 3
subject	: 3	who	: 3	fact	: 3	knowledge	: 3
evolution	: 3	restrictions	: 3	covered	: 3	value	: 3
thus	: 3	obtain	: 3	large-scale	: 3	become	: 3
locate	: 3	introduces	: 3	dependency	: 3	a2	: 3
42	: 3	fig.	: 2	4-star	: 2	calculate	: 2
interdependent	: 2	path	: 2	100	: 2	co-access	: 2
changes	: 2	therefore	: 2	join	: 2	work	: 2
root	: 2	how	: 2	transforming	: 2	maintain	: 2
keeps	: 2	operate	: 2	order	: 2	them	: 2
e-applications	: 2	content	: 2	adapt	: 2	independence	: 2
standard	: 2	r1	: 2	r2	: 2	features	: 2
adopted	: 2	inconsistency	: 2	semantics	: 2	10	: 2
db	: 2	automatic	: 2	projections	: 2	incorporating	: 2
discovery	: 2	nature	: 2	however	: 2	flexible	: 2
hong	: 2	make	: 2	hierarchies	: 2	commonsense	: 2
social	: 2	hand	: 2	semanticweb	: 2	just	: 2
identify	: 2	designers	: 2	regarded	: 2	possible	: 2
advanced	: 2	deal	: 2	webengineering	: 2	refined	: 2
reducing	: 2	differences	: 2	3.3	: 2	exist	: 2
distributions	: 2	concept	: 2	multi-facet	: 2	hawaii	: 2
science	: 2	satisfy	: 2	understanding	: 2	emerge	: 2

cases	: 2	redundancy	: 2	discussion	: 2	criterion	: 2
edinburgh	: 2	designed	: 2	natural	: 2	webservice	: 2
kong	: 2	experiments	: 2	constitutes	: 2	nor	: 2
domain	: 2	banff	: 2	possibility	: 2	structures	: 2
x.	: 2	11	: 2	12	: 2	15	: 2
future	: 2	were	: 2	especially	: 2	ratio	: 2
examples	: 2	explicitly	: 2	seldom	: 2	detect	: 2
style	: 2	delete	: 2	expression	: 2	learning	: 2
better	: 2	dtids	: 2	case	: 2	dataspace	: 2
sub-coordinate	: 2	sensortype	: 2	adjusted	: 2	conditional	: 2
specified	: 2	discussed	: 2	determine	: 2	area	: 2
low	: 2	implies	: 2	default	: 2	reliability	: 2
file	: 2	statuses	: 2	3-dimensional	: 2	removal	: 2
ti	: 2	disjoin	: 2	condition	: 2	further	: 2
published	: 2	establish	: 2	datamining	: 2	strategies	: 2
minimum	: 2	ubiquitous	: 2	prs2	: 2	mapping	: 2
retrieval	: 2	developed	: 2	21	: 2	systems	: 2
good	: 2	food	: 2	communities	: 2	idea	: 2
extended	: 2	issue	: 2	put	: 2	consequence	: 2
major	: 2	student	: 2	instances	: 2	interact	: 2
least	: 2	part	: 2	5-star	: 2	determined	: 2
clear	: 2	traditional	: 2	impact	: 2	budapest	: 2
remove	: 2	scalability	: 2	sercurity	: 2	long-term	: 2
experimental	: 2	reasons	: 2	community	: 2	dimensional	: 2
ensures	: 2	pj	: 2	pi	: 2	empty	: 2
versa	: 2	demand	: 2	larger	: 2	itself	: 2
modification	: 2	higher	: 2	consistency	: 2	chemistry	: 2
guarantees	: 2	insert	: 2	preserves	: 2	often	: 2
b1	: 2	b2	: 2	integration	: 2	extensions	: 2
retrieving	: 2	line	: 2	characteristic	: 2	uk	: 2
associated	: 2	calculating	: 2	vice	: 2	required	: 2
2002	: 2	2003	: 2	2006	: 2	2004	: 2
2005	: 2	far	: 2	requires	: 2	having	: 2
evenly	: 2	wave	: 2	limitations	: 2	insertion	: 2
giving	: 2	multimedia	: 2	37	: 2	opinion	: 2
cooperate	: 2	challenge	: 2	obvious	: 2	0.3	: 2
0.2	: 2	0.7	: 2	regions	: 2	temporal	: 2
lp	: 2	greater	: 2	practice	: 2	entertainment	: 2
math	: 2	interactions	: 2	retrieved	: 2	york	: 2
determining	: 2	could	: 2	times	: 2	acquire	: 2
updating	: 2	rss	: 2	distinguished	: 2	viewed	: 2
chiba	: 2	accuracy	: 2	hierarchical	: 2	emerging	: 2
view	: 2	available	: 2	neither	: 2	minds	: 2
cm	: 2	cs	: 2	ontologies	: 2	define	: 2
effect	: 2	identity	: 2	well	: 2	sets	: 2
firstly	: 2	less	: 2	accurate	: 2	maintaining	: 2
non-null	: 2	know	: 2	phenomena	: 2	searching	: 2
recognition	: 2	leaf	: 2	selecting	: 2	although	: 2
collected	: 2	versatile	: 2	whether	: 2	converted	: 2

40	: 2	limited	: 1	dynamic	: 1	four	: 1
spec-apart-gen	: 1	4nf	: 1	under	: 1	desirable	: 1
summarized	: 1	vector	: 1	direct	: 1	selected	: 1
establishes	: 1	increasing	: 1	violate	: 1	changed	: 1
complicated	: 1	guests	: 1	plot	: 1	until	: 1
excellent	: 1	give	: 1	organizes	: 1	provide	: 1
methodology	: 1	ordinary	: 1	classifying	: 1	attempt	: 1
algorithms	: 1	restriction	: 1	extents	: 1	2-star	: 1
before	: 1	personal	: 1	adaption	: 1	exhibits	: 1
first-level	: 1	overcome	: 1	effects	: 1	fitness	: 1
series	: 1	t.	: 1	200usd	: 1	combinatorial	: 1
associate	: 1	little	: 1	formation	: 1	correctness	: 1
creator	: 1	onto	: 1	grade	: 1	annotated	: 1
similarly	: 1	approximately	: 1	western	: 1	cyber-socio	: 1
roles	: 1	seen	: 1	regulate	: 1	isolated	: 1
indexes	: 1	indexed	: 1	retaining	: 1	alarm	: 1
notion	: 1	incomplete	: 1	reserve	: 1	incorporate	: 1
one-dimensional	: 1	7.2	: 1	trade-off	: 1	situations	: 1
do	: 1	na?ve	: 1	14	: 1	countries	: 1
reference	: 1	depends	: 1	techniques	: 1	inappropriate	: 1
terms	: 1	extend	: 1	he/she	: 1	extent	: 1
modeling	: 1	linkage	: 1	co-naviation	: 1	conference	: 1
much	: 1	algebras	: 1	ebdata	: 1	child	: 1
euclidean	: 1	sln	: 1	balance	: 1	facility.room	: 1
www2005	: 1	taxonomies	: 1	www2002	: 1	comparies	: 1
scenario	: 1	proposes	: 1	transforms	: 1	tuples	: 1
easy	: 1	cultural	: 1	judge	: 1	unnecessary	: 1
specific	: 1	steps	: 1	deletes	: 1	chapter	: 1
initial	: 1	transform	: 1	way	: 1	true	: 1
high-dimensional	: 1	proved	: 1	computing	: 1	dotted	: 1
whereas	: 1	interested	: 1	uniformly	: 1	update	: 1
together	: 1	manages	: 1	graph	: 1	discovering	: 1
co-experience	: 1	presented	: 1	three-dimensional	: 1	trend	: 1
discover	: 1	initialized	: 1	targets	: 1	uniform	: 1
current	: 1	supporting	: 1	explosion	: 1	tradoff	: 1
along	: 1	studied	: 1	regardless	: 1	logical	: 1
flexibility	: 1	prove	: 1	tightly	: 1	granularities	: 1
appending	: 1	rigid	: 1	districts	: 1	inter-coordinate	: 1
refine	: 1	spa	: 1	occur	: 1	subconsciously	: 1
requirements	: 1	orthogonality	: 1	outline	: 1	explicit	: 1
definitions	: 1	derive	: 1	non	: 1	views	: 1
processes	: 1	lineage	: 1	arrows	: 1	axis/point	: 1
abnormal	: 1	avoided	: 1	living	: 1	shown	: 1
emerged	: 1	formula	: 1	unifying	: 1	quite	: 1
inputting	: 1	bayes	: 1	training	: 1	selections	: 1
unchanging	: 1	frequent	: 1	variables	: 1	directly	: 1
carry	: 1	open	: 1	second-level	: 1	checked	: 1
exploring	: 1	mining	: 1	wide	: 1	third	: 1
17	: 1	16	: 1	19	: 1	18	: 1

generality	: 1	say	: 1	attribute-based	: 1	efficient	: 1
potential	: 1	multi-dimensions	: 1	formulas	: 1	sure	: 1
trace	: 1	pages	: 1	average	: 1	duplication	: 1
laws	: 1	discovered	: 1	realizing	: 1	enriched	: 1
get	: 1	ignored	: 1	inequalities	: 1	definite	: 1
label	: 1	analyzed	: 1	cities	: 1	resides	: 1
tractable	: 1	region	: 1	satisfaction	: 1	considers	: 1
specializing	: 1	shopping	: 1	formed	: 1	photos	: 1
situation	: 1	loosing	: 1	movements	: 1	verified	: 1
document	: 1	investigated	: 1	n-dimensional	: 1	largely	: 1
markup	: 1	ccs	: 1	extensible	: 1	being	: 1
rule2	: 1	unclear	: 1	aspect	: 1	thinking	: 1
except	: 1	setting	: 1	samples	: 1	real	: 1
traffic	: 1	identifying	: 1	specifies	: 1	images	: 1
provides	: 1	moderate	: 1	refer	: 1	scientific	: 1
equivalent	: 1	theorems	: 1	meaning	: 1	acm	: 1
references	: 1	theoretically	: 1	removing	: 1	subclasses	: 1
detailed	: 1	videos	: 1	citation	: 1	completeness	: 1
storage	: 1	mathematics	: 1	deriving	: 1	deluxe	: 1
consider	: 1	chinese	: 1	caused	: 1	lack	: 1
splitting	: 1	generalize	: 1	causes	: 1	program	: 1
tk	: 1	nodes	: 1	self-reasoning	: 1	very	: 1
fall	: 1	applicable	: 1	t1	: 1	large	: 1
design	: 1	functioning	: 1	china.beijing	: 1	emotions	: 1
full	: 1	publisher	: 1	generalizing	: 1	allows	: 1
drawers	: 1	specialize	: 1	uniquely	: 1	detecting	: 1
takes	: 1	comparing	: 1	keeping	: 1	lacks	: 1
species	: 1	5.1	: 1	5.2	: 1	explains	: 1
algebra	: 1	specifying	: 1	24	: 1	25	: 1
26	: 1	27	: 1	20	: 1	23	: 1
28	: 1	29	: 1	detected	: 1	obeyed	: 1
framework	: 1	easily	: 1	1-star	: 1	micro	: 1
found	: 1	weight	: 1	energy	: 1	gradully	: 1
occurs	: 1	reason	: 1	positioning	: 1	feel	: 1
construct	: 1	relationship	: 1	authors	: 1	supposed	: 1
motivation	: 1	webdata	: 1	depending	: 1	play	: 1
reach	: 1	significant	: 1	physics	: 1	4-dimensional	: 1
bookshelves	: 1	closely	: 1	resolve	: 1	keyword	: 1
generally	: 1	recommendations	: 1	locating	: 1	consciously	: 1
intelligence	: 1	chemistry.gl.cl	: 1	misjudge	: 1	probably	: 1
knowing	: 1	creating	: 1	improved	: 1	3-star	: 1
corresponds	: 1	described	: 1	strategy	: 1	meeting	: 1
self-organized	: 1	gap	: 1	understand	: 1	probview	: 1
involved	: 1	enriching	: 1	virtually	: 1	comprehensive	: 1
cyber-mental	: 1	expressiveness	: 1	uses	: 1	regulating	: 1
distances	: 1	intervals	: 1	atomic	: 1	world	: 1
useful	: 1	input	: 1	transformation	: 1	capacities	: 1
essential	: 1	economic	: 1	gradually	: 1	scale	: 1
affects	: 1	either	: 1	step	: 1	anything	: 1

tracing	: 1	within	: 1	sightseeing	: 1	clustering	: 1
innate	: 1	u1	: 1	long	: 1	u2	: 1
repeatedly	: 1	deployed	: 1	p.xi	: 1	up	: 1
cim	: 1	politic	: 1	ui	: 1	heterogeneous	: 1
storing	: 1	diverse	: 1	defines	: 1	inter-point	: 1
generated	: 1	vectors	: 1	resolving	: 1	suite	: 1
include	: 1	inter-dependent	: 1	g3	: 1	g2	: 1
gl	: 1	unsatisfied	: 1	incites	: 1	access	: 1
indian	: 1	objects	: 1	invented	: 1	39	: 1
cts	: 1	33	: 1	32	: 1	31	: 1
30	: 1	34	: 1	rdb	: 1	implement	: 1
composed	: 1	up-to-date	: 1	decentralized	: 1	scales	: 1
boolean	: 1	tools	: 1	comparison	: 1	sql-like	: 1
carrying	: 1	publications	: 1	proof	: 1	0.5	: 1
0.6	: 1	high	: 1	schemas	: 1	located	: 1
intelligent	: 1	third-level	: 1	multiplication	: 1	efficiently	: 1
realized	: 1	arduous	: 1	element	: 1	move	: 1
mentioned	: 1	superior	: 1	li	: 1	clusters	: 1
realize	: 1	university	: 1	l2	: 1	static	: 1
our	: 1	special	: 1	behaviours	: 1	adaptive	: 1
approached	: 1	conflicts	: 1	powerful	: 1	accompany	: 1
completed	: 1	regards	: 1	manipulation	: 1	fuzzy	: 1
distinguishes	: 1	providing	: 1	exhibit	: 1	webmining	: 1
shrinks	: 1	clearly	: 1	angle	: 1	mappings	: 1
studying	: 1	able	: 1	mechanism	: 1	instance	: 1
misplacing	: 1	calculus	: 1	eight	: 1	misjudgment	: 1
selection	: 1	text	: 1	cooccurred	: 1	thousands	: 1
cube	: 1	familiar	: 1	words	: 1	coordinating	: 1
areas	: 1	contain	: 1	computed	: 1	exists	: 1
computer	: 1	classification-preserve:	1	state	: 1	projecting	: 1
correctly	: 1	progress	: 1	efficiency	: 1	e-learning	: 1
taking	: 1	etc	: 1	otherwise	: 1	ci	: 1
provinces	: 1	c.	: 1	sensed	: 1	present	: 1
unlike	: 1	almost	: 1	descriptive	: 1	sequentially	: 1
parts	: 1	units	: 1	sauna	: 1	analysized	: 1
keep	: 1	thought	: 1	usual	: 1	sources	: 1
recommending	: 1	add	: 1	smart	: 1	comments	: 1
increases	: 1	loss	: 1	necessary	: 1	helpful	: 1
user-defined	: 1	lose	: 1	classical	: 1	superclass	: 1
happens	: 1	avoid	: 1	referential	: 1	analysed	: 1
xi/xj	: 1	co-experiencing	: 1	swimming	: 1	owl	: 1
own	: 1	functional	: 1	networking	: 1	subjective	: 1
construction	: 1	ruling	: 1	recognize	: 1	universal	: 1
denote	: 1	reflecting	: 1	compared	: 1	top-down	: 1
41	: 1	compares	: 1	xml&w	: 1	repeat	: 1
coupling	: 1	expands	: 1				

WP_Fdic:

['the', 'DT'] : 777 ['and', 'CC']

: 279 ['of', 'IN']

: 269

['to', 'TO']	: 240	['in', 'IN']	: 240	['space', 'NN']	: 233
['resource', 'NN']	: 231	['-rrb-', '-RRB-']	: 221	['-lrb-', '-LRB-']	: 219
['is', 'VBZ']	: 175	['can', 'MD']	: 114	['resources', 'NNS']	: 111
['be', 'VB']	: 108	['for', 'IN']	: 71	['that', 'IN']	: 70
['on', 'IN']	: 67	['are', 'VBP']	: 57	['probability', 'NN']	: 55
['classification', 'NN']	: 55	['probabilistic', 'JJ']	: 51	['-lsb-', 'NNP']	: 50
['as', 'IN']	: 49	['membership', 'NN']	: 49	['belongs', 'VBZ']	: 47
['with', 'IN']	: 47	['...', ':']	: 46	['by', 'IN']	: 45
['it', 'PRP']	: 42	['into', 'IN']	: 42	['rsm', 'NNP']	: 42
['from', 'IN']	: 41	['or', 'CC']	: 41	['model', 'NN']	: 40
['between', 'IN']	: 39	['point', 'NN']	: 38	['semantic', 'JJ']	: 38
['spaces', 'NNS']	: 38	['-rsb-', 'NNP']	: 38	['rs', 'NNP']	: 37
['axis', 'NNS']	: 37	['each', 'DT']	: 37	['at', 'IN']	: 36
['if', 'IN']	: 35	['mental', 'JJ']	: 33	['two', 'CD']	: 33
['-rcb-', '-RRB-']	: 32	['points', 'NNS']	: 32	['this', 'DT']	: 32
['prob', 'NNP']	: 32	['according', 'VBG']	: 31	['-rsb-', 'NNS']	: 31
['x1', 'NNP']	: 31	['users', 'NNS']	: 30	['-lcb-', '-LRB-']	: 30
['cyber', 'NN']	: 26	['2nf', 'CD']	: 25	['coordinate', 'NN']	: 24
['axes', 'NNS']	: 24	['1nf', 'CD']	: 23	['following', 'JJ']	: 23
['not', 'RB']	: 23	['an', 'DT']	: 23	['one', 'CD']	: 22
['relational', 'JJ']	: 22	['operations', 'NNS']	: 21	['physical', 'JJ']	: 21
['different', 'JJ']	: 21	['various', 'JJ']	: 21	['services', 'NNS']	: 20
['will', 'MD']	: 20	['number', 'NN']	: 20	['p-rsm', 'NN']	: 20
['classifications', 'NNS']	: 20	['manage', 'VB']	: 19	['any', 'DT']	: 19
['such', 'JJ']	: 19	['where', 'WRB']	: 19	['set', 'NN']	: 19
['xn', 'NNP']	: 18	['xi', 'NNP']	: 18	['search', 'NN']	: 18
['socio', 'NN']	: 18	['when', 'WRB']	: 17	['papers', 'NNS']	: 17
['cyber-physical', 'JJ']	: 17	['link', 'NN']	: 17	['also', 'RB']	: 17
['-lsb-', 'VBG']	: 17	['society', 'NN']	: 16	['same', 'JJ']	: 16
['3nf', 'CD']	: 16	['data', 'NN']	: 15	['normal', 'JJ']	: 15
['its', 'PRP\$']	: 15	['other', 'JJ']	: 15	['probabilities', 'NNS']	: 15
['data', 'NNS']	: 15	['have', 'VBP']	: 15	['that', 'WDT']	: 15
['paper', 'NN']	: 15	['we', 'PRP']	: 14	['coordinates', 'VBZ']	: 14
['has', 'VBZ']	: 14	['multi-dimensional', 'JJ']	: 14	['class', 'NN']	: 14
['then', 'RB']	: 14	['which', 'WDT']	: 14	['uncertain', 'JJ']	: 14
['following', 'VBG']	: 14	['links', 'NNS']	: 13	['managing', 'VBG']	: 13
['all', 'DT']	: 13	['supports', 'VBZ']	: 13	['precision', 'NN']	: 13
['basic', 'JJ']	: 13	['every', 'DT']	: 13	['-rsb-', 'NNPS']	: 13
['multiple', 'JJ']	: 13	['enables', 'VBZ']	: 12	['example', 'NN']	: 12
['coordinates', 'NN']	: 12	['integrity', 'NN']	: 12	['coordinates', 'NNP']	: 12
['c1', 'NNP']	: 12	['c2', 'NNP']	: 12	['form', 'NN']	: 12
['applications', 'NNS']	: 12	['query', 'NN']	: 12	['faceted', 'JJ']	: 12
['information', 'NN']	: 12	['recall', 'NN']	: 12	['-lsb-', 'CD']	: 11
['models', 'NNS']	: 11	['rs2', 'NNP']	: 11	['represent', 'VB']	: 11
['operation', 'NN']	: 11	['generalization', 'NN']	: 11	['max', 'NN']	: 11
['consists', 'VBZ']	: 11	['distribution', 'NN']	: 11	['some', 'DT']	: 11
['through', 'IN']	: 11	['only', 'RB']	: 11	['more', 'RBR']	: 10
['been', 'VBN']	: 10	['based', 'VBN']	: 10	['rs', 'NN']	: 10
['satisfies', 'VBZ']	: 10	['complex', 'JJ']	: 10	['time', 'NN']	: 10

['all', 'PDT']	: 10	['their', 'PRP\$']	: 10	['they', 'PRP']	: 10
['rs1', 'NNP']	: 10	['section', 'NN']	: 10	['network', 'NN']	: 10
['classes', 'NNS']	: 10	['used', 'VBN']	: 10	['pattern', 'NN']	: 9
['interval', 'NN']	: 9	['organizing', 'VBG']	: 9	['ck', 'NNP']	: 9
['may', 'MD']	: 9	['relevant', 'JJ']	: 9	['method', 'NN']	: 9
['specialization', 'NN']	: 9	['p-rsm', 'NNP']	: 9	['than', 'IN']	: 9
['resource', 'NNP']	: 9	['these', 'DT']	: 9	['but', 'CC']	: 9
['attributes', 'NNS']	: 9	['dimension', 'NN']	: 9	['during', 'IN']	: 9
['confidence', 'NN']	: 9	['specify', 'VB']	: 9	['user', 'NN']	: 9
['threshold', 'NN']	: 8	['forms', 'NNS']	: 8	['entity', 'NN']	: 8
['"s"', 'POS']	: 8	['table', 'NN']	: 8	['topic', 'NN']	: 8
['rs', 'VBN']	: 8	['node', 'NN']	: 8	['coordinate', 'NNP']	: 8
['certain', 'JJ']	: 8	['above', 'JJ']	: 8	['fig', 'NNP']	: 8
['previous', 'JJ']	: 8	['given', 'VBN']	: 8	['independent', 'JJ']	: 8
['there', 'EX']	: 8	['reflects', 'VBZ']	: 8	['following', 'NN']	: 8
['since', 'IN']	: 8	['original', 'JJ']	: 8	['common', 'JJ']	: 7
['...', 'NNS']	: 7	['constraint', 'NN']	: 7	['point', 'NNP']	: 7
['dependence', 'NN']	: 7	['events', 'NNS']	: 7	['model', 'NNP']	: 7
['dimensions', 'NNS']	: 7	['space', 'NNP']	: 7	['uncertainty', 'NN']	: 7
['classified', 'VBN']	: 7	['organize', 'VB']	: 7	['active', 'JJ']	: 7
['let', 'VB']	: 7	['fig', 'VB']	: 7	['characteristics', 'NNS']	: 7
['appropriate', 'JJ']	: 7	['corresponding', 'JJ']	: 7	['rules', 'NNS']	: 7
['another', 'DT']	: 7	['from', 'NNP']	: 7	['e.g.', 'NNP']	: 7
['database', 'NN']	: 7	['types', 'NNS']	: 7	['support', 'VB']	: 6
['yn', 'NNP']	: 6	['effective', 'JJ']	: 6	['event', 'NN']	: 6
['called', 'VBN']	: 6	['reasoning', 'NN']	: 6	['relations', 'NNS']	: 6
['degree', 'NN']	: 6	['total', 'JJ']	: 6	['concerns', 'VBZ']	: 6
['xj', 'NNP']	: 6	['new', 'JJ']	: 6	['using', 'VBG']	: 6
['approach', 'NN']	: 6	['coordinate', 'VB']	: 6	['reflect', 'VB']	: 6
['mechanisms', 'NNS']	: 6	['set', 'VBN']	: 6	['methods', 'NNS']	: 6
['36', 'CD']	: 6	['levels', 'NNS']	: 6	['"', '']	: 6
['important', 'JJ']	: 6	['experiment', 'NN']	: 6	['holds', 'VBZ']	: 6
['x2', 'NNP']	: 6	['contents', 'NNS']	: 6	['definition', 'NNS']	: 6
['topics', 'NNP']	: 6	['most', 'RBS']	: 6	['key', 'NN']	: 6
['facets', 'NNS']	: 6	['select', 'NNP']	: 6	['does', 'VBZ']	: 6
['values', 'NNS']	: 6	['coordinate', 'JJ']	: 6	['topics', 'NNS']	: 6
['several', 'JJ']	: 6	['merge', 'JJ']	: 6	['management', 'NN']	: 6
['candidate', 'NN']	: 6	['represents', 'VBZ']	: 6	['lead', 'VB']	: 5
['ability', 'NN']	: 5	['-lsb-', 'NNS']	: 5	['more', 'JJR']	: 5
['type', 'NN']	: 5	['querying', 'VBG']	: 5	['basis', 'NN']	: 5
['bound', 'VBN']	: 5	['due', 'JJ']	: 5	['simultaneously', 'RB']	: 5
['automatically', 'RB']	: 5	['axis', 'JJ']	: 5	['take', 'VB']	: 5
['ontology', 'NN']	: 5	['i.e.', 'RB']	: 5	['constraints', 'NNS']	: 5
['function', 'NN']	: 5	['networks', 'NNS']	: 5	['equal', 'JJ']	: 5
['tree', 'NN']	: 5	['y1', 'NNS']	: 5	['trees', 'NNS']	: 5
['three', 'CD']	: 5	['subclass', 'NNS']	: 5	['lemma', 'NN']	: 5
['point', 'VB']	: 5	['patterns', 'NNS']	: 5	['x3', 'NNP']	: 5
['abstraction', 'NN']	: 5	['35', 'CD']	: 5	['follows', 'VBZ']	: 5
['p2', 'NNS']	: 5	['coordinates', 'NNS']	: 5	['introduced', 'VBN']	: 5

['returned', 'JJ']	: 5	['fine', 'JJ']	: 5	['calculated', 'VBN']	: 5
['-lsb-', 'NN']	: 5	['humans', 'NNS']	: 5	['need', 'VBP']	: 5
['probabilistic', 'NN']	: 5	['web', 'NNP']	: 5	['defined', 'VBN']	: 5
['integrating', 'VBG']	: 5	['operating', 'VBG']	: 5	['effectively', 'RB']	: 5
['that', 'DT']	: 5	['first', 'JJ']	: 5	['goes', 'VBZ']	: 4
['ors2', 'NNP']	: 4	['structure', 'NN']	: 4	['after', 'IN']	: 4
['functions', 'NNS']	: 4	['obtained', 'VBN']	: 4	['transformed', 'VBN']	: 4
['theory', 'NN']	: 4	['xml', 'NN']	: 4	['denoted', 'VBN']	: 4
['mind', 'NN']	: 4	['linear', 'JJ']	: 4	['mainly', 'RB']	: 4
['polynomial', 'JJ']	: 4	['merged', 'VBN']	: 4	['-lsb-', 'VBZ']	: 4
['inserting', 'VBG']	: 4	['satisfied', 'JJ']	: 4	['should', 'MD']	: 4
['so', 'RB']	: 4	['p1', 'CD']	: 4	['difficult', 'JJ']	: 4
['rules', 'NNP']	: 4	['individuals', 'NNS']	: 4	['-rsb-', 'JJ']	: 4
['links', 'VBZ']	: 4	['merging', 'VBG']	: 4	['like', 'IN']	: 4
['schema', 'NN']	: 4	['results', 'NNS']	: 4	['definition', 'NN']	: 4
['addition', 'NN']	: 4	['hierarchy', 'NN']	: 4	['satisfactory', 'JJ']	: 4
['ors1', 'NNP']	: 4	['includes', 'VBZ']	: 4	['sub-coordinates', 'NNS']	: 4
['makes', 'VBZ']	: 4	['probabilistic', 'NNP']	: 4	['because', 'IN']	: 4
['cyber-physical-socio', 'JJ']	: 4	['xm', 'NNP']	: 4	['interface', 'NN']	: 4
['problem', 'NN']	: 4	['created', 'VBN']	: 4	['influence', 'NN']	: 4
['axis', 'NNP']	: 4	['quality', 'NNP']	: 4	['general', 'JJ']	: 4
['layers', 'NNS']	: 4	['students', 'NNS']	: 4	['lifetime', 'NN']	: 4
['result', 'NN']	: 4	['room', 'NN']	: 4	['inserted', 'VBN']	: 4
['no', 'DT']	: 4	['distance', 'NN']	: 4	['explore', 'VB']	: 4
['so', 'IN']	: 4	['locations', 'NNP']	: 4	['about', 'IN']	: 4
['behaviors', 'NNS']	: 4	['axis', 'VBZ']	: 4	['database', 'NNP']	: 4
['category', 'NN']	: 4	['rsm', 'NN']	: 4	['such', 'PDT']	: 4
['while', 'IN']	: 4	['layer', 'NN']	: 4	['system', 'NN']	: 4
['concepts', 'NNS']	: 4	['suitable', 'JJ']	: 4	['kind', 'NN']	: 4
['indicates', 'VBZ']	: 4	['lemma', 'NNS']	: 4	['naturally', 'RB']	: 4
['many', 'JJ']	: 4	['lower', 'JJR']	: 4	['item', 'NN']	: 4
['location', 'NNP']	: 4	['documents', 'NNS']	: 4	['ct', 'NNP']	: 4
['reflected', 'VBN']	: 4	['tables', 'NNS']	: 4	['be', 'VBP']	: 4
['needs', 'VBZ']	: 4	['queries', 'NNS']	: 4	['attribute', 'NN']	: 4
['respectively', 'RB']	: 4	['process', 'NN']	: 4	['as', 'RB']	: 4
['sensors', 'NNS']	: 3	['role', 'NN']	: 3	['second', 'JJ']	: 3
['target', 'NN']	: 3	['adding', 'VBG']	: 3	['hard', 'JJ']	: 3
['representing', 'VBG']	: 3	['value', 'NN']	: 3	['search', 'VB']	: 3
['fact', 'NN']	: 3	['assume', 'VBP']	: 3	['facility', 'NNP']	: 3
['interaction', 'NN']	: 3	['depicts', 'VBZ']	: 3	['belonging', 'VBG']	: 3
['object', 'JJ']	: 3	['both', 'CC']	: 3	['texts', 'NNS']	: 3
['existence', 'NN']	: 3	['price', 'NNP']	: 3	['query', 'VB']	: 3
['accurately', 'RB']	: 3	['represented', 'VBN']	: 3	['min', 'NN']	: 3
['p1', 'NNS']	: 3	['covered', 'VBN']	: 3	['share', 'VBP']	: 3
['unified', 'JJ']	: 3	['evolution', 'NN']	: 3	['create', 'VB']	: 3
['out', 'RP']	: 3	['yn', 'FW']	: 3	['introduces', 'VBZ']	: 3
['p1', 'JJ']	: 3	['established', 'VBN']	: 3	['select', 'VB']	: 3
['done', 'VBN']	: 3	['merge', 'VB']	: 3	['represent', 'VBP']	: 3
['gender', 'NN']	: 3	['new', 'NNP']	: 3	['relation', 'NNP']	: 3

['cluster', 'NN']	: 3	['falls', 'VBZ']	: 3	['restrictions', 'NNS']	: 3
['feasible', 'JJ']	: 3	['flat', 'JJ']	: 3	['combination', 'NN']	: 3
['2001', 'CD']	: 3	['knowledge', 'NN']	: 3	['proposed', 'VBN']	: 3
['even', 'RB']	: 3	['satisfying', 'JJ']	: 3	['projection', 'NN']	: 3
['evaluate', 'VB']	: 3	['behaviors', 'NNP']	: 3	['drawn', 'VBN']	: 3
['hotels', 'NNS']	: 3	['42', 'CD']	: 3	['upper', 'JJ']	: 3
['college', 'NN']	: 3	['statement', 'NN']	: 3	['fundamental', 'JJ']	: 3
['research', 'NNP']	: 3	['among', 'IN']	: 3	['contains', 'VBZ']	: 3
['navigation', 'NN']	: 3	['service', 'NN']	: 3	['experience', 'NN']	: 3
['denotes', 'VBZ']	: 3	['browser', 'NNP']	: 3	['top-level', 'JJ']	: 3
['where', 'NNP']	: 3	['1.5', 'CD']	: 3	['p2', 'JJ']	: 3
['upper', 'RB']	: 3	['easier', 'JJR']	: 3	['who', 'WP']	: 3
['thus', 'RB']	: 3	['evolve', 'VB']	: 3	['distributed', 'VBN']	: 3
['facility', 'NN']	: 3	['large-scale', 'JJ']	: 3	['continuous', 'JJ']	: 3
['help', 'VB']	: 3	['non-1nf', 'JJ']	: 3	['change', 'VB']	: 3
['returned', 'VBN']	: 3	['categories', 'NNS']	: 3	['maximum', 'NN']	: 3
['parent', 'NN']	: 3	['prs1', 'NN']	: 3	['eliminate', 'VB']	: 3
['gender', 'NNP']	: 3	['usually', 'RB']	: 3	['applies', 'VBZ']	: 3
['resources', 'NNP']	: 3	['managed', 'VBN']	: 3	['concern', 'VB']	: 3
['rule', 'NNS']	: 3	['without', 'IN']	: 3	['classify', 'VB']	: 3
['ensure', 'VB']	: 3	['-rrb-', 'RB']	: 3	['-rsb-', 'VBZ']	: 3
['13', 'CD']	: 3	['digital', 'JJ']	: 3	['entry', 'NN']	: 3
['integrated', 'VBN']	: 3	['11', 'NNP']	: 3	['describes', 'VBZ']	: 3
['dependent', 'JJ']	: 3	['38', 'CD']	: 3	['search', 'NNP']	: 3
['sometimes', 'RB']	: 3	['orthogonal', 'JJ']	: 3	['interfaces', 'NNP']	: 3
['language', 'NN']	: 3	['facet', 'NN']	: 3	['2007', 'CD']	: 3
['theorem', 'VB']	: 3	['zk', 'NNP']	: 3	['both', 'DT']	: 3
['quality', 'NN']	: 3	['plays', 'VBZ']	: 3	['belong', 'VB']	: 3
['organized', 'VBN']	: 3	['subject', 'VB']	: 3	['range', 'NN']	: 3
['theorem', 'NNP']	: 3	['null', 'JJ']	: 3	['obtain', 'VB']	: 3
['entities', 'NNS']	: 3	['uploading', 'VBG']	: 3	['human', 'JJ']	: 3
['accessed', 'VBN']	: 3	['increase', 'NN']	: 3	['locate', 'VB']	: 3
['main', 'JJ']	: 3	['solution', 'NN']	: 3	['prs1', 'NNP']	: 3
['location', 'NN']	: 3	['pj', 'NN']	: 2	['leaf', 'NN']	: 2
['emerge', 'VB']	: 2	['therefore', 'RB']	: 2	['case', 'NN']	: 2
['constitutes', 'VBZ']	: 2	['15', 'CD']	: 2	['higher', 'JJR']	: 2
['cm', 'NNP']	: 2	['natural', 'JJ']	: 2	['xn', 'VBN']	: 2
['performance', 'NNP']	: 2	['itself', 'PRP']	: 2	['-rsb-', 'CD']	: 2
['preserves', 'VBZ']	: 2	['work', 'NN']	: 2	['rs1', 'NN']	: 2
['y1', 'NNP']	: 2	['coordinates', 'VBG']	: 2	['subset', 'NN']	: 2
['define', 'VB']	: 2	['default', 'NN']	: 2	['them', 'PRP']	: 2
['associated', 'VBN']	: 2	['chemistry', 'NN']	: 2	['flexible', 'JJ']	: 2
['both', 'PDT']	: 2	['transforming', 'VBG']	: 2	['possible', 'JJ']	: 2
['discovery', 'NN']	: 2	['phenomena', 'NNS']	: 2	['designed', 'VBN']	: 2
['normalization', 'NN']	: 2	['2002', 'CD']	: 2	['spaces', 'NN']	: 2
['apartment', 'NNP']	: 2	['identify', 'VB']	: 2	['have', 'VB']	: 2
['emerging', 'VBG']	: 2	['use', 'VB']	: 2	['adapt', 'VB']	: 2
['guarantees', 'NNS']	: 2	['available', 'JJ']	: 2	['support', 'NN']	: 2
['especially', 'RB']	: 2	['dtds', 'NNS']	: 2	['11', 'CD']	: 2

['extended', 'VBN']	: 2	['cases', 'NNS']	: 2	['conditional', 'JJ']	: 2
['query', 'JJ']	: 2	['socio', 'JJ']	: 2	['advanced', 'JJ']	: 2
['retrieval', 'NN']	: 2	['although', 'IN']	: 2	['multimedia', 'FW']	: 2
['reflect', 'VBP']	: 2	['only', 'JJ']	: 2	['dependency', 'NN']	: 2
['structures', 'NNS']	: 2	['operate', 'VB']	: 2	['section', 'NNP']	: 2
['determined', 'VBN']	: 2	['xn', 'VB']	: 2	['independence', 'NN']	: 2
['collected', 'VBN']	: 2	['giving', 'VBG']	: 2	['differences', 'NNS']	: 2
['remove', 'VB']	: 2	['37', 'CD']	: 2	['10', 'CD']	: 2
['reasons', 'NNS']	: 2	['theorem', 'NN']	: 2	['limitations', 'NNS']	: 2
['communities', 'NNS']	: 2	['student', 'NN']	: 2	['ensures', 'VBZ']	: 2
['york', 'NNP']	: 2	['demand', 'NN']	: 2	['converted', 'VBN']	: 2
['consistency', 'NN']	: 2	['rss', 'NNP']	: 2	['expression', 'NN']	: 2
['know', 'VB']	: 2	['requires', 'VBZ']	: 2	['discussed', 'VBN']	: 2
['implies', 'VBZ']	: 2	['how', 'WRB']	: 2	['upload', 'VB']	: 2
['removal', 'NN']	: 2	['features', 'NNS']	: 2	['sub-coordinate', 'NN']	: 2
['complexity', 'NN']	: 2	['were', 'VBD']	: 2	['minimum', 'JJ']	: 2
['clear', 'JJ']	: 2	['web', 'NN']	: 2	['concept', 'NN']	: 2
['hong', 'NNP']	: 2	['duplicated', 'JJ']	: 2	['advantages', 'NNS']	: 2
['lp', 'NN']	: 2	['real-time', 'NN']	: 2	['well', 'RB']	: 2
['max', 'VBN']	: 2	['could', 'MD']	: 2	['make', 'VB']	: 2
['2006', 'CD']	: 2	['impact', 'NN']	: 2	['e-applications', 'NNS']	: 2
['hierarchies', 'NNS']	: 2	['banff', 'NNP']	: 2	['evenly', 'RB']	: 2
['accurate', 'JJ']	: 2	['challenge', 'NN']	: 2	['strategies', 'NNS']	: 2
['2004', 'CD']	: 2	['effect', 'NN']	: 2	['recognition', 'NN']	: 2
['experimental', 'JJ']	: 2	['firstly', 'RB']	: 2	['experience', 'NNP']	: 2
['versatile', 'JJ']	: 2	['deal', 'VB']	: 2	['down', 'RP']	: 2
['constraint', 'VB']	: 2	['p-rsm', 'RB']	: 2	['systems', 'NNS']	: 2
['rule', 'NNP']	: 2	['db', 'NNP']	: 2	['evaluation', 'NN']	: 2
['find', 'VB']	: 2	['insertion', 'NN']	: 2	['experiments', 'NNS']	: 2
['research', 'NN']	: 2	['z1', 'NNP']	: 2	['interdependent', 'NN']	: 2
['operations', 'NNP']	: 2	['shows', 'VBZ']	: 2	['male', 'NN']	: 2
['years', 'NNP']	: 2	['retrieved', 'VBN']	: 2	['obvious', 'JJ']	: 2
['ubiquitous', 'NNP']	: 2	['distributions', 'NNS']	: 2	['determine', 'VB']	: 2
['separated', 'VBN']	: 2	['interactions', 'NNS']	: 2	['searching', 'VBG']	: 2
['set', 'VBD']	: 2	['ratio', 'NN']	: 2	['whether', 'IN']	: 2
['2003', 'CD']	: 2	['2005', 'CD']	: 2	['establish', 'VB']	: 2
['path', 'NN']	: 2	['community', 'NN']	: 2	['file', 'NN']	: 2
['nature', 'NN']	: 2	['0.3', 'CD']	: 2	['b2', 'NNS']	: 2
['social', 'JJ']	: 2	['ontologies', 'NNP']	: 2	['z1', 'NNS']	: 2
['c1', 'NNS']	: 2	['years', 'VBZ']	: 2	['3.3', 'CD']	: 2
['40', 'CD']	: 2	['forms', 'VBZ']	: 2	['however', 'RB']	: 2
['webservices', 'NNP']	: 2	['determining', 'VBG']	: 2	['line', 'NN']	: 2
['tuple', 'NN']	: 2	['changes', 'NNS']	: 2	['nor', 'CC']	: 2
['major', 'JJ']	: 2	['become', 'VB']	: 2	['characteristic', 'NN']	: 2
['a2', 'NNS']	: 2	['relational', 'NN']	: 2	['existing', 'VBG']	: 2
['0.2', 'CD']	: 2	['adaptation', 'NN']	: 2	['mapping', 'VBG']	: 2
['maintaining', 'VBG']	: 2	['automatic', 'JJ']	: 2	['issue', 'NN']	: 2
['less', 'JJR']	: 2	['extensions', 'NNS']	: 2	['scalability', 'NNP']	: 2
['interact', 'VB']	: 2	['discussion', 'NN']	: 2	['retrieve', 'VB']	: 2

['consequence', 'NN']	: 2	['integration', 'NN']	: 2	['updating', 'VBG']	: 2
['commonsense', 'NN']	: 2	['adjusted', 'VBN']	: 2	['minds', 'NNS']	: 2
['specialization', 'NNP']	: 2	['inconsistency', 'NN']	: 2	['hand', 'NN']	: 2
['viewed', 'VBN']	: 2	['x1', 'NNS']	: 2	['order', 'NN']	: 2
['neither', 'RB']	: 2	['...', '.']	: 2	['accuracy', 'NN']	: 2
['hierarchical', 'JJ']	: 2	['wave', 'VB']	: 2	['separated', 'JJ']	: 2
['bound', 'NN']	: 2	['calculating', 'VBG']	: 2	['r2', 'NNS']	: 2
['statuses', 'NNS']	: 2	['keeps', 'VBZ']	: 2	['good', 'JJ']	: 2
['link', 'VB']	: 2	['condition', 'NN']	: 2	['datamining', 'NNP']	: 2
['domain', 'NN']	: 2	['multi-layer', 'JJ']	: 2	['opinion', 'NN']	: 2
['greater', 'JJR']	: 2	['seldom', 'RB']	: 2	['satisfy', 'VB']	: 2
['acquire', 'VB']	: 2	['math', 'NN']	: 2	['sercurity', 'NNP']	: 2
['developed', 'VBN']	: 2	['kong', 'NNP']	: 2	['long-term', 'JJ']	: 2
['low', 'JJ']	: 2	['just', 'RB']	: 2	['webengineering', 'NNP']	: 2
['uk', 'NNP']	: 2	['practice', 'NNP']	: 2	['understanding', 'NN']	: 2
['adopted', 'VBN']	: 2	['far', 'RB']	: 2	['idea', 'NN']	: 2
['redundancy', 'NN']	: 2	['browsing', 'NN']	: 2	['reliability', 'NNP']	: 2
['incorporating', 'VBG']	: 2	['chiba', 'NNP']	: 2	['resource', 'IN']	: 2
['fig.', 'NNP']	: 2	['further', 'RBR']	: 2	['influence', 'VB']	: 2
['21', 'CD']	: 2	['budapest', 'NNP']	: 2	['designers', 'NNS']	: 2
['semantic', 'NNP']	: 2	['better', 'JJR']	: 2	['nf', 'NN']	: 2
['indicate', 'VB']	: 2	['non-null', 'JJ']	: 2	['100', 'CD']	: 2
['part', 'NN']	: 2	['examples', 'NNS']	: 2	['xn', 'VBZ']	: 2
['nf', 'NNP']	: 2	['entertainment', 'NN']	: 2	['having', 'VBG']	: 2
['xm', 'FW']	: 2	['12', 'CD']	: 2	['p2', 'CD']	: 2
['root', 'NN']	: 2	['where', 'VBP']	: 2	['style', 'NN']	: 2
['enable', 'VBP']	: 2	['larger', 'JJR']	: 2	['coordinate', 'NNS']	: 2
['traditional', 'JJ']	: 2	['regarded', 'VBN']	: 2	['programming', 'NN']	: 2
['form', 'VB']	: 2	['specified', 'VBN']	: 2	['sensortype', 'NNP']	: 2
['i.e.', 'FW']	: 2	['rs2', 'VBN']	: 2	['required', 'VBN']	: 2
['approaches', 'NNS']	: 2	['temporal', 'JJ']	: 2	['projections', 'NNS']	: 2
['store', 'VB']	: 2	['regions', 'NNS']	: 2	['semantics', 'NNS']	: 2
['constraint', 'NNP']	: 2	['times', 'NNS']	: 2	['edinburgh', 'NNP']	: 2
['empty', 'JJ']	: 2	['possibility', 'NN']	: 2	['zk', 'FW']	: 2
['courses', 'NNS']	: 2	['prs2', 'NNP']	: 2	['x.', 'NNP']	: 2
['criterion', 'NN']	: 2	['standard', 'NN']	: 2	['rs1', 'VBN']	: 2
['explicitly', 'RB']	: 2	['concerns', 'NNS']	: 2	['refined', 'VBN']	: 2
['least', 'JJS']	: 2	['maintain', 'VB']	: 2	['ontology', 'NNP']	: 2
['-rsb-', 'NN']	: 2	['multi-facet', 'JJ']	: 2	['semanticweb', 'NNP']	: 2
['3-dimensional', 'JJ']	: 2	['hawaii', 'NNP']	: 2	['time', 'NNP']	: 2
['use', 'NN']	: 2	['5-star', 'JJ']	: 2	['future', 'JJ']	: 2
['content', 'NN']	: 2	['often', 'RB']	: 2	['food', 'NN']	: 2
['z1', 'VBN']	: 2	['hotel', 'NN']	: 2	['cs', 'NNP']	: 2
['adaption', 'NN']	: 1	['usual', 'JJ']	: 1	['corresponding', 'VBZ']	: 1
['detecting', 'VBG']	: 1	['sql-like', 'JJ']	: 1	['arduous', 'JJ']	: 1
['reflecting', 'VBG']	: 1	['analyzed', 'VBN']	: 1	['r1', 'NNS']	: 1
['expands', 'VBZ']	: 1	['put', 'NN']	: 1	['apartment', 'NN']	: 1
['delete', 'NNP']	: 1	['sequentially', 'RB']	: 1	['t1', 'NNP']	: 1
['invented', 'VBN']	: 1	['y1', 'VBN']	: 1	['economic', 'JJ']	: 1

['involved', 'VBN']	: 1	['classification-preserve', 'NN']	: 1	['transforms', 'VBZ']	: 1
['reducing', 'NN']	: 1	['the', 'NNP']	: 1	['spaces', 'NNP']	: 1
['transformation', 'NN']	: 1	['investigated', 'VBN']	: 1	['formula', 'NN']	: 1
['dataspace', 'NNP']	: 1	['specialize', 'VB']	: 1	['26', 'CD']	: 1
['considers', 'VBZ']	: 1	['object', 'NN']	: 1	['distinguished', 'JJ']	: 1
['browsing', 'JJ']	: 1	['explicit', 'JJ']	: 1	['get', 'VBP']	: 1
['restriction', 'NN']	: 1	['equivalent', 'JJ']	: 1	['open', 'JJ']	: 1
['e-learning', 'NNP']	: 1	['axis/point', 'NN']	: 1	['increases', 'VBZ']	: 1
['polynomial', 'NN']	: 1	['cts', 'NN']	: 1	['energy', 'NN']	: 1
['unsatisfied', 'VB']	: 1	['rs2', 'NN']	: 1	['third', 'JJ']	: 1
['region', 'NN']	: 1	['lose', 'VB']	: 1	['exist', 'VBP']	: 1
['27', 'CD']	: 1	['own', 'JJ']	: 1	['initialized', 'VBN']	: 1
['scale', 'NN']	: 1	['4-star', 'JJ']	: 1	['relation', 'NN']	: 1
['one-dimensional', 'JJ']	: 1	['shows', 'NNS']	: 1	['classes', 'NNP']	: 1
['china.beijing', 'NNP']	: 1	['relationship', 'NN']	: 1	['update', 'NN']	: 1
['clustering', 'NN']	: 1	['affects', 'VBZ']	: 1	['unnecessary', 'JJ']	: 1
['special', 'JJ']	: 1	['xml&w', 'NNP']	: 1	['applicable', 'JJ']	: 1
['represented', 'NN']	: 1	['access', 'VB']	: 1	['variables', 'NNS']	: 1
['rigid', 'JJ']	: 1	['24', 'CD']	: 1	['disjoin', 'NNP']	: 1
['compares', 'VBZ']	: 1	['full', 'JJ']	: 1	['chemistry.gl.c1', 'NN']	: 1
['regulate', 'VB']	: 1	['t.', 'NNP']	: 1	['emotions', 'NNS']	: 1
['almost', 'RB']	: 1	['subset', 'RB']	: 1	['shrinks', 'VBZ']	: 1
['ci', 'NNP']	: 1	['superclass', 'NNS']	: 1	['realizing', 'VBG']	: 1
['multiplication', 'NN']	: 1	['include', 'VBP']	: 1	['feel', 'VB']	: 1
['trace', 'VB']	: 1	['publisher', 'NN']	: 1	['obeyed', 'VBN']	: 1
['bookshelves', 'NNS']	: 1	['detailed', 'JJ']	: 1	['presented', 'VBN']	: 1
['graph', 'NN']	: 1	['learning', 'VBG']	: 1	['virtually', 'RB']	: 1
['axes', 'NN']	: 1	['and', 'NNS']	: 1	['scenario', 'NN']	: 1
['discovering', 'VBG']	: 1	['conference', 'NN']	: 1	['micro', 'JJ']	: 1
['e.g.', 'VBG']	: 1	['32', 'CD']	: 1	['values', 'VBZ']	: 1
['xml', 'JJ']	: 1	['let', 'IN']	: 1	['cooperate', 'VB']	: 1
['compared', 'VBN']	: 1	['positioning', 'NN']	: 1	['necessary', 'JJ']	: 1
['evaluation', 'NNP']	: 1	['select', 'JJ']	: 1	['3-star', 'JJ']	: 1
['outline', 'VB']	: 1	['clusters', 'NNS']	: 1	['uniquely', 'RB']	: 1
['sets', 'NNS']	: 1	['manages', 'VBZ']	: 1	['limited', 'VBN']	: 1
['publications', 'NNS']	: 1	['nodes', 'NNS']	: 1	['ebdata', 'NNP']	: 1
['programming', 'VBG']	: 1	['store', 'VBP']	: 1	['definition', 'NNP']	: 1
['correctly', 'RB']	: 1	['understand', 'VB']	: 1	['recommendations', 'NNS']	: 1
['proof', 'NN']	: 1	['locating', 'VBG']	: 1	['c1', 'JJ']	: 1
['human', 'NNP']	: 1	['cooperate', 'VBP']	: 1	['facet', 'VBP']	: 1
['matching', 'NN']	: 1	['depending', 'VBG']	: 1	['comparison', 'NN']	: 1
['closely', 'RB']	: 1	['b1', 'NNS']	: 1	['approached', 'VBN']	: 1
['innate', 'JJ']	: 1	['caused', 'VBN']	: 1	['detected', 'VBN']	: 1
['xi', 'JJ']	: 1	['effects', 'NNS']	: 1	['element', 'NN']	: 1
['step', 'NN']	: 1	['extensible', 'CD']	: 1	['supporting', 'VBG']	: 1
['lack', 'VBP']	: 1	['implement', 'VB']	: 1	['universal', 'JJ']	: 1
['use', 'VBP']	: 1	['indian', 'NNP']	: 1	['have', 'JJ']	: 1
['unifying', 'VBG']	: 1	['extent', 'NN']	: 1	['change', 'NN']	: 1
['decentralized', 'NNP']	: 1	['u1', 'NNP']	: 1	['child', 'NN']	: 1

['co-experiencing', 'JJ']	: 1	['29', 'CD']	: 1	['tightly', 'JJ']	: 1
['xn-1', 'NNP']	: 1	['current', 'JJ']	: 1	['trend', 'NN']	: 1
['causes', 'VBZ']	: 1	['give', 'VB']	: 1	['g3', 'CD']	: 1
['western', 'NNP']	: 1	['much', 'JJ']	: 1	['analysed', 'VBN']	: 1
['www2005', 'NNP']	: 1	['selections', 'VBN']	: 1	['selecting', 'JJ']	: 1
['rule', 'NN']	: 1	['powerful', 'JJ']	: 1	['humans', 'VB']	: 1
['targets', 'NNS']	: 1	['processes', 'NNS']	: 1	['projecting', 'VBG']	: 1
['scientific', 'JJ']	: 1	['set', 'VB']	: 1	['tuple', 'JJ']	: 1
['spa', 'NN']	: 1	['contain', 'VB']	: 1	['avoid', 'VB']	: 1
['enriched', 'VBN']	: 1	['equal', 'CD']	: 1	['split', 'VB']	: 1
['establishes', 'VBZ']	: 1	['disjoin', 'VB']	: 1	['denoted', 'RB']	: 1
['self-organized', 'JJ']	: 1	['motivation', 'NN']	: 1	['intelligent', 'JJ']	: 1
['semantic', 'NN']	: 1	['move', 'VB']	: 1	['loss', 'NN']	: 1
['described', 'VBN']	: 1	['wide', 'NNP']	: 1	['user-defined', 'JJ']	: 1
['layers', 'JJ']	: 1	['references', 'NNP']	: 1	['efficient', 'JJ']	: 1
['distances', 'NNS']	: 1	['classifications', 'NNP']	: 1	['similarly', 'RB']	: 1
['derive', 'VB']	: 1	['taking', 'VBG']	: 1	['world', 'NNP']	: 1
['human', 'NN']	: 1	['exhibit', 'VB']	: 1	['result', 'VB']	: 1
['associate', 'VBP']	: 1	['inappropriate', 'JJ']	: 1	['advantages', 'JJ']	: 1
['helpful', 'JJ']	: 1	['science', 'NN']	: 1	['consciously', 'RB']	: 1
['approaches', 'VBZ']	: 1	['situations', 'NNS']	: 1	['keeping', 'VBG']	: 1
['classical', 'JJ']	: 1	['co-access', 'NNS']	: 1	['reducing', 'VBG']	: 1
['specializing', 'VBG']	: 1	['down', 'RB']	: 1	['lineage', 'NN']	: 1
['discovered', 'VBN']	: 1	['generated', 'VBN']	: 1	['exploring', 'VBG']	: 1
['framework', 'NN']	: 1	['logical', 'JJ']	: 1	['belong', 'VBP']	: 1
['efficiency', 'NN']	: 1	['18', 'CD']	: 1	['specifies', 'VBZ']	: 1
['satisfies', 'NNP']	: 1	['put', 'VB']	: 1	['recall', 'VBP']	: 1
['published', 'NN']	: 1	['reason', 'NN']	: 1	['four', 'CD']	: 1
['text', 'NN']	: 1	['prove', 'VB']	: 1	['inter-point', 'JJ']	: 1
['instances', 'VBZ']	: 1	['transform', 'VB']	: 1	['performance', 'NN']	: 1
['expressiveness', 'NNS']	: 1	['sensed', 'VBD']	: 1	['cube', 'NN']	: 1
['dimensions', 'JJ']	: 1	['above', 'IN']	: 1	['generally', 'RB']	: 1
['deployed', 'VBN']	: 1	['view', 'VBP']	: 1	['frequent', 'JJ']	: 1
['14', 'CD']	: 1	['pi', 'NNP']	: 1	['-lsb-', 'JJ']	: 1
['setting', 'VBG']	: 1	['providing', 'VBG']	: 1	['analy sized', 'VBN']	: 1
['familiar', 'JJ']	: 1	['shown', 'VBN']	: 1	['adaptation', 'NNP']	: 1
['indicate', 'VBP']	: 1	['our', 'PRP\$']	: 1	['exhibits', 'VBZ']	: 1
['classifying', 'VBG']	: 1	['subconsciously', 'RB']	: 1	['mathematics', 'NNS']	: 1
['extents', 'NNS']	: 1	['defines', 'VBZ']	: 1	['physics', 'NN']	: 1
['probabilistic', 'VBG']	: 1	['summarized', 'VBD']	: 1	['duplicated', 'NN']	: 1
['scales', 'NNS']	: 1	['thinking', 'VBG']	: 1	['sure', 'JJ']	: 1
['coordinates', 'VBN']	: 1	['learning', 'NN']	: 1	['high-dimensional', 'JJ']	: 1
['xn-1', 'VB']	: 1	['g2', 'CD']	: 1	['repeat', 'VBD']	: 1
['co-access', 'JJ']	: 1	['interval', 'VBP']	: 1	['explosion', 'NN']	: 1
['coupling', 'NN']	: 1	['lemma', 'NNP']	: 1	['webmining', 'NNP']	: 1
['resource', 'RB']	: 1	['-rsb-', 'VBN']	: 1	['complexity', 'NNP']	: 1
['ignored', 'VBN']	: 1	['university', 'NN']	: 1	['cities', 'NNS']	: 1
['multi-dimensions', 'NNS']	: 1	['-lsb-', 'VBD']	: 1	['trade-off', 'NN']	: 1
['science', 'NNP']	: 1	['guests', 'NNS']	: 1	['organizes', 'VBZ']	: 1

['steps', 'NNS']	: 1	['parts', 'NNS']	: 1	['classification', 'NNP']	: 1
['axes', 'JJ']	: 1	['19', 'CD']	: 1	['keyword', 'JJ']	: 1
['moderate', 'JJ']	: 1	['modeling', 'NN']	: 1	['duplication', 'NN']	: 1
['proposes', 'VBZ']	: 1	['mappings', 'NNS']	: 1	['angle', 'NN']	: 1
['storage', 'NN']	: 1	['play', 'VB']	: 1	['1.5', 'NNP']	: 1
['vice', 'NN']	: 1	['taxonomies', 'NNS']	: 1	['meeting', 'NN']	: 1
['way', 'NN']	: 1	['large', 'JJ']	: 1	['sauna', 'NN']	: 1
['no', 'RB']	: 1	['dependency', 'NNS']	: 1	['computing', 'NNP']	: 1
['b1', 'NNPS']	: 1	['algebra', 'NNP']	: 1	['roles', 'NNS']	: 1
['words', 'NNS']	: 1	['different', 'VBG']	: 1	['store', 'NN']	: 1
['cim', 'NNP']	: 1	['strategy', 'NN']	: 1	['identity', 'NNP']	: 1
['calculus', 'NNS']	: 1	['carrying', 'VBG']	: 1	['avoided', 'VBN']	: 1
['4-dimensional', 'JJ']	: 1	['versa', 'NNS']	: 1	['satisfaction', 'NN']	: 1
['areas', 'NNS']	: 1	['third-level', 'JJ']	: 1	['completed', 'VBN']	: 1
['axes', 'VBZ']	: 1	['acm', 'NNP']	: 1	['matching', 'JJ']	: 1
['insert', 'VB']	: 1	['chapter', 'NN']	: 1	['meaning', 'NN']	: 1
['xi/xj', 'NNP']	: 1	['changed', 'JJ']	: 1	['methodology', 'NN']	: 1
['isolated', 'VBN']	: 1	['self-reasoning', 'JJ']	: 1	['studying', 'VBG']	: 1
['countries', 'NNS']	: 1	['16', 'CD']	: 1	['17', 'CD']	: 1
['unclear', 'JJ']	: 1	['versa', 'RB']	: 1	['fitness', 'NN']	: 1
['correctness', 'NNS']	: 1	['ordinary', 'JJ']	: 1	['y1', 'VB']	: 1
['diverse', 'JJ']	: 1	['ccs', 'NNP']	: 1	['services', 'NNP']	: 1
['program', 'NN']	: 1	['real-time', 'JJ']	: 1	['unchanging', 'JJ']	: 1
['retrieve', 'VBP']	: 1	['specify', 'NNS']	: 1	['23', 'CD']	: 1
['probably', 'RB']	: 1	['able', 'JJ']	: 1	['functional', 'JJ']	: 1
['districts', 'NNS']	: 1	['do', 'VBP']	: 1	['xn', 'JJ']	: 1
['together', 'RB']	: 1	['0.5', 'CD']	: 1	['distinguished', 'VBD']	: 1
['indexed', 'VBN']	: 1	['relational', 'NNP']	: 1	['courses', 'NNP']	: 1
['www2002', 'NNP']	: 1	['tk', 'RB']	: 1	['regardless', 'RB']	: 1
['schemas', 'NNS']	: 1	['ti', 'NNP']	: 1	['keep', 'VB']	: 1
['carry', 'VB']	: 1	['lnf', 'NNP']	: 1	['manipulation', 'NN']	: 1
['smart', 'JJ']	: 1	['aspect', 'NN']	: 1	['sln', 'NNP']	: 1
['dependence', 'NNP']	: 1	['p.xi', 'NNS']	: 1	['storing', 'VBG']	: 1
['plot', 'NN']	: 1	['service', 'VB']	: 1	['join', 'NNP']	: 1
['fuzzy', 'JJ']	: 1	['improved', 'VBN']	: 1	['satisfying', 'VBG']	: 1
['citation', 'NN']	: 1	['co-aviation', 'NN']	: 1	['dimensional', 'JJ']	: 1
['flexibility', 'NN']	: 1	['authors', 'NNS']	: 1	['judge', 'VB']	: 1
['construct', 'VB']	: 1	['referential', 'JJ']	: 1	['formed', 'VBN']	: 1
['co-experience', 'NN']	: 1	['say', 'VBP']	: 1	['average', 'JJ']	: 1
['exist', 'VB']	: 1	['suite', 'NN']	: 1	['200usd', 'CD']	: 1
['removing', 'VBG']	: 1	['capacities', 'NNS']	: 1	['owl', 'NNP']	: 1
['and', 'NNP']	: 1	['vice', 'RB']	: 1	['tradoff', 'NN']	: 1
['system', 'NNP']	: 1	['units', 'NNS']	: 1	['explains', 'VBZ']	: 1
['creator', 'NN']	: 1	['or', 'NNP']	: 1	['split', 'VBN']	: 1
['intervals', 'NNS']	: 1	['facility.room', 'NNP']	: 1	['deriving', 'VBG']	: 1
['adaptive', 'JJ']	: 1	['area', 'NNP']	: 1	['proved', 'VBN']	: 1
['coordinating', 'VBG']	: 1	['28', 'CD']	: 1	['photos', 'NNS']	: 1
['present', 'JJ']	: 1	['takes', 'VBZ']	: 1	['34', 'CD']	: 1
['training', 'NN']	: 1	['selected', 'VBN']	: 1	['knowing', 'VBG']	: 1

['realize', 'VB']	: 1	['allows', 'VBZ']	: 1	['regulating', 'VBG']	: 1
['granularities', 'NNS']	: 1	['vectors', 'NNS']	: 1	['selecting', 'VBG']	: 1
['navigation', 'JJ']	: 1	['splitting', 'NN']	: 1	['0.7', 'CD']	: 1
['real', 'JJ']	: 1	['sources', 'NNS']	: 1	['loosing', 'VBG']	: 1
['u2', 'CD']	: 1	['techniques', 'NNS']	: 1	['little', 'JJ']	: 1
['tools', 'NNS']	: 1	['join', 'VB']	: 1	['5.2', 'CD']	: 1
['abnormal', 'JJ']	: 1	['atomic', 'JJ']	: 1	['significant', 'JJ']	: 1
['4-star', 'NNP']	: 1	['normal', 'NNP']	: 1	['requirements', 'NNS']	: 1
['vector', 'NN']	: 1	['n.', 'NN']	: 1	['clearly', 'RB']	: 1
['gap', 'NN']	: 1	['reach', 'VB']	: 1	['uploading', 'JJ']	: 1
['database', 'VB']	: 1	['comprehensive', 'JJ']	: 1	['non', 'VBP']	: 1
['reference', 'NN']	: 1	['insert', 'NN']	: 1	['being', 'VBG']	: 1
['emerged', 'JJ']	: 1	['extend', 'VB']	: 1	['label', 'NN']	: 1
['male', 'JJ']	: 1	['long', 'JJ']	: 1	['views', 'NNS']	: 1
['key', 'NNP']	: 1	['...', 'NNP']	: 1	['0.7', 'NNP']	: 1
['need', 'VB']	: 1	['he/she', 'NN']	: 1	['matching', 'VBG']	: 1
['thousands', 'NNS']	: 1	['euclidean', 'JJ']	: 1	['whereas', 'IN']	: 1
['na?ve', 'NNP']	: 1	['within', 'IN']	: 1	['efficiently', 'RB']	: 1
['form', 'RB']	: 1	['subjective', 'JJ']	: 1	['discover', 'VB']	: 1
['s', 'VBZ']	: 1	['spaces', 'VBD']	: 1	['coordinates', 'CD']	: 1
['uses', 'VBZ']	: 1	['20', 'CD']	: 1	['either', 'CC']	: 1
['verified', 'VBN']	: 1	['etc', 'FW']	: 1	['7.2', 'CD']	: 1
['algebras', 'NNS']	: 1	['rules', 'VBZ']	: 1	['provides', 'VBZ']	: 1
['personal', 'JJ']	: 1	['inter-coordinate', 'JJ']	: 1	['selection', 'NN']	: 1
['-lsb-', 'RB']	: 1	['objects', 'NNS']	: 1	['recognize', 'VB']	: 1
['recommending', 'VBG']	: 1	['normalization', 'NNP']	: 1	['sightseeing', 'NN']	: 1
['initial', 'JJ']	: 1	['satisfies', 'VB']	: 1	['dimensional', 'NN']	: 1
['weight', 'NN']	: 1	['ck', 'NNS']	: 1	['misjudgment', 'NNP']	: 1
['upload', 'VBD']	: 1	['reserve', 'VB']	: 1	['otherwise', 'RB']	: 1
['tree', 'JJ']	: 1	['concern', 'NN']	: 1	['happens', 'VBZ']	: 1
['price', 'NN']	: 1	['influence', 'VBP']	: 1	['complicated', 'VBN']	: 1
['delete', 'NN']	: 1	['comparies', 'VBZ']	: 1	['mechanism', 'NN']	: 1
['p1', 'NNP']	: 1	['politic', 'JJ']	: 1	['notion', 'NN']	: 1
['webdata', 'NNP']	: 1	['pi', 'NN']	: 1	['patterns', 'VB']	: 1
['general', 'NN']	: 1	['identifying', 'RB']	: 1	['33', 'CD']	: 1
['data', 'NNP']	: 1	['markup', 'NNP']	: 1	['modification', 'NN']	: 1
['computed', 'VBN']	: 1	['bayes', 'NNP']	: 1	['design', 'NN']	: 1
['n.', 'JJ']	: 1	['incites', 'VBZ']	: 1	['fall', 'VBP']	: 1
['networking', 'NN']	: 1	['refer', 'VBP']	: 1	['dataspace', 'NN']	: 1
['samples', 'NNS']	: 1	['a2', 'NNP']	: 1	['found', 'VBN']	: 1
['modification', 'NNP']	: 1	['resource', 'VBD']	: 1	['composed', 'VBN']	: 1
['regards', 'VBZ']	: 1	['boolean', 'NNP']	: 1	['view', 'NN']	: 1
['find', 'VBP']	: 1	['query', 'RB']	: 1	['provide', 'VB']	: 1
['violate', 'VB']	: 1	['exists', 'VBZ']	: 1	['31', 'CD']	: 1
['split', 'NNP']	: 1	['overcome', 'VB']	: 1	['merge', 'NNP']	: 1
['resolve', 'VB']	: 1	['uniformly', 'RB']	: 1	['thought', 'NN']	: 1
['directly', 'RB']	: 1	['mentioned', 'VBN']	: 1	['39', 'CD']	: 1
['merge', 'NN']	: 1	['images', 'NNS']	: 1	['high', 'JJ']	: 1
['potential', 'JJ']	: 1	['detect', 'VBP']	: 1	['up', 'RP']	: 1

['cyber-socio', 'JJ']	: 1	['area', 'NN']	: 1	['follows', 'JJ']	: 1
['seen', 'VBN']	: 1	['occurs', 'VBZ']	: 1	['p-rsm', 'VBG']	: 1
['orthogonality', 'NN']	: 1	['up-to-date', 'JJ']	: 1	['cooccurred', 'VBN']	: 1
['spec-apart-gen', 'NN']	: 1	['xn-1', 'RB']	: 1	['rule2', 'NNS']	: 1
['formulas', 'NNS']	: 1	['denote', 'VBP']	: 1	['generalizing', 'VBG']	: 1
['quite', 'RB']	: 1	['intelligence', 'NN']	: 1	['attribute-based', 'JJ']	: 1
['shopping', 'NN']	: 1	['ui', 'NNP']	: 1	['behaviours', 'NNS']	: 1
['faceted', 'NNP']	: 1	['xml', 'NNP']	: 1	['-rsb-', 'RB']	: 1
['chinese', 'NNP']	: 1	['increasing', 'NN']	: 1	['annotated', 'JJ']	: 1
['zk', 'VB']	: 1	['language', 'NNP']	: 1	['faceted', 'VBN']	: 1
['realized', 'VBN']	: 1	['state', 'NN']	: 1	['grade', 'NN']	: 1
['document', 'NNP']	: 1	['indexes', 'NNS']	: 1	['schema', 'NNP']	: 1
['calculate', 'VBD']	: 1	['distinguishes', 'VBZ']	: 1	['approximately', 'RB']	: 1
['theoretically', 'NNP']	: 1	['0.6', 'CD']	: 1	['linkage', 'NN']	: 1
['essential', 'JJ']	: 1	['ruling', 'VBG']	: 1	['refine', 'VB']	: 1
['easily', 'RB']	: 1	['conflicts', 'NNS']	: 1	['videos', 'NNS']	: 1
['situation', 'NN']	: 1	['r1', 'VBN']	: 1	['living', 'VBG']	: 1
['located', 'VBN']	: 1	['definite', 'JJ']	: 1	['comparing', 'VBG']	: 1
['anything', 'NN']	: 1	['incomplete', 'JJ']	: 1	['split', 'NN']	: 1
['manage', 'VBP']	: 1	['detect', 'VB']	: 1	['tractable', 'JJ']	: 1
['three-dimensional', 'JJ']	: 1	['definitions', 'NNS']	: 1	['incorporate', 'VB']	: 1
['attempt', 'NN']	: 1	['series', 'NN']	: 1	['identity', 'NN']	: 1
['balance', 'NN']	: 1	['specific', 'JJ']	: 1	['c.', 'NNP']	: 1
['drawers', 'NNS']	: 1	['largely', 'RB']	: 1	['published', 'VBN']	: 1
['eight', 'CD']	: 1	['interval', 'JJ']	: 1	['resides', 'VBZ']	: 1
['inequalities', 'NNS']	: 1	['provinces', 'NNS']	: 1	['except', 'IN']	: 1
['tuples', 'NNS']	: 1	['complex', 'NN']	: 1	['li', 'NNP']	: 1
['traffic', 'NN']	: 1	['accompany', 'VB']	: 1	['subclasses', 'NNS']	: 1
['computer', 'NNP']	: 1	['user', 'NNP']	: 1	['repeatedly', 'RB']	: 1
['12', 'CD']	: 1	['holds', 'NNP']	: 1	['lacks', 'VBZ']	: 1
['interested', 'JJ']	: 1	['because', 'RB']	: 1	['under', 'IN']	: 1
['2-star', 'JJ']	: 1	['male', 'NNP']	: 1	['n.', 'NNP']	: 1
['cyber-mental', 'JJ']	: 1	['4nf', 'CD']	: 1	['prob', 'VBZ']	: 1
['consists', 'NNP']	: 1	['enriching', 'VBG']	: 1	['comments', 'NNS']	: 1
['easy', 'JJ']	: 1	['become', 'VBP']	: 1	['30', 'CD']	: 1
['n-dimensional', 'JJ']	: 1	['misjudge', 'VB']	: 1	['algorithms', 'NNS']	: 1
['misplacing', 'VB']	: 1	['ti', 'NN']	: 1	['cultural', 'JJ']	: 1
['theorems', 'NNS']	: 1	['dotted', 'JJ']	: 1	['until', 'IN']	: 1
['heterogeneous', 'JJ']	: 1	['swimming', 'NN']	: 1	['calculate', 'VB']	: 1
['5.1', 'NNP']	: 1	['consider', 'VB']	: 1	['enable', 'VB']	: 1
['probview', 'NNP']	: 1	['top-down', 'JJ']	: 1	['retaining', 'VBG']	: 1
['resolving', 'VBG']	: 1	['functioning', 'VBG']	: 1	['interval', 'VBZ']	: 1
['combinatorial', 'NN']	: 1	['gradually', 'RB']	: 1	['unlike', 'IN']	: 1
['i.e.', 'UH']	: 1	['type', 'NNP']	: 1	['completeness', 'NNS']	: 1
['retrieving', 'VBG']	: 1	['useful', 'JJ']	: 1	['merge', 'VBP']	: 1
['generalize', 'VB']	: 1	['second-level', 'JJ']	: 1	['specifying', 'VBG']	: 1
['deluxe', 'JJ']	: 1	['rdb', 'NNP']	: 1	['checked', 'VBN']	: 1
['dynamic', 'JJ']	: 1	['species', 'NNS']	: 1	['tracing', 'VBG']	: 1
['deletes', 'VBZ']	: 1	['retrieving', 'JJ']	: 1	['direct', 'JJ']	: 1

['multi-layer', 'NN']	: 1	['instances', 'NNS']	: 1	['occur', 'VBP']	: 1
['along', 'IN']	: 1	['points', 'VBZ']	: 1	['generality', 'RB']	: 1
['link', 'VBP']	: 1	['alarm', 'VB']	: 1	['pages', 'NNS']	: 1
['add', 'VB']	: 1	['sets', 'VBZ']	: 1	['excellent', 'JJ']	: 1
['movements', 'NNS']	: 1	['static', 'JJ']	: 1	['very', 'RB']	: 1
['before', 'IN']	: 1	['appending', 'VBG']	: 1	['terms', 'NNS']	: 1
['instance', 'NN']	: 1	['depends', 'VBZ']	: 1	['input', 'VBZ']	: 1
['p2', 'NNP']	: 1	['supposed', 'VBN']	: 1	['formation', 'NN']	: 1
['superior', 'JJ']	: 1	['desirable', 'JJ']	: 1	['41', 'CD']	: 1
['studied', 'VBN']	: 1	['construction', 'NN']	: 1	['progress', 'NN']	: 1
['existing', 'JJ']	: 1	['inter-dependent', 'JJ']	: 1	['evolve', 'NNS']	: 1
['laws', 'NNS']	: 1	['mining', 'NNP']	: 1	['25', 'CD']	: 1
['inputting', 'JJ']	: 1	['creating', 'VBG']	: 1	['hotel', 'NNP']	: 1
['1-star', 'JJ']	: 1	['information', 'NNP']	: 1	['rs2', 'VBP']	: 1
['g1', 'CD']	: 1	['onto', 'IN']	: 1	['gradully', 'RB']	: 1
['true', 'JJ']	: 1	['uniform', 'JJ']	: 1	['first-level', 'JJ']	: 1
['corresponds', 'NNS']	: 1	['descriptive', 'JJ']	: 1	['arrows', 'NNS']	: 1

W_Pdic:

limited	: ['VBN']	fig.	: ['NNP']
dynamic	: ['JJ']	four	: ['CD']
consists	: ['VBZ', 'NNP']	integrity	: ['NN']
4-star	: ['JJ', 'NNP']	calculate	: ['VB', 'VBD']
spec-apart-gen	: ['NN']	4nf	: ['CD']
under	: ['IN']	desirable	: ['JJ']
every	: ['DT']	summarized	: ['VBD']
uncertain	: ['JJ']	upload	: ['VB', 'VBD']
vector	: ['NN']	sub-coordinates	: ['NNS']
direct	: ['JJ']	second	: ['JJ']
even	: ['RB']	established	: ['VBN']
selected	: ['VBN']	establishes	: ['VBZ']
new	: ['JJ', 'NNP']	increasing	: ['NN']
simultaneously	: ['RB']	interdependent	: ['NN']
represented	: ['NN', 'VBN']	path	: ['NN']
100	: ['CD']	violate	: ['VB']
obtained	: ['VBN']	changed	: ['JJ']
browsing	: ['NN', 'JJ']	co-access	: ['JJ', 'NNS']
complicated	: ['VBN']	suitable	: ['JJ']
changes	: ['NNS']	projection	: ['NN']
classification	: ['NN', 'NNP']	guests	: ['NNS']
total	: ['JJ']	plot	: ['NN']
therefore	: ['RB']	type	: ['NN', 'NNP']
until	: ['IN']	separated	: ['JJ', 'VBN']
excellent	: ['JJ']	join	: ['NNP', 'VB']
room	: ['NN']	work	: ['NN']
concepts	: ['NNS']	root	: ['NN']
example	: ['NN']	give	: ['VB']
organized	: ['VBN']	indicates	: ['VBZ']

organizes	: ['VBZ']	provide	: ['VB']
how	: ['WRB']	methodology	: ['NN']
ordinary	: ['JJ']	classify	: ['VB']
classifying	: ['VBG']	abstraction	: ['NN']
transforming	: ['VBG']	after	: ['IN']
types	: ['NNS']	attempt	: ['NN']
effective	: ['JJ']	complexity	: ['NNP', 'NN']
maintain	: ['VB']	algorithms	: ['NNS']
keeps	: ['VBZ']	operate	: ['VB']
order	: ['NN']	operations	: ['NNS', 'NNP']
restriction	: ['NN']	extents	: ['NNS']
satisfied	: ['JJ']	2-star	: ['JJ']
satisfies	: ['VBZ', 'NNP', 'VB']	before	: ['IN']
personal	: ['JJ']	adaption	: ['NN']
exhibits	: ['VBZ']	first-level	: ['JJ']
fig	: ['VB', 'NNP']	easier	: ['JJR']
overcome	: ['VB']	then	: ['RB']
them	: ['PRP']	combination	: ['NN']
effects	: ['NNS']	they	: ['PRP']
e-applications	: ['NNS']	several	: ['JJ']
classified	: ['VBN']	fitness	: ['NN']
independent	: ['JJ']	series	: ['NN']
solution	: ['NN']	t.	: ['NNP']
network	: ['NN']	rs	: ['NNP', 'NN', 'VBN']
200usd	: ['CD']	content	: ['NN']
combinatorial	: ['NN']	adapt	: ['VB']
independence	: ['NN']	linear	: ['JJ']
associate	: ['VBP']	little	: ['JJ']
standard	: ['NN']	formation	: ['NN']
sensors	: ['NNS']	r1	: ['NNS', 'VBN']
r2	: ['NNS']	created	: ['VBN']
correctness	: ['NNS']	creator	: ['NN']
onto	: ['IN']	organize	: ['VB']
features	: ['NNS']	grade	: ['NN']
adopted	: ['VBN']	another	: ['DT']
annotated	: ['JJ']	service	: ['NN', 'VB']
similarly	: ['RB']	approximately	: ['RB']
western	: ['NNP']	cyber-socio	: ['JJ']
distance	: ['NN']	target	: ['NN']
roles	: ['NNS']	tree	: ['NN', 'JJ']
classes	: ['NNS', 'NNP']	enables	: ['VBZ']
mind	: ['NN']	socio	: ['NN', 'JJ']
seen	: ['VBN']	regulate	: ['VB']
contents	: ['NNS']	isolated	: ['VBN']
indexes	: ['NNS']	indexed	: ['VBN']
object	: ['JJ', 'NN']	retaining	: ['VBG']
inconsistency	: ['NN']	alarm	: ['VB']
points	: ['NNS', 'VBZ']	notion	: ['NN']
incomplete	: ['JJ']	reserve	: ['VB']

incorporate	: ['VB']	one-dimensional	: ['JJ']
7.2	: ['CD']	trade-off	: ['NN']
proposed	: ['VBN']	situations	: ['NNS']
semantics	: ['NNS']	do	: ['VBP']
na?ve	: ['NNP']	above	: ['JJ', 'IN']
10	: ['CD']	db	: ['NNP']
14	: ['CD']	countries	: ['NNS']
automatic	: ['JJ']	reference	: ['NN']
cyber-physical-socio:	['JJ']	depends	: ['VBZ']
projections	: ['NNS']	incorporating	: ['VBG']
techniques	: ['NNS']	inappropriate	: ['JJ']
drawn	: ['VBN']	approach	: ['NN']
discovery	: ['NN']	we	: ['PRP']
terms	: ['NNS']	extend	: ['VB']
nature	: ['NN']	he/she	: ['NN']
however	: ['RB']	extent	: ['NN']
modeling	: ['NN']	linkage	: ['NN']
uncertainty	: ['NN']	facet	: ['NN', 'VBP']
merging	: ['VBG']	behaviors	: ['NNS', 'NNP']
co-naviation	: ['NN']	2nf	: ['CD']
active	: ['JJ']	polynomial	: ['JJ', 'NN']
conference	: ['NN']	basis	: ['NN']
three	: ['CD']	been	: ['VBN']
much	: ['JJ']	basic	: ['JJ']
flexible	: ['JJ']	algebras	: ['NNS']
ebdata	: ['NNP']	child	: ['NN']
euclidean	: ['JJ']	sln	: ['NNP']
applies	: ['VBZ']	balance	: ['NN']
facility.room	: ['NNP']	3nf	: ['CD']
is	: ['VBZ']	it	: ['PRP']
in	: ['IN']	if	: ['IN']
hong	: ['NNP']	specialization	: ['NN', 'NNP']
make	: ['VB']	complex	: ['JJ', 'NN']
split	: ['NNP', 'VB', 'VBN', 'NN']	www2005	: ['NNP']
hierarchies	: ['NNS']	taxonomies	: ['NNS']
www2002	: ['NNP']	comparies	: ['VBZ']
evolve	: ['VB', 'NNS']	commonsense	: ['NN']
social	: ['JJ']	hand	: ['NN']
normalization	: ['NN', 'NNP']	scenario	: ['NN']
uploading	: ['VBG', 'JJ']	the	: ['DT', 'NNP']
semanticweb	: ['NNP']	unified	: ['JJ']
just	: ['RB']	proposes	: ['VBZ']
identify	: ['VB']	transforms	: ['VBZ']
human	: ['NNP', 'JJ', 'NN']	previous	: ['JJ']
adding	: ['VBG']	designers	: ['NNS']
candidate	: ['NN']	regarded	: ['VBN']
tuples	: ['NNS']	transformed	: ['VBN']
easy	: ['JJ']	has	: ['VBZ']
possible	: ['JJ']	cultural	: ['JJ']

judge	: ['VB']	depicts	: ['VBZ']
advanced	: ['JJ']	unnecessary	: ['JJ']
specific	: ['JJ']	steps	: ['NNS']
deal	: ['VB']	for	: ['IN']
webengineering	: ['NNP']	deletes	: ['VBZ']
chapter	: ['NN']	ensure	: ['VB']
automatically	: ['RB']	facility	: ['NNP', 'NN']
bound	: ['NN', 'VBN']	down	: ['RP', 'RB']
refined	: ['VBN']	reducing	: ['NN', 'VBG']
methods	: ['NNS']	support	: ['VB', 'NN']
initial	: ['JJ']	transform	: ['VB']
way	: ['NN']	form	: ['NN', 'VB', 'RB']
differences	: ['NNS']	true	: ['JJ']
maximum	: ['NN']	3.3	: ['CD']
high-dimensional	: ['JJ']	proved	: ['VBN']
computing	: ['NNP']	''	: ['"']
exist	: ['VB', 'VBP']	distributions	: ['NNS']
physical	: ['JJ']	-lcb-	: ['-LRB-']
dotted	: ['JJ']	no	: ['DT', 'RB']
whereas	: ['IN']	when	: ['WRB']
nf	: ['NN', 'NNP']	interested	: ['JJ']
role	: ['NN']	digital	: ['JJ']
shows	: ['VBZ', 'NNS']	node	: ['NN']
's	: ['POS', 'VBZ']	models	: ['NNS']
uniformly	: ['RB']	update	: ['NN']
n.	: ['NNP', 'JJ', 'NN']	assume	: ['VBP']
interval	: ['NN', 'JJ', 'VBZ', 'VBP']	together	: ['RB']
time	: ['NN', 'NNP']	concept	: ['NN']
managed	: ['VBN']	real-time	: ['NN', 'JJ']
manages	: ['VBZ']	subclass	: ['NNS']
layers	: ['NNS', 'JJ']	graph	: ['NN']
multi-facet	: ['JJ']	discovering	: ['VBG']
orthogonal	: ['JJ']	co-experience	: ['NN']
presented	: ['VBN']	hawaii	: ['NNP']
science	: ['NNP', 'NN']	non-1nf	: ['JJ']
upper	: ['JJ', 'RB']	three-dimensional	: ['JJ']
trend	: ['NN']	discover	: ['VB']
cyber	: ['NN']	initialized	: ['VBN']
targets	: ['NNS']	axes	: ['JJ', 'NNS', 'VBZ', 'NN']
uniform	: ['JJ']	current	: ['JJ']
goes	: ['VBZ']	relational	: ['JJ', 'NN', 'NNP']
satisfy	: ['VB']	supporting	: ['VBG']
explosion	: ['NN']	understanding	: ['NN']
tradoff	: ['NN']	along	: ['IN']
change	: ['VB', 'NN']	studied	: ['VBN']
usually	: ['RB']	navigation	: ['NN', 'JJ']
emerge	: ['VB']	regardless	: ['RB']
logical	: ['JJ']	flexibility	: ['NN']
hotels	: ['NNS']	prove	: ['VB']

tightly	: ['JJ']	granularities	: ['NNS']
appending	: ['VBG']	rigid	: ['JJ']
cases	: ['NNS']	districts	: ['NNS']
values	: ['NNS', 'VBZ']	can	: ['MD']
following	: ['JJ', 'VBG', 'NN']	inter-coordinate	: ['JJ']
topic	: ['NN']	refine	: ['VB']
spa	: ['NN']	occur	: ['VBP']
subconsciously	: ['RB']	redundancy	: ['NN']
requirements	: ['NNS']	discussion	: ['NN']
orthogonality	: ['NN']	criterion	: ['NN']
edinburgh	: ['NNP']	information	: ['NN', 'NNP']
may	: ['MD']	max	: ['NN', 'VBN']
needs	: ['VBZ']	applications	: ['NNS']
membership	: ['NN']	designed	: ['VBN']
such	: ['JJ', 'PDT']	data	: ['NN', 'NNS', 'NNP']
natural	: ['JJ']	outline	: ['VB']
explicit	: ['JJ']	so	: ['RB', 'IN']
webservices	: ['NNP']	definitions	: ['NNS']
mainly	: ['RB']	kong	: ['NNP']
experiments	: ['NNS']	derive	: ['VB']
coordinates	: ['NNP', 'VBZ', 'VBG', 'NN', 'NNS', 'VBN', 'CD']	forms	: ['NNS', 'VBZ']
constitutes	: ['VBZ']	main	: ['JJ']
non	: ['VBP']	views	: ['NNS']
processes	: ['NNS']	not	: ['RB']
nor	: ['CC']	lineage	: ['NN']
arrows	: ['NNS']	axis/point	: ['NN']
domain	: ['NN']	retrieve	: ['VB', 'VBP']
abnormal	: ['JJ']	lnf	: ['CD', 'NNP']
avoided	: ['VBN']	living	: ['VBG']
shown	: ['VBN']	banff	: ['NNP']
space	: ['NN', 'NNP']	increase	: ['NN']
emerged	: ['JJ']	formula	: ['NN']
unifying	: ['VBG']	theory	: ['NN']
queries	: ['NNS']	mechanisms	: ['NNS']
possibility	: ['NN']	quite	: ['RB']
inputting	: ['JJ']	advantages	: ['NNS', 'JJ']
bayes	: ['NNP']	training	: ['NN']
language	: ['NN', 'NNP']	selections	: ['VBN']
programming	: ['VBG', 'NN']	unchanging	: ['JJ']
frequent	: ['JJ']	first	: ['JJ']
xj	: ['NNP']	xi	: ['NNP', 'JJ']
xn	: ['NNP', 'VBN', 'VBZ', 'JJ', 'VB']	xm	: ['NNP', 'FW']
variables	: ['NNS']	one	: ['CD']
directly	: ['RB']	carry	: ['VB']
open	: ['JJ']	second-level	: ['JJ']
given	: ['VBN']	checked	: ['VBN']
indicate	: ['VB', 'VBP']	structures	: ['NNS']
exploring	: ['VBG']	mining	: ['NNP']
x.	: ['NNP']	that	: ['WDT', 'IN', 'DT']

continuous	:	['JJ']	accurately	:	['RB']
x2	:	['NNP']	x3	:	['NNP']
x1	:	['NNP', 'NNS']	representing	:	['VBG']
than	:	['IN']	specify	:	['VB', 'NNS']
11	:	['CD']	wide	:	['NNP']
13	:	['CD']	12	:	['CD']
15	:	['CD']	third	:	['JJ']
17	:	['CD']	16	:	['CD']
19	:	['CD']	18	:	['CD']
future	:	['JJ']	were	:	['VBD']
accessed	:	['VBN']	browser	:	['NNP']
and	:	['CC', 'NNS', 'NNP']	generality	:	['RB']
topics	:	['NNS', 'NNP']	locations	:	['NNP']
generalization	:	['NN']	say	:	['VBP']
any	:	['DT']	attribute-based	:	['JJ']
efficient	:	['JJ']	potential	:	['JJ']
take	:	['VB']	multi-dimensions	:	['NNS']
performance	:	['NNP', 'NN']	formulas	:	['NNS']
sure	:	['JJ']	multiple	:	['JJ']
trace	:	['VB']	normal	:	['JJ', 'NNP']
price	:	['NN', 'NNP']	falls	:	['VBZ']
dimensions	:	['NNS', 'JJ']	satisfying	:	['JJ', 'VBG']
inserted	:	['VBN']	pages	:	['NNS']
especially	:	['RB']	average	:	['JJ']
duplication	:	['NN']	laws	:	['NNS']
discovered	:	['VBN']	spaces	:	['NNS', 'VBD', 'NNP', 'NN']
threshold	:	['NN']	realizing	:	['VBG']
xml	:	['NN', 'JJ', 'NNP']	ratio	:	['NN']
examples	:	['NNS']	only	:	['RB', 'JJ']
explicitly	:	['RB']	enriched	:	['VBN']
get	:	['VBP']	resource	:	['NNP', 'NN', 'RB', 'IN', 'VBD']
seldom	:	['RB']	where	:	['WRB', 'VBP', 'NNP']
ignored	:	['VBN']	college	:	['NN']
top-level	:	['JJ']	concern	:	['VB', 'NN']
detect	:	['VBP', 'VB']	inequalities	:	['NNS']
managing	:	['VBG']	definite	:	['JJ']
label	:	['NN']	between	:	['IN']
parent	:	['NN']	style	:	['NN']
analyzed	:	['VBN']	cities	:	['NNS']
resides	:	['VBZ']	tractable	:	['JJ']
many	:	['JJ']	region	:	['NN']
according	:	['VBG']	delete	:	['NN', 'NNP']
expression	:	['NN']	among	:	['IN']
satisfaction	:	['NN']	learning	:	['VBG', 'NN']
considers	:	['VBZ']	specializing	:	['VBG']
better	:	['JJR']	-rrb-	:	['-RRB-', 'RB']
dtlds	:	['NNS']	enable	:	['VBP', 'VB']
shopping	:	['NN']	formed	:	['VBN']
photos	:	['NNS']	case	:	['NN']

dataspace	: ['NN', 'NNP']	these	: ['DT']
situation	: ['NN']	characteristics	: ['NNS']
sub-coordinate	: ['NN']	cluster	: ['NN']
loosing	: ['VBG']	movements	: ['NNS']
different	: ['JJ', 'VBG']	verified	: ['VBN']
same	: ['JJ']	document	: ['NNP']
events	: ['NNS']	investigated	: ['VBN']
n-dimensional	: ['JJ']	sensortype	: ['NNP']
largely	: ['RB']	markup	: ['NNP']
ccs	: ['NNP']	without	: ['IN']
extensible	: ['CD']	coordinate	: ['NN', 'JJ', 'NNP', 'VB', 'NNS']
model	: ['NN', 'NNP']	dimension	: ['NN']
being	: ['VBG']	rule2	: ['NNS']
adjusted	: ['VBN']	unclear	: ['JJ']
aspect	: ['NN']	thinking	: ['VBG']
except	: ['IN']	setting	: ['VBG']
samples	: ['NNS']	real	: ['JJ']
multi-layer	: ['NN', 'JJ']	represents	: ['VBZ']
rules	: ['NNS', 'NNP', 'VBZ']	papers	: ['NNS']
traffic	: ['NN']	using	: ['VBG']
identifying	: ['RB']	specifies	: ['VBZ']
satisfactory	: ['JJ']	conditional	: ['JJ']
calculated	: ['VBN']	specified	: ['VBN']
images	: ['NNS']	organizing	: ['VBG']
matching	: ['NN', 'VBG', 'JJ']	entities	: ['NNS']
courses	: ['NNP', 'NNS']	provides	: ['VBZ']
moderate	: ['JJ']	refer	: ['VBP']
scientific	: ['JJ']	equivalent	: ['JJ']
each	: ['DT']	ontology	: ['NN', 'NNP']
on	: ['IN']	of	: ['IN']
theorems	: ['NNS']	discussed	: ['VBN']
meaning	: ['NN']	acm	: ['NNP']
or	: ['CC', 'NNP']	references	: ['NNP']
determine	: ['VB']	theoretically	: ['NNP']
area	: ['NN', 'NNP']	removing	: ['VBG']
there	: ['EX']	low	: ['JJ']
implies	: ['VBZ']	with	: ['IN']
default	: ['NN']	subclasses	: ['NNS']
detailed	: ['JJ']	videos	: ['NNS']
certain	: ['JJ']	citation	: ['NN']
an	: ['DT']	as	: ['IN', 'RB']
reliability	: ['NNP']	at	: ['IN']
file	: ['NN']	lifetime	: ['NN']
statuses	: ['NNS']	completeness	: ['NNS']
storage	: ['NN']	mathematics	: ['NNS']
students	: ['NNS']	includes	: ['VBZ']
deriving	: ['VBG']	important	: ['JJ']
ors2	: ['NNP']	ors1	: ['NNP']
deluxe	: ['JJ']	original	: ['JJ']

represent	: ['VB', 'VBP']	all	: ['DT', 'PDT']
semantic	: ['JJ', 'NNP', 'NN']	consider	: ['VB']
chinese	: ['NNP']	caused	: ['VBN']
lack	: ['VBP']	splitting	: ['NN']
generalize	: ['VB']	research	: ['NNP', 'NN']
reasoning	: ['NN']	causes	: ['VBZ']
duplicated	: ['JJ', 'NN']	3-dimensional	: ['JJ']
apartment	: ['NNP', 'NN']	removal	: ['NN']
to	: ['TO']	program	: ['NN']
tk	: ['RB']	ti	: ['NNP', 'NN']
nodes	: ['NNS']	belonging	: ['VBG']
self-reasoning	: ['JJ']	returned	: ['VBN', 'JJ']
very	: ['RB']	disjoin	: ['NNP', 'VB']
fall	: ['VBP']	condition	: ['NN']
evaluation	: ['NNP', 'NN']	applicable	: ['JJ']
t1	: ['NNP']	large	: ['JJ']
design	: ['NN']	further	: ['RBR']
functioning	: ['VBG']	china.beijing	: ['NNP']
section	: ['NN', 'NNP']	emotions	: ['NNS']
method	: ['NN']	full	: ['JJ']
operating	: ['VBG']	publisher	: ['NN']
search	: ['NN', 'NNP', 'VB']	generalizing	: ['VBG']
allows	: ['VBZ']	experience	: ['NN', 'NNP']
drawers	: ['NNS']	published	: ['VBN', 'NN']
specialize	: ['VB']	uniquely	: ['RB']
texts	: ['NNS']	establish	: ['VB']
detecting	: ['VBG']	select	: ['VB', 'NNP', 'JJ']
takes	: ['VBZ']	probabilities	: ['NNS']
contains	: ['VBZ']	two	: ['CD']
comparing	: ['VBG']	more	: ['RBR', 'JJR']
flat	: ['JJ']	datamining	: ['NNP']
keeping	: ['VBG']	recall	: ['NN', 'VBP']
strategies	: ['NNS']	male	: ['NN', 'JJ', 'NNP']
share	: ['VBP']	minimum	: ['JJ']
lacks	: ['VBZ']	p-rsm	: ['NN', 'NNP', 'RB', 'VBG']
species	: ['NNS']	axis	: ['NNS', 'JJ', 'VBZ', 'NNP']
5.1	: ['NNP']	5.2	: ['CD']
explains	: ['VBZ']	ubiquitous	: ['NNP']
algebra	: ['NNP']	prs2	: ['NNP']
prs1	: ['NNP', 'NN']	mapping	: ['VBG']
reflect	: ['VB', 'VBP']	specifying	: ['VBG']
fundamental	: ['JJ']	retrieval	: ['NN']
help	: ['VB']	hierarchy	: ['NN']
developed	: ['VBN']	paper	: ['NN']
through	: ['IN']	y1	: ['NNP', 'VB', 'NNS', 'VBN']
existence	: ['NN']	its	: ['PRP\$']
24	: ['CD']	25	: ['CD']
26	: ['CD']	27	: ['CD']
20	: ['CD']	21	: ['CD']

23	:	['CD']	28	:	['CD']
29	:	['CD']	detected	:	['VBN']
systems	:	['NNS']	good	:	['JJ']
yn	:	['NNP', 'FW']	food	:	['NN']
number	:	['NN']	obeyed	:	['VBN']
framework	:	['NN']	communities	:	['NNS']
easily	:	['RB']	1-star	:	['JJ']
micro	:	['JJ']	-lsb-	:	['NN', 'VBG', 'NNP', 'VBZ', 'NNS', 'CD', 'JJ', 'RB',
'VBD']					
found	:	['VBN']	mental	:	['JJ']
weight	:	['NN']	energy	:	['NN']
hard	:	['JJ']	idea	:	['NN']
extended	:	['VBN']	operation	:	['NN']
event	:	['NN']	gradully	:	['RB']
item	:	['NN']	since	:	['IN']
denotes	:	['VBZ']	denoted	:	['VBN', 'RB']
issue	:	['NN']	occurs	:	['VBZ']
reason	:	['NN']	put	:	['NN', 'VB']
definition	:	['NNP', 'NNS', 'NN']	positioning	:	['NN']
consequence	:	['NN']	major	:	['JJ']
student	:	['NN']	probability	:	['NN']
feel	:	['VB']	reflected	:	['VBN']
instances	:	['NNS', 'VBZ']	done	:	['VBN']
construct	:	['VB']	interact	:	['VB']
least	:	['JJS']	belongs	:	['VBZ']
statement	:	['NN']	store	:	['NN', 'VB', 'VBP']
schema	:	['NN', 'NNP']	relationship	:	['NN']
hotel	:	['NNP', 'NN']	part	:	['NN']
authors	:	['NNS']	kind	:	['NN']
5-star	:	['JJ']	determined	:	['VBN']
supposed	:	['VBN']	motivation	:	['NN']
null	:	['JJ']	webdata	:	['NNP']
depending	:	['VBG']	also	:	['RB']
play	:	['VB']	reach	:	['VB']
most	:	['RBS']	significant	:	['JJ']
services	:	['NNS', 'NNP']	probabilistic	:	['NNP', 'JJ', 'NN', 'VBG']
clear	:	['JJ']	sometimes	:	['RB']
traditional	:	['JJ']	physics	:	['NN']
relation	:	['NN', 'NNP']	fine	:	['JJ']
find	:	['VB', 'VBP']	impact	:	['NN']
distributed	:	['VBN']	experiment	:	['NN']
4-dimensional	:	['JJ']	merged	:	['VBN']
dependent	:	['JJ']	bookshelves	:	['NNS']
trees	:	['NNS']	closely	:	['RB']
during	:	['IN']	budapest	:	['NNP']
resolve	:	['VB']	querying	:	['VBG']
keyword	:	['JJ']	generally	:	['RB']
remove	:	['VB']	common	:	['JJ']
recommendations	:	['NNS']	locating	:	['VBG']

consciously	: ['RB']	set	: ['VBN', 'NN', 'VB', 'VBD']
intelligence	: ['NN']	are	: ['VBP']
chemistry.gl.c1	: ['NN']	-rsb-	: ['CD', 'NNP', 'NNS', 'JJ', 'RB', 'VBN', 'NNPS', 'VBZ', 'NN']
misjudge	: ['VB']	various	: ['JJ']
probably	: ['RB']	knowing	: ['VBG']
creating	: ['VBG']	interfaces	: ['NNP']
scalability	: ['NNP']	interface	: ['NN']
sercurity	: ['NNP']	both	: ['DT', 'CC', 'PDT']
improved	: ['VBN']	3-star	: ['JJ']
long-term	: ['JJ']	experimental	: ['JJ']
point	: ['NN', 'NNP', 'VB']	reasons	: ['NNS']
corresponds	: ['NNS']	community	: ['NN']
dimensional	: ['NN', 'JJ']	adaptation	: ['NN', 'NNP']
ensures	: ['VBZ']	described	: ['VBN']
create	: ['VB']	due	: ['JJ']
strategy	: ['NN']	describes	: ['VBZ']
pj	: ['NN']	pi	: ['NNP', 'NN']
meeting	: ['NN']	empty	: ['JJ']
versa	: ['RB', 'NNS']	self-organized	: ['JJ']
precision	: ['NN']	gap	: ['NN']
understand	: ['VB']	demand	: ['NN']
p2	: ['NNS', 'CD', 'JJ', 'NNP']	probview	: ['NNP']
p1	: ['NNS', 'CD', 'JJ', 'NNP']	classifications	: ['NNS', 'NNP']
while	: ['IN']	involved	: ['VBN']
larger	: ['JJR']	enriching	: ['VBG']
faceted	: ['JJ', 'NNP', 'VBN']	itself	: ['PRP']
belong	: ['VBP', 'VB']	virtually	: ['RB']
modification	: ['NNP', 'NN']	higher	: ['JJR']
used	: ['VBN']	comprehensive	: ['JJ']
cyber-mental	: ['JJ']	expressiveness	: ['NNS']
levels	: ['NNS']	uses	: ['VBZ']
user	: ['NN', 'NNP']	lower	: ['JJR']
database	: ['NN', 'NNP', 'VB']	regulating	: ['VBG']
consistency	: ['NN']	entry	: ['NN']
chemistry	: ['NN']	distances	: ['NNS']
intervals	: ['NNS']	atomic	: ['JJ']
world	: ['NNP']	useful	: ['JJ']
tables	: ['NNS']	location	: ['NNP', 'NN']
theorem	: ['NNP', 'VB', 'NN']	input	: ['VBZ']
guarantees	: ['NNS']	transformation	: ['NN']
...	: [':', '.', 'NNS', 'NNP']	insert	: ['NN', 'VB']
evaluate	: ['VB']	capacities	: ['NNS']
like	: ['IN']	follows	: ['JJ', 'VBZ']
facets	: ['NNS']	individuals	: ['NNS']
essential	: ['JJ']	preserves	: ['VBZ']
often	: ['RB']	some	: ['DT']
economic	: ['JJ']	b1	: ['NNPS', 'NNS']
b2	: ['NNS']	gradually	: ['RB']

scale	: ['NN']	affects	: ['VBZ']
integration	: ['NN']	eliminate	: ['VB']
prob	: ['NNP', 'VBZ']	either	: ['CC']
inserting	: ['VBG']	be	: ['VB', 'VBP']
confidence	: ['NN']	step	: ['NN']
by	: ['IN']	anything	: ['NN']
constraint	: ['NN', 'VB', 'NNP']	tracing	: ['VBG']
range	: ['NN']	extensions	: ['NNS']
into	: ['IN']	within	: ['IN']
appropriate	: ['JJ']	sightseeing	: ['NN']
clustering	: ['NN']	innate	: ['JJ']
retrieving	: ['VBG', 'JJ']	u1	: ['NNP']
long	: ['JJ']	u2	: ['CD']
link	: ['NN', 'VBP', 'VB']	repeatedly	: ['RB']
-lrb-	: ['-LRB-']	line	: ['NN']
deployed	: ['VBN']	characteristic	: ['NN']
p.xi	: ['NNS']	up	: ['RP']
cim	: ['NNP']	politic	: ['JJ']
ui	: ['NNP']	uk	: ['NNP']
heterogeneous	: ['JJ']	called	: ['VBN']
storing	: ['VBG']	associated	: ['VBN']
defined	: ['VBN']	influence	: ['NN', 'VBP', 'VB']
diverse	: ['JJ']	defines	: ['VBZ']
inter-point	: ['JJ']	users	: ['NNS']
calculating	: ['VBG']	generated	: ['VBN']
vectors	: ['NNS']	structure	: ['NN']
feasible	: ['JJ']	vice	: ['RB', 'NN']
required	: ['VBN']	resolving	: ['VBG']
2002	: ['CD']	2003	: ['CD']
2001	: ['CD']	2006	: ['CD']
2007	: ['CD']	2004	: ['CD']
2005	: ['CD']	far	: ['RB']
requires	: ['VBZ']	having	: ['VBG']
evenly	: ['RB']	results	: ['NNS']
existing	: ['JJ', 'VBG']	query	: ['NN', 'VB', 'JJ', 'RB']
suite	: ['NN']	include	: ['VBP']
resources	: ['NNS', 'NNP']	inter-dependent	: ['JJ']
g3	: ['CD']	g2	: ['CD']
g1	: ['CD']	wave	: ['VB']
categories	: ['NNS']	gender	: ['NNP', 'NN']
integrating	: ['VBG']	unsatisfied	: ['VB']
limitations	: ['NNS']	zk	: ['NNP', 'FW', 'VB']
insertion	: ['NN']	incites	: ['VBZ']
plays	: ['VBZ']	giving	: ['VBG']
multimedia	: ['FW']	networks	: ['NNS']
access	: ['VB']	indian	: ['NNP']
degree	: ['NN']	respectively	: ['RB']
explore	: ['VB']	objects	: ['NNS']
let	: ['IN', 'VB']	cyber-physical	: ['JJ']

invented	: ['VBN']	z1	: ['NNP', 'NNS', 'VBN']
39	: ['CD']	38	: ['CD']
cts	: ['NN']	33	: ['CD']
32	: ['CD']	31	: ['CD']
30	: ['CD']	37	: ['CD']
36	: ['CD']	35	: ['CD']
34	: ['CD']	rdb	: ['NNP']
opinion	: ['NN']	implement	: ['VB']
makes	: ['VBZ']	composed	: ['VBN']
up-to-date	: ['JJ']	decentralized	: ['NNP']
scales	: ['NNS']	manage	: ['VB', 'VBP']
boolean	: ['NNP']	tools	: ['NNS']
use	: ['VB', 'VBP', 'NN']	from	: ['IN', 'NNP']
links	: ['NNS', 'VBZ']	attribute	: ['NN']
reflects	: ['VBZ']	comparison	: ['NN']
sql-like	: ['JJ']	cooperate	: ['VB', 'VBP']
carrying	: ['VBG']	this	: ['DT']
challenge	: ['NN']	obvious	: ['JJ']
publications	: ['NNS']	proof	: ['NN']
e.g.	: ['NNP', 'VBG']	process	: ['NN']
0.3	: ['CD']	0.2	: ['CD']
0.5	: ['CD']	0.7	: ['NNP', 'CD']
0.6	: ['CD']	high	: ['JJ']
effectively	: ['RB']	schemas	: ['NNS']
holds	: ['NNP', 'VBZ']	regions	: ['NNS']
located	: ['VBN']	intelligent	: ['JJ']
xn-1	: ['VB', 'NNP', 'RB']	third-level	: ['JJ']
multiplication	: ['NN']	efficiently	: ['RB']
realized	: ['VBN']	arduous	: ['JJ']
element	: ['NN']	move	: ['VB']
mentioned	: ['VBN']	superior	: ['JJ']
multi-dimensional	: ['JJ']	temporal	: ['JJ']
li	: ['NNP']	lp	: ['NN']
clusters	: ['NNS']	greater	: ['JJR']
practice	: ['NNP']	realize	: ['VB']
university	: ['NN']	merge	: ['NNP', 'VB', 'JJ', 'NN', 'VBP']
12	: ['CD']	11	: ['NNP']
constraints	: ['NNS']	subset	: ['NN', 'RB']
society	: ['NN']	static	: ['JJ']
our	: ['PRP\$']	special	: ['JJ']
out	: ['RP']	category	: ['NN']
entertainment	: ['NN']	behaviours	: ['NNS']
adaptive	: ['JJ']	supports	: ['VBZ']
integrated	: ['VBN']	math	: ['NN']
approached	: ['VBN']	interactions	: ['NNS']
retrieved	: ['VBN']	approaches	: ['VBZ', 'NNS']
york	: ['NNP']	conflicts	: ['NNS']
interaction	: ['NN']	determining	: ['VBG']
could	: ['MD']	times	: ['NNS']

powerful	: ['JJ']	quality	: ['NNP', 'NN']
rs1	: ['VBN', 'NNP', 'NN']	rs2	: ['VBP', 'NNP', 'VBN', 'NN']
management	: ['NN']	system	: ['NN', 'NNP']
relations	: ['NNS']	their	: ['PRP\$']
rsm	: ['NNP', 'NN']	accompany	: ['VB']
tuple	: ['NN', 'JJ']	completed	: ['VBN']
acquire	: ['VB']	regards	: ['VBZ']
manipulation	: ['NN']	fuzzy	: ['JJ']
updating	: ['VBG']	rss	: ['NNP']
distinguishes	: ['VBZ']	providing	: ['VBG']
distinguished	: ['JJ', 'VBD']	result	: ['NN', 'VB']
exhibit	: ['VB']	1.5	: ['CD', 'NNP']
webmining	: ['NNP']	shrinks	: ['VBZ']
have	: ['VBP', 'VB', 'JJ']	need	: ['VBP', 'VB']
clearly	: ['RB']	viewed	: ['VBN']
documents	: ['NNS']	angle	: ['NN']
mappings	: ['NNS']	min	: ['NN']
studying	: ['VBG']	able	: ['JJ']
mechanism	: ['NN']	chiba	: ['NNP']
instance	: ['NN']	concerns	: ['VBZ', 'NNS']
which	: ['WDT']	subject	: ['VB']
misplacing	: ['VB']	accuracy	: ['NN']
calculus	: ['NNS']	who	: ['WP']
eight	: ['CD']	misjudgment	: ['NNP']
class	: ['NN']	hierarchical	: ['JJ']
fact	: ['NN']	emerging	: ['VBG']
selection	: ['NN']	text	: ['NN']
cooccurred	: ['VBN']	based	: ['VBN']
knowledge	: ['NN']	should	: ['MD']
lemma	: ['NN', 'NNS', 'NNP']	thousands	: ['NNS']
cube	: ['NN']	familiar	: ['JJ']
words	: ['NNS']	coordinating	: ['VBG']
entity	: ['NN']	areas	: ['NNS']
evolution	: ['NN']	contain	: ['VB']
view	: ['VBP', 'NN']	available	: ['JJ']
computed	: ['VBN']	exists	: ['VBZ']
humans	: ['NNS', 'VB']	computer	: ['NNP']
classification-preserve:	['NN']	pattern	: ['NN']
-rcb-	: ['-RRB-']	state	: ['NN']
projecting	: ['VBG']	correctly	: ['RB']
progress	: ['NN']	neither	: ['RB']
ability	: ['NN']	efficiency	: ['NN']
key	: ['NNP', 'NN']	e-learning	: ['NNP']
distribution	: ['NN']	restrictions	: ['NNS']
taking	: ['VBG']	equal	: ['JJ', 'CD']
minds	: ['NNS']	etc	: ['FW']
attributes	: ['NNS']	otherwise	: ['RB']
ck	: ['NNP', 'NNS']	ci	: ['NNP']
relevant	: ['JJ']	cm	: ['NNP']

cs	: ['NNP']	table	: ['NN']
ct	: ['NNP']	provinces	: ['NNS']
i.e.	: ['FW', 'RB', 'UH']	addition	: ['NN']
ontologies	: ['NNP']	define	: ['VB']
corresponding	: ['JJ', 'VBZ']	c.	: ['NNP']
sensed	: ['VBD']	covered	: ['VBN']
c2	: ['NNP']	c1	: ['NNP', 'JJ', 'NNS']
general	: ['JJ', 'NN']	present	: ['JJ']
unlike	: ['IN']	value	: ['NN']
will	: ['MD']	layer	: ['NN']
almost	: ['RB']	thus	: ['RB']
descriptive	: ['JJ']	sequentially	: ['RB']
parts	: ['NNS']	units	: ['NNS']
difficult	: ['JJ']	effect	: ['NN']
sauna	: ['NN']	analyzed	: ['VBN']
identity	: ['NNP', 'NN']	keep	: ['VB']
well	: ['RB']	thought	: ['NN']
patterns	: ['NNS', 'VB']	sets	: ['VBZ', 'NNS']
firstly	: ['RB']	usual	: ['JJ']
less	: ['JJR']	accurate	: ['JJ']
obtain	: ['VB']	sources	: ['NNS']
years	: ['NNP', 'VBZ']	web	: ['NNP', 'NN']
large-scale	: ['JJ']	recommending	: ['VBG']
add	: ['VB']	maintaining	: ['VBG']
smart	: ['JJ']	comments	: ['NNS']
non-null	: ['JJ']	increases	: ['VBZ']
know	: ['VB']	loss	: ['NN']
necessary	: ['JJ']	helpful	: ['JJ']
user-defined	: ['JJ']	lose	: ['VB']
become	: ['VBP', 'VB']	because	: ['RB', 'IN']
classical	: ['JJ']	phenomena	: ['NNS']
searching	: ['VBG']	superclass	: ['NNS']
recognition	: ['NN']	happens	: ['VBZ']
leaf	: ['NN']	lead	: ['VB']
avoid	: ['VB']	referential	: ['JJ']
does	: ['VBZ']	locate	: ['VB']
selecting	: ['VBG', 'JJ']	analysed	: ['VBN']
although	: ['IN']	xi/xj	: ['NNP']
about	: ['IN']	introduces	: ['VBZ']
dependence	: ['NN', 'NNP']	dependency	: ['NN', 'NNS']
a2	: ['NNP', 'NNS']	co-experiencing	: ['JJ']
introduced	: ['VBN']	swimming	: ['NN']
owl	: ['NNP']	own	: ['JJ']
functional	: ['JJ']	networking	: ['NN']
naturally	: ['RB']	function	: ['NN']
but	: ['CC']	subjective	: ['JJ']
collected	: ['VBN']	construction	: ['NN']
versatile	: ['JJ']	whether	: ['IN']
converted	: ['VBN']	ruling	: ['VBG']

problem	:	['NN']	recognize	:	['VB']
universal	:	['JJ']	denote	:	['VBP']
reflecting	:	['VBG']	functions	:	['NNS']
compared	:	['VBN']	top-down	:	['JJ']
42	:	['CD']	40	:	['CD']
41	:	['CD']	other	:	['JJ']
compares	:	['VBZ']	xml&w	:	['NNP']
repeat	:	['VBD']	coupling	:	['NN']
rule	:	['NN', 'NNS', 'NNP']	expands	:	['VBZ']