f0002:

W Fdic:							
the	: 185	and	: 132	knowledge	: 131	of	: 104
to	: 55	flow	: 46	in	: 42	can	: 36
network	: 34	-rrb-	: 33	-lrb-	: 33	flows	: 32
research	: 29	is	: 28	an	: 27	that	: 24
scientists	: 24	articles	: 23	are	: 22	by	: 21
between	: 21	citation	: 21	authors	: 20	scientific	: 20
nodes	: 19	their	: 19	as	: 19	for	: 19
this	: 17	spiral	: 16	environment	: 15	area	: 15
evolution	: 15	-lsb-	: 14	development	: 14	-rsb-	: 14
or	: 14	citations	: 14	networks	: 13	semantic	: 12
more	: 12	be	: 12	energy	: 11	with	: 11
node	: 11	its	: 10	will	: 10	it	: 10
on	: 10	's	: 10	team	: 9	such	: 9
not	: 9	new	: 9	article	: 9	community	: 9
from	: 8	cited	: 8	service	: 8	distribution	: 8
other	: 8	space	: 7	science	: 7	areas	: 7
cooperation	: 7	interest	: 7	web	: 7	has	: 7
within	: 7	links	: 6	two	: 6	evolves	: 6
effective	: 6	help	: 6	group	: 6	each	: 6
shows	: 6	roles	: 6	documents	: 6	which	: 6
effectiveness	: 6	data	: 6	different	: 6	interconnection	: 6
1.1	: 6	implies	: 6	dynamic	: 5	number	: 5
helps	: 5	activities	: 5	displays	: 5	control	: 5
figure	: 5	information	: 5	rising	: 5	cite	: 5
interests	: 5	enables	: 5	extracting	: 5	who	: 5
services	: 5	through	: 5	among	: 5	relevant.	: 5
co-authors	: 5	teamwork	: 5	user	: 5	human	: 5
world	: 5	autonomous	: 5	time	: 5	portion	: 5
query	: 4	fusing	: 4	grid	: 4	publications	: 4
published	: 4	example	: 4	map	: 4	over	: 4
including	: 4	personal	: 4	members	: 4	e-science	: 4
changing	: 4	interact	: 4	future	: 4	model	: 4
peers	: 4	find	: 4	routing	: 4	common	: 4
however	: 4	strategy	: 4	if	: 4	status	: 4
evolve	: 4	discipline	: 4	using	: 4	advanced	: 4
relationship	: 4	automatically	: 4	appropriate	: 4	references	: 4
link	: 4	display	: 4	influence	: 4	at	: 4
digital	: 4	does	: 3	discovering	: 3	list	: 3
disciplines	: 3	discover	: 3	changes	: 3	analyzing	: 3
following	: 3	process	: 3	share	: 3	answer	: 3
high-energy	: 3	journals	: 3	solving	: 3	them	: 3
they	: 3	workflows	: 3	constitute	: 3	society	: 3
special	: 3	out	: 3	shown	: 3	estimate	: 3
generate	: 3	used	: 3	major	: 3	powerful	: 3
management	: 3	than	: 3	10	: 3	have	: 3
ideas	: 3	internal	: 3	differences	: 3	reach	: 3

F:\Pn.D_1\program\Eclipse\CE_r	elation\vvtreque	ence\wPFt0002.txt						2016年7月1
plan	: 3	institutions	: 3	only	: 3	during	: 3	
libraries	: 3	efficiency	: 3	many	: 3	according	: 3	
cites/links	: 3	same	: 3	spirals	: 3	contact	: 3	
researchers	: 3	when	: 3	spread	: 3	evaluate	: 3	
papers	: 3	finding	: 3	support	: 3	form	: 3	
but	: 3	promote	: 3	problem	: 3	physical	: 3	
authoritative	: 3	external	: 3	results	: 2	co-author	: 2	
cooperative	: 2	consists	: 2	reasoning	: 2	issues	: 2	
relationships	: 2	very	: 2	every	: 2	large	: 2	
imply	: 2	rate	: 2	current	: 2	looking	: 2	
flowing	: 2	groups	: 2	others	: 2	along	: 2	
implicit	: 2	generalizing	: 2	involved	: 2	useful	: 2	
type	: 2	sharing	: 2	anything	: 2	integrating	: 2	
tracing	: 2	making	: 2	expanding	: 2	effectively	: 2	
attract	: 2	cites	: 2	provide	: 2	means	: 2	
types	: 2	developed	: 2	coordinating	: 2	differently	: 2	
then	: 2	encouraging	: 2	records	: 2	maintaining	: 2	
document	: 2	interface	: 2	level	: 2	another	: 2	
personalization	: 2	content	: 2	top	: 2	researcher	: 2	
forwarding	: 2	unselfish	: 2	system	: 2	relations	: 2	
contribute	: 2	inventing	: 2	11	: 2	recording	: 2	
need	: 2	any	: 2	also	: 2	trace	: 2	
ranking	: 2	12	: 2	increasing	: 2	fixed	: 2	
where	: 2	individual	: 2	detect	: 2	managing	: 2	
self-replication	: 2	declining	: 2	received	: 2	hyperlink	: 2	
passing	: 2	three	: 2	these	: 2	while	: 2	
thus	: 2	trusted	: 2	author	: 2	several	: 2	
higher	: 2	effect	: 2	analysis	: 2	greatest	: 2	
left	: 2	being	: 2	recommend	: 2	yet	: 2	
source	: 2	descending	: 2	right	: 2	searching	: 2	
indirect	: 2	happens	: 2	dimensions	: 2	fragments	: 2	
processing	: 2	epidemic	: 2	about	: 2	ensure	: 2	
shrinking	: 2	networking	: 2	there	: 2	start	: 2	
way	: 2	function	: 2	whether	: 2	continuously	: 2	
similar	: 2	computing	: 2	dissemination	: 2	hypercycle	: 2	
important	: 2	most-cited	: 2	lead	: 2	rule	: 2	
requires	: 2	represent	: 1	all	: 1	concept	: 1	
global	: 1	generalize	: 1	whose	: 1	21st	: 1	
send	: 1	under	: 1	expressing	: 1	downstream	: 1	
orthogonal	: 1	resoning	: 1	human-machine	: 1	categories	: 1	
accompanying	: 1	affiliation	: 1	invention	: 1	follow	: 1	
further	: 1	functioning	: 1	click	: 1	machines	: 1	
cooperatively	: 1	non-redundant	: 1	selected	: 1	experiment	: 1	
goes	: 1	international	: 1	net	: 1	contributes	: 1	
method	: 1	contrast	: 1	revealing	: 1	understanding	: 1	
stategy	: 1	explore	: 1	path	: 1	great	: 1	
institute	: 1	completely	: 1	prior	: 1	inspires	: 1	
involves	: 1	mutual	: 1	appropriately	: 1	tasks	: 1	
classification	: 1	objectively	: 1	psychological	: 1	peer	: 1	

I .IFII.D_I\program\ccipse\cc_	_relation(vvii)eque	IICE(VVFI 10002.txt						2010年7月10日 9.41
rather	: 1	С.	: 1	formed	: 1	collaborators	: 1	
higher-energy	: 1	curves	: 1	eventually	: 1	those	: 1	
novel	: 1	unlike	: 1	policies	: 1	situation	: 1	
extracts	: 1	identical	: 1	low-energy	: 1	century	: 1	
characteristics	: 1	result	: 1	develop	: 1	make	: 1	
complex	: 1	extended	: 1	social	: 1	fuse	: 1	
frequently	: 1	center	: 1	database	: 1	makes	: 1	
well	: 1	without	: 1	comparisons	: 1	arising	: 1	
depict	: 1	time-constrained	: 1	obtain	: 1	valuable	: 1	
communities	: 1	catalytic-support	t : 1	catalytic	: 1	point	: 1	
ideal	: 1	nor	: 1	author-affiliation	: 1	technological	: 1	
reason	: 1	match	: 1	resolved	: 1	rules	: 1	
fusion	: 1	supervise	: 1	emergence	: 1	highly	: 1	
like	: 1	loss	: 1	peer-to-peer	: 1	ZOOM	: 1	
benefit	: 1	arbitrary	: 1	output	: 1	internet-mediated	: 1	
often	: 1	people	: 1	some	: 1	authority	: 1	
cognitive	: 1	chronology	: 1	platforms	: 1	hasten	: 1	
openness	: 1	organizing	: 1	generates	: 1	dense	: 1	
overlay	: 1	recorded	: 1	comments	: 1	critical	: 1	
economical	: 1	professionals	: 1	obey	: 1	power	: 1	
cliques	: 1	selecting	: 1	journal	: 1	assists	: 1	
losing	: 1	emits	: 1	stage	: 1	puts	: 1	
increasingly	: 1	constraint	: 1	universe	: 1	location	: 1	
mutually	: 1	carries	: 1	shared	: 1	transitive	: 1	
presence	: 1	communication	: 1	color-coded	: 1	assess	: 1	
determine	: 1	mental	: 1	rely	: 1	statistics	: 1	
forwarded	: 1	retrieving	: 1	diseases	: 1		: 1	
analyze	: 1	medium	: 1	forming	: 1	pages criteria	: 1	
initiator	: 1		: 1	challenges	: 1		: 1	
characteristic	: 1	convergence	: 1	-	: 1	hop	: 1	
certain	: 1	maturity direction	: 1	mature		storing exist	: 1	
	: 1 : 1			higher-ranking	: 1 : 1			
functions		assessing	: 1	no		novice	: 1	
virtual	: 1	clicks	: 1	predefined	: 1	users	: 1	
models	: 1	includes	: 1	helping	: 1	develops	: 1	
cooperate	: 1	independently	: 1	roadmaps	: 1	ensuring	: 1	
resembles	: 1	directory	: 1	original	: 1			
WP_Fdic:								
['the', 'DT']			'and', 'CC']		: 131	['knowledge', 'NN']	: 119
['of', 'IN']		: 104	'to', 'TO']		: 55	['flow', 'NN']		: 42
['in', 'IN']		: 41	'can', 'MD']		: 36	['-rrb-', '-RRB-']		: 33
['network', 'NN']		: 33	'-lrb-', '-L	RB-']	: 33	['is', 'VBZ']		: 28
['research', 'NN']	: 28 ['an', 'DT']		: 27	['flows', 'NNS']		: 25
['scientists', 'N			'articles',	'NNS']	: 23	['are', 'VBP']		: 22
['between', 'IN']			'by', 'IN']	-	: 21	['authors', 'NNS']		: 20
['citation', 'NN'			'their', 'PR	P\$']	: 19	['for', 'IN']		: 19
['nodes', 'NNS']	-		'as', 'IN']	•	: 18	['this', 'DT']		: 17
['scientific', 'J	J']		'spiral', 'N	N']	: 16	['that', 'WDT']		: 15
['area', 'NN']	•		'evolution',		: 15	['environment', 'N	N'1	: 15
				** 4			J	

F:\Pn.D_1\program\Eclipse\CE_relation\wvrrequence\v	VPF10002.txt				2016年7月18日 9:41
['or', 'CC'] ['networks', 'NNS'] ['semantic', 'JJ'] ['node', 'NN'] ['its', 'PRP\$']	: 14	['development', 'NN']	: 14	['citations', 'NNS'] ['with', 'IN'] ['will', 'MD'] ['it', 'PRP'] ['team', 'NN']	: 13
['networks', 'NNS']	: 13	['be', 'VB']	: 12	['with', 'IN']	: 11
['semantic', 'JJ']	: 11	['energy', 'NN']	: 11	['will', 'MD']	: 10
['node', 'NN']	: 10	['be', 'VB'] ['energy', 'NN'] ["'s", 'POS'] ['new', 'JJ']	: 10	['it', 'PRP']	: 10
['its', 'PRP\$']	: 10	['new', 'JJ']	: 9	['team', 'NN']	: 9
['community', 'NN']	: 9	['-rsh-' 'NNS']	• 9	['article' 'NN']	• Q
['on', 'IN']	: 9	['not', 'RB'] ['such', 'JJ']	: 9	['from', 'IN']	: 8
['more', 'JJR']	: 8	['such', 'JJ']	: 8	['knowledge', 'NNP']	: 8
['service', 'NN']	: 8 : 8	['other', 'JJ'] ['interest', 'NN'] ['flows', 'VBZ'] ['implies', 'VBZ']	: 8	['from', 'IN'] ['knowledge', 'NNP'] ['distribution', 'NN']	: 8
['science', 'NN']	: 7	['interest', 'NN']	: 7	['cooperation', 'NN']	: 7
['has', 'VBZ']	: 7 : 7 : 7	['flows', 'VBZ']	: 7	['cooperation', 'NN'] ['areas', 'NNS']	: 7
['within', 'IN']	: 7	['implies', 'VB7']	: 6	['effectiveness', 'NN']	: 6
[!linke! !NMC!]	• 6	['two', 'CD']	• 6	['which', 'WDT']	: 6
['space'. 'NN']	• 6	<pre>['two', 'CD'] ['documents', 'NNS']</pre>	• 6	['roles', 'NNS']	: 6
['space', 'NN'] ['interconnection', 'NN'] ['different', 'JJ'] ['effective', 'JJ'] ['enables', 'VBZ'] ['activities', 'NNS']	• 6	['aroup' 'NN']	• 6	["'", "''"]	: 6
['different' '.T.T']	• 6	['shows' 'VRZ']	• 6		
['effective' '.T.T']	• 6	['group', 'NN'] ['shows', 'VBZ'] ['each', 'DT'] ['help', 'VB']	• 6	['that', 'IN'] ['helps', 'VBZ'] ['co-authors', 'NNS']	: 5
['enables' 'VB7']	• 5	['helm' 'VR']	• 5	['co-authors' 'NNS']	• 5 • 5
[lactivities NNS!]	. J	[number! !NN!]	. J	['evolves', 'VBZ']	• 5 • 5
[!toomwork! NN!]	• 5	[number , NN]	• 5	['services', 'NNS']	• 5 • 5
[teamwork , NN]	. J	[portion , NN]	. J	['among', 'IN']	• 5 • 5
<pre>['activities', 'NNS'] ['teamwork', 'NN'] ['world', 'NN'] ['human', 'JJ'] ['autonomous', 'JJ'] ['interests', 'NNS'] ['map', 'NN'] ['including', 'VBG'] ['grid', 'NN'] ['relationship', 'NN'] ['influence', 'VB'] ['references', 'NNS'] ['peers', 'NNS'] ['example', 'NN']</pre>	. 5	<pre>['neip', 'VB'] ['number', 'NN'] ['portion', 'NN'] ['time', 'NN'] ['through', 'IN'] ['who', 'WP'] ['user', 'NN'] ['more', 'RBR']</pre>	. 5	['extracting', 'VBG']	• 5 • 5
[Inutarian ITI]	: 5	['though', 'IN']	: 5	['displays', 'VBZ']	: 5 : 5
[autonomous , 100]	: 5	[WIO , WP]	: 5	['relevant', 'JJ']	: 5
['Interests', 'NNS']	: 5	['user', 'NN']	: 5	['relevant', 'JJ']	: 5
['map', 'NN']	: 4	['more', 'RBR']	: 4	['discipline', 'NN']	: 4
['including', 'VBG']	: 4	['data', 'NNS']	: 4	['over', 'IN']	
['gria', 'NN']	: 4	['appropriate', 'JJ']	: 4	['fusing', 'NN']	: 4
['relationship', 'NN']	: 4	['data', 'NNS'] ['appropriate', 'JJ'] ['rising', 'VBG'] ['at', 'IN'] ['members', 'NNS']	: 4	['however', 'RB'] ['information', 'NN'] ['strategy', 'NN']	: 4
['influence', 'VB']	: 4	['at', 'IN']	: 4	['information', 'NN']	: 4
['references', 'NNS']	: 4	['members', 'NNS']	: 4	['strategy', 'NN']	: 4
['peers', 'NNS']	: 4	['e-science', 'JJ']	: 4	['digital', 'JJ']	: 4
['example', 'NN']	: 4			['changing', 'VBG']	
['control', 'NN'] ['if', 'IN'] ['display', 'VB'] ['future', 'JJ'] ['finding', 'VBG']	: 4	['status', 'NN']	: 4	['personal', 'JJ']	
['if', 'IN']	: 4	['dynamic', 'JJ']	: 4	['using', 'VBG']	: 4
['display', 'VB']	: 4	['-lsb-', 'VBG']	: 4	['evolve', 'VB']	: 4
['future', 'JJ']	: 4	['dynamic', 'JJ'] ['-lsb-', 'VBG'] ['common', 'JJ'] ['cite', 'VBP']	: 4	['find', 'VB']	: 4
['finding', 'VBG']	: 3	['cite', 'VBP']	: 3	['flow', 'VBP']	: 3
['papers', 'NNS']	: 3	['contact', 'NN']	: 3	['model', 'NN']	: 3
['society', 'NN']	: 3	['does', 'VBZ']	: 3	['journals', 'NNS']	: 3
['than', 'IN']	: 3	['efficiency', 'NN']	: 3	['spread', 'NN']	: 3
['web', 'NN']	: 3	['scientific', 'NNP']	: 3	['evaluate', 'VB']	: 3
['many', 'JJ']	: 3	['them', 'PRP']	: 3	['problem', 'NN']	: 3
['physical', 'JJ']	: 3	['web', 'NNP']	: 3	['shown', 'VBN']	: 3
['solving', 'VBG']	: 3	['special', 'JJ']	: 3	['major', 'JJ']	: 3
['disciplines', 'NNS']	: 3	['discovering', 'VBG']	: 3	['automatically', 'RB']	: 3
['promote', 'VB']	: 3	['reach', 'VB']	: 3	['analyzing', 'VBG']	: 3
['figure', 'NNP']	: 3	['interact', 'VB']	: 3	['authoritative', 'JJ']	: 3
['-lsb-', 'CD']	: 3	['that', 'DT']	: 3	['management', 'NN']	: 3
['knowledge', 'JJ']	: 3	['during', 'IN']	: 3	['query', 'NN']	: 3
		- · · · · · · · · · · · · · · · · · · ·	• •	- 1 1 / J	

1.1F11.D_1\program\citpse\cit_lelation\vviiequelice\v	WI I 10002.txt				2010年7月10日 9.41
['cites/links', 'NNS']	: 3	['list', 'NN']	: 3	<pre>['they', 'PRP'] ['according', 'VBG'] ['workflows', 'NNS'] ['-lsb-', 'NNP']</pre>	: 3
<pre>['cited', 'VBN'] ['but', 'CC'] ['libraries', 'NNS']</pre>	: 3	['advanced', 'JJ'] ['same', 'JJ'] ['generate', 'VB']	: 3	['according', 'VBG']	: 3
['but', 'CC']	: 3	['same', 'JJ']	: 3	['workflows', 'NNS']	: 3
['libraries', 'NNS']	: 3	['generate', 'VB']	: 3	['-lsb-', 'NNP']	: 3
['out', 'RP']	: 3	['differences', 'NNS']	: 3	['institutions', 'NNS']	: 3
['out', 'RP'] ['routing', 'NNS']	• 3	['published', 'VBN']	• 3	['10', 'CD']	: 3
['researchers', 'NNS']	. 3	['ideas', 'NNS']	• 3	['powerful', 'JJ']	
['high-energy', 'JJ']	. 3	[!-rsh-! !.T.T!]	. 3	['have', 'VBP']	: 3
['cited', 'VBD']	. 3	['process', 'NN']	. 3	[!whon! !WDD!]	
['link', 'NN']	: 3 : 3 : 3	[process , NN]	: 2	['when', 'WRB'] ['provide', 'VB']	• 3 • 2
[IIIK , ININ]	: 2	['left', 'JJ'] ['system', 'NN']	: 2 : 2	['requires', 'VBZ']	: 2 : 2
['level', 'NN'] ['support', 'VB']		['System', 'NN']	: 4	[requires , vbz]	: 2 : 2
['Support', 'VB']	: 4	['source', 'NN'] ['searching', 'VBG']	: 4	<pre>['lead', 'VB'] ['inventing', 'NN']</pre>	: 2 : 2
['ensure', 'VB']	: 2	['searching', 'VBG']	: 2	<pre>['inventing', 'NN'] ['internal', 'JJ'] ['constitute', 'VB']</pre>	: 2
['nigner', 'JJR']	: 2	['whether', 'IN']	: 2	['internal', 'JJ']	: 2
['ensure', 'VB'] ['higher', 'JJR'] ['involved', 'VBN'] ['data', 'NN'] ['epidemic', 'NN']	: 2	<pre>['whether', 'IN'] ['citation', 'NNP'] ['types', 'NNS'] ['rate', 'NN']</pre>	: 2	['constitute', 'VB'] ['share', 'VBP'] ['analysis', 'NN']	: 2
['data', 'NN']	: 2	['types', 'NNS']	: 2	['share', 'VBP']	: 2
['epidemic', 'NN']	: 2	['rate', 'NN']	: 2	['analysis', 'NN']	: 2
l'declining'. 'VBG'l	• /	['cited', 'JJ']	: 2	['indirect', 'JJ']	
['type', 'NN'] ['cooperative', 'JJ'] ['issues', 'NNS'] ['making', 'VBG'] ['cites', 'VBZ']	: 2	<pre>['spirals', 'NNS'] ['several', 'JJ'] ['dimensions', 'NNS'] ['-lsb-', 'JJ'] ['changes', 'NNS']</pre>	: 2	['plan', 'VB']	: 2
['cooperative', 'JJ']	: 2	['several', 'JJ']	: 2	['another', 'DT']	: 2
['issues', 'NNS']	: 2	['dimensions', 'NNS']	: 2	<pre>['looking', 'VBG'] ['developed', 'VBN'] ['implicit', 'JJ']</pre>	: 2
['making', 'VBG']	: 2	['-lsb-', 'JJ']	: 2	['developed', 'VBN']	: 2
['cites', 'VBZ']	: 2	['changes', 'NNS']	: 2	['implicit', 'JJ']	: 2
['increasing', 'VBG']	: 2	['anything', 'NN']	: 2	['continuously', 'RB'] ['means', 'VBZ']	: 2
['external', 'JJ']	: 2	['there', 'EX']	: 2	['means', 'VBZ']	: 2
['differently', 'RB']	: 2	<pre>['these', 'DT'] ['unselfish', 'JJ'] ['maintaining', 'VBG'] ['others', 'NNS']</pre>	: 2	['answer', 'NN']	: 2
['12', 'CD']	: 2	['unselfish', 'JJ']	: 2	['answer', 'NN'] ['any', 'DT'] ['top', 'JJ']	: 2
['about', 'IN']	: 2 : 2	['maintaining', 'VBG']	: 2	['any', 'DT'] ['top', 'JJ']	: 2
['most-cited', 'JJ']	: 2	['others', 'NNS']	: 2	['where', 'WRB']	: 2
['effect', 'NN']	: 2	['generalizing', 'NN']	: 2	['greatest', 'JJS']	: 2
['encouraging', 'VBG']		['researcher', 'NN']		['function', 'NN']	
['also' 'RB']	• 2	['heina' 'VBC']	• 2	['relations', 'NNS']	: 2
['following' 'VBG']	• 2	['nersonalization' 'NN']	• 2	['similar', 'JJ']	: 2
[!forwarding! !NN!]	• 2	[!flowing! !VBC!]	• 2	['content', 'NN']	: 2
[IOI WAIGING , NN]	• 2	[lowers! DT!]	• 2	['trace', 'VB']	: 2
<pre>['following', 'VBG'] ['forwarding', 'NN'] ['11', 'CD'] ['descending', 'VBG']</pre>	. 2	['personalization', 'NN'] ['flowing', 'VBG'] ['every', 'DT'] ['discover', 'VB']	. 2	['used', 'VBN']	: 2 : 2
[descending , vbG]	. 2	[discover , vb]	. 2	[used , VBN]	: 2 : 2
[yet , Kb]	• 4	['large', 'JJ']	: 4	['groups', 'NNS']	: 2 : 2
['coordinating', 'NN'] ['hyperlink', 'NN']	: 2	['important', 'JJ']	: 2	['received', 'VBN']	: 2
['nyperlink', 'NN']	: 2	['three', 'CD']	: ∠	['results', 'NNS']	: 2
['estimate', 'VBZ']	: 2	['consists', 'VBZ']		['co-author', 'NN']	
['useful', 'JJ']	: 2	['fixed', 'VBN']	: 2	['figure', 'NN']	: 2
['integrating', 'NNS']	: 2	['fragments', 'NNS']	: 2	['right', 'JJ']	: 2
['interface', 'NN']	: 2	['tracing', 'VBG']	: 2	['thus', 'RB']	: 2
['then', 'RB']	: 2	['only', 'RB']	: 2	['individual', 'JJ']	: 2
['dissemination', 'NN']	: 2	['managing', 'VBG']	: 2	['need', 'VBP']	: 2
['very', 'RB']	: 2	['document', 'NN']	: 2	['current', 'JJ']	: 2
['happens', 'VBZ']	: 2	['recommend', 'VB']	: 2	['start', 'VB']	: 2
['rule', 'NN']	: 2	['sharing', 'NN']	: 2	['way', 'NN']	: 2
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1.1F11.D_Tiprogramitchipsetot_relation/wirequence/wi	-1 10002.txt				2010年7月10日 9.41
['expanding', 'VBG']	: 2	['synergize', 'VB']	: 1	['goes', 'VBZ']	: 1
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i .\rii.b_i\piograii\ciipse\ci_ieiatioi\vviiequeilce\	VVF1 10002.LXL				2010年7月10日 9.41
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[Lacemental INNC!]	; <u>1</u>	['Spirats', 'VBZ']	. <u>1</u>	[philiosophical , oo	i ⊥ . 1
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1 - 3			
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law	: ['NN']	journals	: ['NNS']
types	: ['NNS']	outline	: ['VB']
effective	: ['フフ']	correspond	: ['VB']
inform	: ['NNP']	broadcasting	: ['NN']

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so	: ['IN']	decreasing : ['VBG']	
representation	: ['NN']	increase : ['VB']	
realizing	: ['VBG']	operations : ['NNS']	
help	: ['NN', 'VB']	hierarchy : ['NN']	
developed	: ['VBN']	over : ['IN']	
coordinating	: ['NN']	paper : ['NN']	
including	: ['VBG']	statistical : ['JJ']	
innovative	: ['JJ']	depicts : ['VBZ']	
its	: ['PRP\$']	group : ['NN']	
personal	: ['JJ']	solving : ['VBG']	
coordinates	: ['VBZ']	distinguishing : ['VBG']	
differently	: ['RB']	of : ['IN']	
then	: ['RB']	them : ['PRP']	
generously	: ['RB']	interdisciplinary : ['JJ']	
enrich	: ['VB']	encouraging : ['VBG']	
records	: ['VBZ', 'NNS']	they : ['PRP']	
workflows	: ['NNS']	not : ['RB']	
querying	: ['JJ']	linking : ['VBG']	
maintaining	: ['VBG']	articles : ['NNS']	
document	: ['NN']	always : ['RB']	
interface	: ['NN']	level : ['NN']	
capability	: ['NN']	-lsb- : ['CD', 'VBZ', 'NNP', 'JJ', 'VBG', 'NNS']	
each	: ['DT']	rising : ['JJ', 'VBG']	
development	: ['NN']	everyone : ['NN']	
another	: ['DT']	classifying : ['VBG']	
energy	: ['NN']	related : ['VBN']	
constitute	: ['VBP', 'VB']	society : ['NN']	
literature	: ['NN']	static : ['JJ']	
personalization	: ['NN']	our : ['PRP\$']	
operation	: ['NN']	special : ['JJ']	
out	: ['RP']	category : ['NN']	
shown	: ['VBN']	network : ['NN', 'NNP']	
space	: ['NN', 'NNP']	coincidentally : ['RB']	
publish	: ['VB']	research : ['NN', 'NNP']	
content	: ['NN']	supports : ['VBZ']	
shows	: ['VBZ']	theory : ['NN']	
queries	: ['VBZ']	sustainable : ['JJ']	
approaches	: ['NNS']	formation : ['NN']	
members	: ['NNS']	estimate : ['VBZ', 'VBP']	
generate	: ['VB']	interaction : ['NN']	
service	: ['NN']	language : ['NN']	
could	: ['MD']	area : ['NN']	
correctness	: ['NNS']	used : ['VBN', 'VBD']	
keep	: ['VBP']	isi : ['NNP']	
top	: ['JJ']	first : ['JJ']	
prospective	: ['JJ']	major : ['JJ']	
researcher	: ['NN']	powerful : ['JJ']	
e-science	: ['JJ']	one : ['CD']	
philosophical	: ['JJ']	least : ['JJS']	
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1.11 II.D_Typrogrammechpsetor	L_Telation(vvii)equence(vvFT 10002.txt		2010年7月10日 9.41
directly	: ['RB']	changing	: ['VBG']
forwarding	: ['NN']	management	: ['NN']
publication	: ['NN']	likely	: ['JJ']
their	: ['PRP\$']	unselfish	: ['JJ']
interact	: ['VB', 'VBZ']	behaves	: ['VBZ']
system	: ['NN']	relations	: ['NNS']
needed	: ['JJ']	rates	: ['NNS']
passed	: ['VBN']	cite	: ['VB', 'VBP', 'JJ']
inflow	: ['NN']	interests	: ['NNS']
exploring	: ['VBG']	mining	: ['VBG']
enhancing	: ['VBG']	that	: ['DT', 'WDT', 'IN']
brains	: ['NNS']	completed	: ['VBN']
contribute	: ['VBP', 'VB']	innovate	: ['VB']
reflecting	: ['VBG']	predictable	: ['JJ']
differentiate	: ['VB']	simulate	: ['NNP']
authors	: ['NNS']	inventing	: ['NN']
than	: ['IN']	semantics	: ['NNS']
11	: ['CD']	10	: ['CD']
roles	: ['NNS']	richer	: ['JJR']
bee	: ['NN']	recording	: ['RB', 'NN']
future	: ['JJ']	embody	: ['VBP']
enables	: ['VBZ']	activity-level	: ['JJ']
extracting	: ['VBG']	and	: ['CC', 'NNP']
uploading	: ['VBG']	dynamically	: ['JJ']
generalization	: ['NN']	have	: ['VBP']
need	: ['VBP']	any	: ['DT']
contents	: ['NNS']	documents	: ['NNS']
hub	: ['NN']	ideas	: ['NNS']
also	: ['RB']	recognizing	: ['VBG']
internal	: ['NNP', 'JJ']	take	: ['VB']
which	: ['WDT']	online	: ['JJ']
objective	: ['JJ']	algorithms	: ['NNS']
effectiveness	: ['NN']	tool	: ['NN']
play	: ['VB']	differences	: ['NNS']
trace	: ['VB']	collaboration	: ['NN']
who	: ['WP']	reach	: ['VB']
virus	: ['NN']	plan	: ['VB', 'VBP']
services	: ['NNS']	model	: ['NN', 'NNP']
peers	: ['NNS']	especially	: ['RB']
flow	: ['NN', 'VB', 'VBP']	reachability	: ['NN']
institutions	: ['NNS']	hyperlinking	: ['NNP']
science	: ['NN']	inspire	: ['VBP']
show	: ['VB']	text	: ['NN']
discovered	: ['VBN']	planning	: ['VBG']
data	: ['NNS', 'NN']	find	: ['VB']
impact	: ['NN']	partners	: ['NNS']
based	: ['VBN']	knowledge	: ['NN', 'NNP', 'JJ', 'VB']
operational	: ['JJ']	affiliations	: ['NNS']
only	: ['RB', 'JJ']	rich	: ['JJ']

Tita inib_riprogramiteonpooret_r				2010-17310-0141
factor	: ['NN']	axiom	: ['NN']	
routing	: ['NNS', 'VBG']	ranking	: ['VBG', 'JJ']	
get	: ['VB']	scientists	: ['NNS']	
12	: ['CD']	closely	: ['RB']	
new	: ['JJ']	report	: ['NNP']	
during	: ['IN']	falling	: ['VBG']	
areas	: ['NNS']	reveal	: ['VB']	
evolution	: ['NN']	increasing	: ['VBG']	
resource	: ['NNP']	seldom	: ['RB']	
comprising	: ['VBG']	investigate	: ['VB']	
scientist	: ['NN']	common	: ['JJ']	
contain	: ['VBP']	release	: ['NN']	
through	: ['IN']	fixed	: ['VBN']	
where	: ['WRB']	emergent	: ['JJ']	
infectious	: ['JJ']	culture	: ['NN']	
depends	: ['VBZ']	individual	: ['JJ']	
are	: ['VBP']	-rsb-	: ['NNS', 'NN', 'CD', 'JJ']	
techniques	: ['NNS']	phases	: ['NNS']	
detect	: ['VBZ', 'VB']	on-demand	: ['JJ']	
interacting	: ['VBG']	record	: ['VB']	
managing	: ['VBG']	review	: ['NN']	
sites	: ['NNS']	sponsorship	: ['NN']	
libraries	: ['NNS']	hyperlinks	: ['NNS']	
behind	: ['IN']	various	: ['JJ']	
discovers	: ['VBZ']	cooperation	: ['NN']	
between	: ['IN']	neither	: ['CC']	
approach	: ['NN']	email	: ['NN']	
knowing	: ['CD']	We	: ['PRP']	
self-replication	: ['JJ', 'NN']	hypercycles	: ['NNS']	
nature	: ['NN']	deliver	: ['VB']	
however	: ['RB']	analyzes	: ['VBZ']	
efficiency	: ['NN']	invisible	: ['VB']	
article	: ['NN']	come	: ['VBN']	
distribution	: ['NN']	declining	: ['VBG']	
received	: ['VBN']	providing	: ['VBG']	
hyperlink	: ['NN']	epidemics	: ['NNS']	
many	: ['JJ']	region	: ['NN']	
according	: ['VBG']	called	: ['VBD']	
propagation	: ['NN']	passing	: ['VBG', 'NNP']	
adapted	: ['VBN']	among	: ['IN']	
relevant	: ['JJ']	large-scale	: ['JJ']	
recycling	: ['VBG']	environments	: ['NNS']	
co-authors	: ['NNS']	distinguish	: ['VB']	
agents	: ['NNS']	learning	: ['VBG']	
table	: ['NN']	power-law	: ['JJ']	
synergize	: ['VB']	raise	: ['VB']	
second	: ['NN']	basis	: ['NN']	
create	: ['VB']	-rrb-	: ['-RRB-']	
three	: ['CD']	strategy	: ['NN']	
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describes	: ['VBZ']	teamwork : ['NN']	
interest	: ['NN']	utilizing : ['VBG']	
topics	: ['NNS']	engine : ['NN']	
generating	: ['VBG']	rather : ['RB']	
c.	: ['NNP']	formed : ['VBN']	
collaborators	: ['NNS']	higher-energy : ['NN']	
curves	: ['NNS']	eventually : ['RB']	
those	: ['DT']	novel : ['NN']	
unlike	: ['IN']	these : ['DT']	
as	: ['IN', 'RB']	will : ['MD']	
cites/links	: ['NNS']	while : ['IN']	
policies	: ['NNS']	situation : ['NN']	
extracts	: ['VBZ']	identical : ['JJ']	
low-energy	: ['JJ']	century : ['NN']	
characteristics	: ['NNS']	is : ['VBZ']	
thus	: ['RB']	it : ['PRP']	
in	: ['IN', 'RP']	trusted : ['JJ', 'VBN'	1
if	: ['IN']	result : ['NN']	
different	: ['JJ']	develop : ['VB']	
author	: ['NNP', 'NN']	make : ['VB']	
same	: ['JJ']	complex : ['NN']	
spirals	: ['NNS', 'VBZ']	several : ['JJ']	
higher	: ['JJR']	status : ['NN']	
evolve	: ['VB']	extended : ['VBN']	
social	: ['JJ']	effect : ['NN']	
flows	: ['NNS', 'VBZ']	fuse : ['VB']	
user	: ['NN']	frequently : ['RB']	
center	: ['NN']	database : ['NN']	
makes	: ['VBZ']	well : ['RB']	
analysis	: ['NN']	without : ['IN']	
contact	: ['NN']	greatest : ['JJS']	
comparisons	: ['NNS']	the : ['DT', 'NNP'	1
arising	: ['VBG']	depict : ['VB']	1
researchers	: ['NNS']	left : ['JJ']	
being	: ['VBG']	when : ['WRB']	
time-constrained	: ['JJ']	obtain : ['VB']	
valuable	: ['JJ']	communities : ['NNS']	
human	: ['JJ']	world : ['NN']	
recommend	: ['VB']	yet : ['RB']	
discipline	: ['NN']	web : ['JJ', 'NNP'	'NN']
catalytic-support	: ['JJ']	catalytic : ['JJ']	, 1414]
point	: ['NN']	ideal : ['JJ']	
source	: ['NN']	spread : ['NN']	
nor	: ['CC']	author-affiliation : ['JJ']	
technological	: ['JJ']	reason : ['NN']	
has	: ['VBZ']	match : ['VBP']	
interconnection	: ['NN']	resolved : ['VBN']	
rules	: ['NNS']	evaluate : ['VB']	
	: ['NNS']	finding : ['VBG']	
papers	· [CMM]	rinaing : ['VBG']	

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fusion	: ['NN']	descending	: ['VBG']
community	: ['NN']	supervise	: ['NN']
using	: ['VBG']	emergence	: ['NN']
highly	: ['RB']	advanced	: ['VBN', 'JJ']
like	: ['IN']	loss	: ['NN']
peer-to-peer	: ['JJ']	zoom	: ['VB']
benefit	: ['VB']	arbitrary	: ['JJ']
output	: ['VB']	internet-mediated	: ['JJ']
right	: ['JJ']	often	: ['RB']
people	: ['NNS']	some	: ['DT']
searching	: ['VBG']	authority	: ['NN']
cognitive	: ['JJ']	chronology	: ['NN']
platforms	: ['NNS']	hasten	: ['VB']
openness	: ['NN']	indirect	: ['JJ']
organizing	: ['VBG']	generates	: ['VBZ']
happens	: ['VBZ']	dense	: ['JJ']
dimensions	: ['NNS']	for	: ['IN']
overlay	: ['NN']	recorded	: ['VBN']
comments	: ['NNS']	critical	: ['JJ']
economical	: ['JJ']	fragments	: ['NNS']
professionals	: ['NNS']	be	: ['VB']
obey	: ['VB']	power	: ['NN']
cliques	: ['NNS']	selecting	: ['VBG']
journal	: ['NNP']	processing	: ['NN', 'VBG']
epidemic	: ['NN']	assists	: ['VBZ']
relationship	: ['NN']	losing	: ['VBG']
emits	: ['VBZ']	stage	: ['NN']
on	: ['RP', 'IN']	about	: ['IN']
puts	: ['VBZ']	increasingly	: ['RB']
constraint	: ['NN']	universe	: ['NN']
location	: ['NN']	mutually	: ['RB']
carries	: ['VBZ']	ensure	: ['VB']
shared	: ['VBN']	transitive	: ['JJ']
or	: ['CC']	automatically	: ['NNP', 'RB']
presence	: ['NN']	communication	: ['NN']
within	: ['IN']	color-coded	: ['JJ']
autonomous	: ['JJ']	assess	: ['VB']
appropriate	: ['JJ']	references	: ['NNS']
determine	: ['VB']	shrinking	: ['JJ', 'VBG']
mental	: ['JJ']	rely	: ['VB']
statistics	: ['NNP']	networking	: ['NN']
forwarded	: ['VBD']	retrieving	: ['VBG']
support	: ['NN', 'VB']	there	: ['EX']
spiral	: ['NN']	diseases	: ['NNS']
pages	: ['NNS']	start	: ['VB']
citations	: ['NNS', 'NNP']	way	: ['NN']
scientific	: ['NNP', 'JJ']	analyze	: ['VB']
function	: ['NN']	medium	: ['NN']
form	: ['VBP', 'NN', 'VB']	forming	: ['VBG']

1.11 II.D_Tiprogramicchpseloc_rei	ation	will equelice will 1 10002.txt
criteria	:	['NNP']
but	:	['CC']
convergence	:	['NN']
promote	:	['VB']
challenges	:	['NNS']
whether	:	['IN']
maturity	:	['NN']
continuously	:	['RB']
similar	:	['IJ']
storing	:	['VBG']
certain	:	['JJ']
influence	:	['VB']
dissemination	:	['NN']
T T	:	["''"]
exist	:	['VBP']
physical	:	['IJ']
assessing	:	['VBG']
authoritative	:	['IJ']
virtual	:	['JJ']
hypercycle	:	['JJ', 'NN']
clicks	:	['VBZ']
predefined	:	['VBN']
users	:	['NNS']
time	:	['NN']
helping	:	['VBG']
important		['JJ']
most-cited		['JJ']
roadmaps	:	['NNS']
lead	:	['VB']
portion	:	['NN']
resembles		['VBZ']
requires	:	['VBZ']
external	:	['NNP', 'JJ']

```
initiator
                     : ['NN']
                     : ['VB', 'NN']
link
                     : ['-LRB-']
-lrb-
with
                     : ['IN']
hop
                     : ['NN']
characteristic
                     : ['NN']
mature
                     : ['JJ']
problem
                     : ['NN']
display
                     : ['VB']
computing
                     : ['NNP', 'NN']
                     : ['NN', 'NNP']
citation
direction
                     : ['NN']
                     : ['DT']
an
higher-ranking
                     : ['JJ']
                     : ['IN']
at
functions
                     : ['NNS']
no
                     : ['DT']
novice
                     : ['NN']
                     : ['JJ']
other
digital
                     : ['JJ']
node
                     : ['NN', 'VBP']
's
                     : ['POS']
models
                     : ['NNS']
includes
                     : ['VBZ']
develops
                     : ['VBZ']
cooperate
                     : ['VB']
independently
                     : ['RB']
implies
                     : ['VBZ']
rule
                     : ['NN']
                     : ['VBG']
ensuring
directory
                     : ['NN']
original
                     : ['JJ']
```