RDF method to improve ontology using RDF algorithm

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Abstract:

A Relation description frame work we used semantic based collections using crawlers. The semantic matching and relevancy are made and improved results are obtained. RDF helps us to generate a hierarchy based tree structure and produces a semantic relationship.

Keyword: R DF, Semantics, Swoogle.

1Introduction:

RDF is the main aspect of semantic search. Here relationship is stored as a hierarchy based data based system. It generates more relations by removing stop words.

2 Problem Identification:

In swoogle the main problem is the RDF tree is not properly structured. The Tree is constructed based on user views and used designed templates. The tree has to be designed based don the semantic relevant structures (R1). In SBP analysis the performance of photo types has to be improved and file system designed are very complex (R1).

3 Proposed Solution:

In proposed solution we have,

1. RDF constructions techniques.

The RDF is designed by means of following algorithms.

URL typed on web browser.

Do process when URL has some value.

Search URL First.

Mark it as read

If protocol # http

Stop

Go to while

If file exists then

If file not open go to

While

Stop

If URL open # html then

Stop

Go to while

Repeat html

While

{If file exists not open

Go to while

If URL # html

Specify html as specified or searched.

If add files found }}.

Here our proposed implement and swoogle results are compared and an improved results are shown as follows.

Here we have created a search engine url is a semantic search engine. From this search engine the following parameters are compared and improved results are obtained.

. Parameters are

1.Total number of good pages visited vs Precision (percent)

2.Total number of good pages visited vs delay factor

3. RDF tree

The following graphs and tables clearly illustrate that RDF tree generation and number of good pages visited and precision gets improved. Delay factor is reduced.

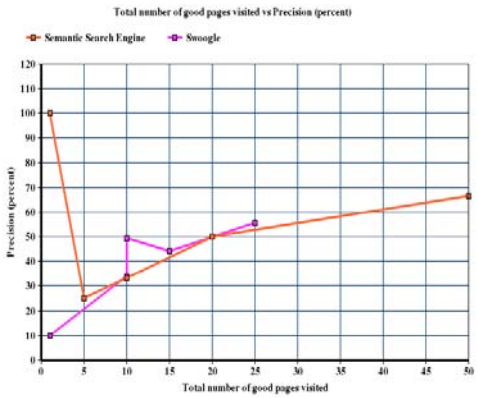
1 RDF parameter comparison good pages visited vs Precision (percent)

category	**Proposed semantic search engine**		**Swoogle**		**Hakia**		**Lexxe**	
	No of good pages visited	**Precision (percent)**	**no of good pages visited**	**Precision (percent)**	**no of good pages visited**	**Precision (percent)**	**no of good pages visited**	**Precision (percent)**
Replicoders	1	100	1	10	3	33.33	1	6.66
Common	5	25.2	10	34.1	5	25.0	10	30.33
Health	10	33.3	10	49.5	3	14.2	25	55.55
Travel	20	50.0	15	44.2	4	24.1	15	37.5
Education	50	66.6	25	55.6	5	15.7	18	36

2 Performance of Proposed semantic search engine vs Swoogle

category	Proposed semantic search engine		Swoogle	
	No of good pages visited	Precision (percent)	no of good pages visited	Precision (percent)
Replicoders	1	100	1	10
Common	5	25.2	10	34.1
Health	10	33.3	10	49.5
Travel	20	50.0	15	44.2
Education	50	66.6	25	55.6

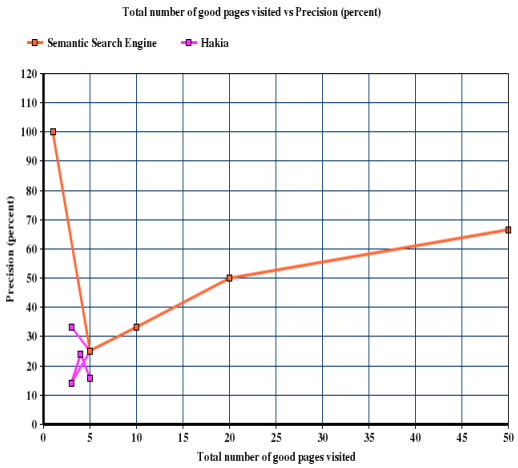
Graph-1 (precision improved)



3 Performance of Proposed semantic search engine vs Hakia

category	Proposed semantic search engine		Hakia	
	No of good pages visited	Precision (percent)	no of good pages visited	Precision (percent)
Replicoders	1	100	3	33.33
Common	5	25.2	5	25.0
Health	10	33.3	3	14.2
Travel	20	50.0	4	24.1
Education	50	66.6	5	15.7

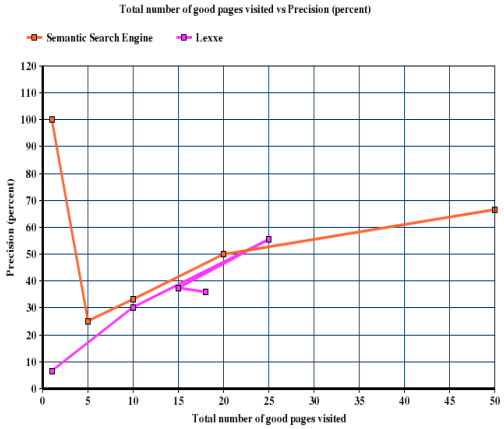
Graph-2(precision improved)



4 Performance of Proposed semantic search engine vs Lexxe

category	Proposed semantic search engine		Lexxe	
	No of good pages visited	Precision (percent)	no of good pages visited	Precision (percent)
Replicoders	1	100	1	6.66
Common	5	25.2	10	30.33
Health	10	33.3	25	55.55
Travel	20	50.0	15	37.5
Education	50	66.6	18	36

Graph-3(precision improved)



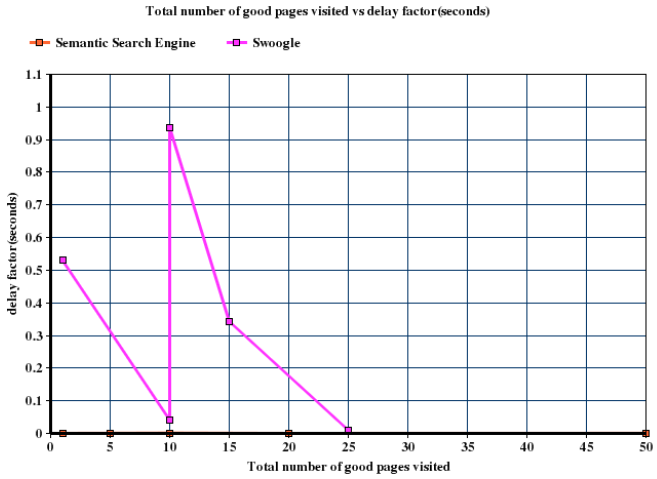
5. RDF parameter comparison with Total number (delay factor improved) of good pages visited vs delay factor

category	Proposed semantic search engine		Swoogle		Hakia		Lexxe	
	No of good pages visited	Delay factor (seconds)	no of good pages visited	Delay factor (seconds)	no of good pages visited	Delay factor (seconds)	no of good pages visited	Delay factor (seconds)
Replicoders	1	0.00022	1	0.530	3	0.08	1	0.010
Common	5	0.00045	10	0.041	5	0.05	10	0.120
Health	10	0.00099	10	0.937	3	0.15	25	0.152
Travel	20	0.00005	15	0.343	4	0.04	15	0.048
Education	50	0.00034	25	0.010	5	0.22	18	0.097

6 Performance of Proposed semantic search engine vs Swoogle

category	Proposed semantic search engine		Swoogle	
	No of good pages visited	Delay factor (seconds)	no of good pages visited	Delay factor (seconds)
Replicoders	1	0.00022	1	0.530
Common	5	0.00045	10	0.041
Health	10	0.00099	10	0.937
Travel	20	0.00005	15	0.343
Education	50	0.00034	25	0.010

Graph-4(delay factor improved)



7 Performance of Proposed semantic search engine vs Hakia

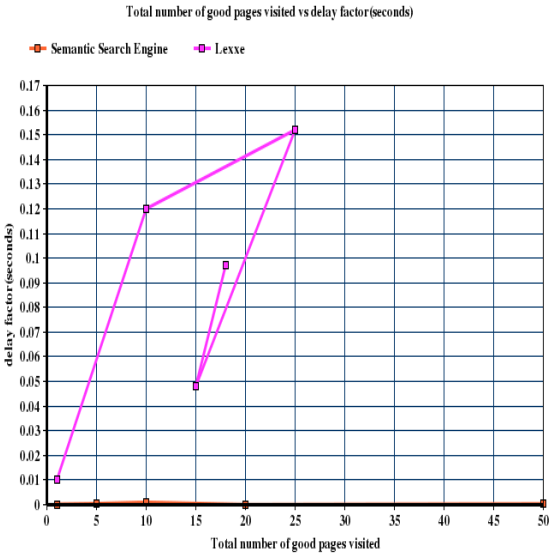
category	Proposed semantic search engine		Hakia	
	No of good pages visited	Delay factor (seconds)	no of good pages visited	Delay factor (seconds)
Replicoders	1	0.00022	3	0.08
Common	5	0.00045	5	0.05
Health	10	0.00099	3	0.15
Travel	20	0.00005	4	0.04
Education	50	0.00034	5	0.22

Graph-5(delay factor improved)

8 Performance of Proposed semantic search engine vs Lexxe

category	**Proposed semantic search engine**		**Lexxe**	
	No of good pages visited	**Delay factor (seconds)**	**no of good pages visited**	**Delay factor (seconds)**
Replicoders	1	0.00022	1	0.010
Common	5	0.00045	10	0.120
Health	10	0.00099	25	0.152
Travel	20	0.00005	15	0.048
Education	50	0.00034	18	0.097

Graph-6(delay factor improved)



9 Proposed semantic search engine

No	Time(Seconds)	Topic	Time Delay(Seconds)	Precision(Percent)	Total Number of pages visited	Total Number of Pages	Total Number of God Pages visited
1	0.00133,0.00114	Replicoders	0.000022	100	1,1	1	1,1
2	0.01216,0.01171	Education	0.000045	66.6	75,65	1247	50,25
3	0.00518,0.00617	Travel	0.000099	50.0	40,35	524	20,25
4	0.00907,0.00902	Health	0.000005	33.3	30,25	1032	10,5
5	0.00887,0.00853	Common	0.000034	25.2	24,15	200	5,9

Swoogle

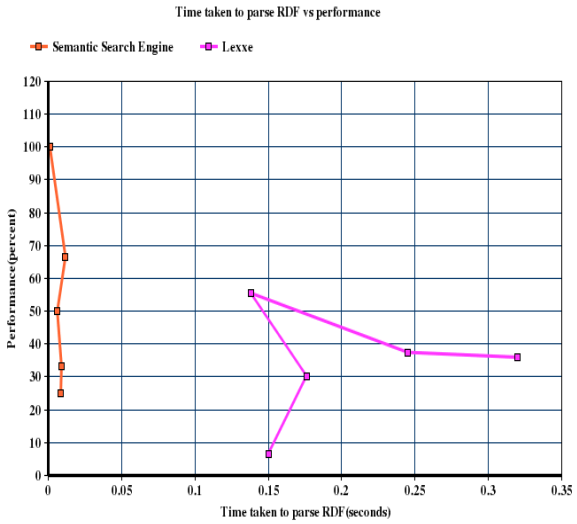
No	Time(Seconds)	Topic	Time Delay (Seconds)	Precision (Percent)	Total Number of pages visited	Total Number of Pages	Total Number of Good Pages visited
1	0.547,0.017	Replicoders	0.530	10,12.5	10,16	100	1,2
2	0.937,0.896	Education	0.041	34.1,42.2	27,45	1285	10,19
3	1.986,1.049	Travel	0.937	49.5,50	21,30	688	10,15
4	1.503,1.16	Health	0.343	44.2,29.1	41,55	432	15,16
5	0.561,0.551	Common	0.010	55.6,37.5	35,40	1673	25,15

Hakia

No	Time(Seconds)	Topic	Time Delay (Seconds)	Precision (Percent)
1	0.2	Replicoders	0.08	33.33,28
2	0.15	Common	0.05	15.7,19.08
3	0.22	Health	0.15	24.1,13.33
4	0.1	Travel	0.04	14.2,20
5	0.03	Education	0.22	25.0,43.33

Lexxe (graph 7) (delay factor improved)

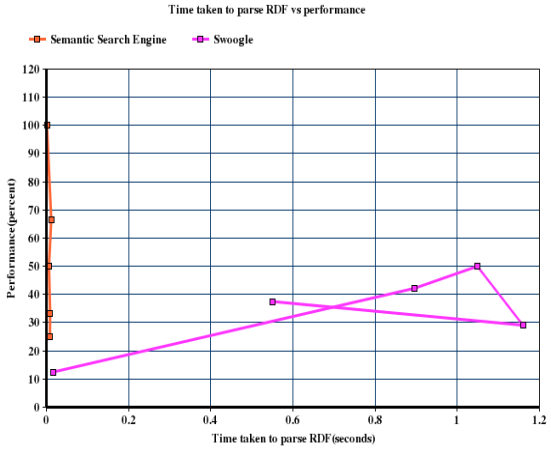
No	Time(Seconds)	Topic	Time Delay (Seconds)	Precision (Percent)
1	0.150	Replicoders	0.010	6.66
2	0.176	Common	0.120	30.33
3	0.138	Health	0.152	55.55
4	0.245	Travel	0.048	37.5
5	0.320	Education	0.097	36



Other Comparison Fields:
RDF(time taken to parse rdf vs performance)
Graph-08 Proposed semantic search engine vs Lexxe

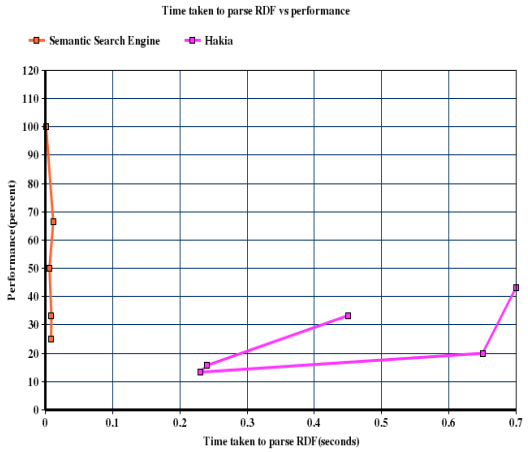
category	Proposed semantic search engine		Lexxe	
	Time taken to parse rdf(seconds)	Performance(percent)	Time taken to parse rdf(seconds)	Performance(percent)
Replicoders	0.00114	100	0.150	6.66
Common	0.01171	66.6	0.176	30.33
Health	0.00617	50.0	0.138	55.55
Travel	0.00902	33.3	0.245	37.5
Education	0.00853	25.2	0.320	36

Graph-09 Proposed semantic search engine vs Swoogle(RDF parsing improved)



Graph-10 Proposed semantic search engine vs Hakia
(RDF parsing improved)

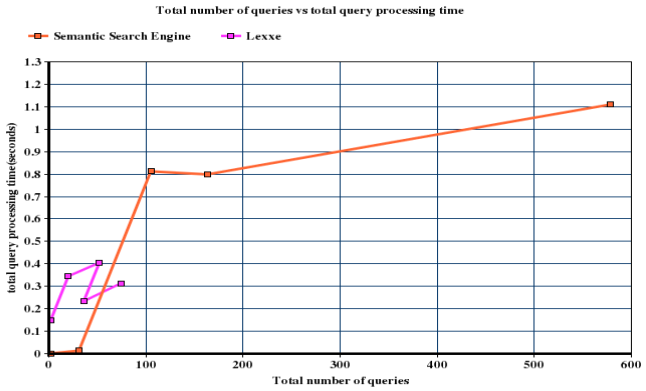
category	Proposed semantic search engine		Hakia	
	Time taken to parse rdf(seconds)	Performance(percent)	Time taken to parse rdf(seconds)	Performance(percent)
Replicoders	0.00114	100	0.45	33.33
Common	0.01171	66.6	0.24	15.7
Health	0.00617	50.0	0.23	13.33
Travel	0.00902	33.3	0.65	20
Education	0.00853	25.2	0.70	43.33



QueryIndexing (number of queries vs total query processing time)
(query processing improved)

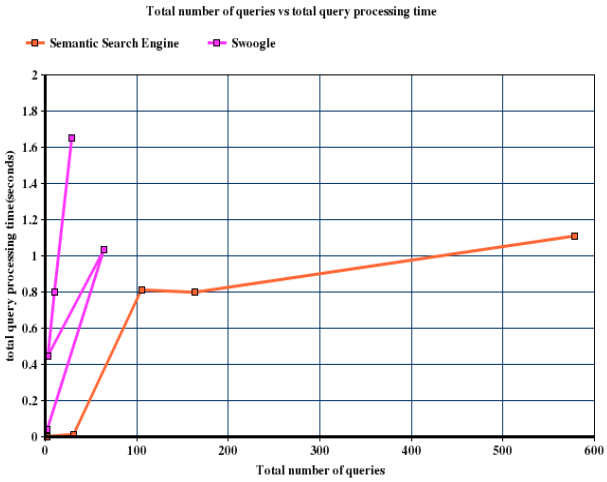
category	Proposed semantic search engine		Lexxe	
	Total number of queries	total query processing time(seconds)	Total number of queries	total query processing time(seconds)
Replicoders	2	0.00124	2	0.150
Common	31	0.01354	20	0.345
Health	105	0.81202	52	0.405
Travel	163	0.79851	36	0.234
Education	578	1.10954	74	0.313

Graph-11 Proposed semantic search engine vs Lexxe



category	Proposed semantic search engine		Swoogle	
	Total number of queries	total query processing time(seconds)	Total number of queries	total query processing time(seconds)
Replicoders	2	0.00124	2	0.038
Common	31	0.01354	64	1.033
Health	105	0.81202	3	0.448
Travel	163	0.79851	10	0.798
Education	578	1.10954	29	1.652

+Graph-12 Proposed semantic search engine vs Swoogle (query processing improved)



Proposed semantic search engine vs Hakia

category	Proposed semantic search engine		Hakia	
	Total number of queries	total query processing time(seconds)	Total number of queries	total query processing time(seconds)
Replicoders	2	0.00124	25	0.56
Common	31	0.01354	50	0.34
Health	105	0.81202	35	0.76
Travel	163	0.79851	21	0.87
Education	578	1.10954	34	0.35

4 Conclusion:

RDF helps us to provide a new solution for the swoogle search. Here limited data sets are considered. In future we have decided to handle a large number of data sets and produce an optimized results. RDF helps us to improve swoogle search in a better way.

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