

Non-Semantical Search

IPR2013-00478 POR at 11.

EXHIBIT 2116

Facebook, Inc. et al. v. Software Rights Archive, LLC

CASES IPR2013-00478

IPR2013-00479

IPR2013-00480

IPR2013-00481

The Patents at Issue Claim a Method of Non-Semantical Searching

Claim 26 of the '352 patent recites:

A **non-semantical method** for numerically representing objects in a computer database and **for computerized searching** of the numerically represented objects in the database, wherein direct and indirect relationships exist between objects in the database, comprising:

...

searching the objects in the database using a computer and the stored second numerical representations, wherein the search identifies one or more of the objects in the database.

'352 patent at 35:28-53 (emphasis added); *see also* IPR2013-00478 POR at 11.

The District Court Construed “Non-Semantical” as One That “Does Not Account for Phrases and Words”

In previous litigation, the District Court construed the term “non-semantical method” as “a method of analysis that is based on direct relationships between textual objects and that otherwise does not account for phrases and words in a textual object.”

Claim Construction Order, IPR2013-00478 Exhibit 2022; *see also* IPR2013-00478 POR at 11.



Results of ISI Single Document Feedback
Using One Subvector

average precision	% change from terms only
.2465	
.0759	-69%
.1559	-37%
.1129	-54%

Table 8.8: Results of CACM Single Document Feedback
Using One Subvector

subvector used	average precision	% change from terms only
tm	.3153	
au	.1135	-64
cr	.1376	-56
bc	.1189	-62
ln	.2106	-33
cc	.1544	-51
d-bc	.1127	-64
d-ln	.1458	-54
d-cc	.1244	-61

Table 8.12: Results of CACM Term Relevance Feedback
Using One Subvector

subvector used	average precision	% change from terms only
tm	.3839	
au	.2181	-43.1
cr	.2876	-25.1
bc	.2820	-26.5
ln	.4032	+ 5.0
cc	.2727	-29.0

bs Dec., IPR2013-00478 Exhibit 2113 at ¶ 244-250 ;Fox Thesis, IPR2013-00478 Exhibit 1009 at 241-256; IPR2013-00478 POR at 50-

Results of ISI Single Document Feedback Using Several Subvectors

Combination Cases	Average Precision	% Change vs. Terms Only
w_{cc} w_{cd}		
	.246	
	.229	-7.2
.5	.251	+1.8
.12	.231	-6.2
.33	.281	+6.1
.33	.234	-4.9
	.227	-7.8
.10	.252	+2.2
.25	.261	+5.8
	.257	+4.5

Table 8.7: Results of ISI Single Document Feedback Using Regression Determined Coefficients

Combination Cases Name	w_{tm}	w_{cc}	w_{cd}	Average Precision	% Change vs. Terms Only
base	1.0			.246	
guess	.88	.12		.261	+6.1
regression1	.83	.17		.259	+5.2
regression2	.64		.36	.251	+1.7

Table 8.11: Results of CACM Single Document Feedback Using Subvector Combinations With Equal (E) or Regression (R) Based Weights

tm	Subvectors Used	Weight Scheme	Aver. Prec.	% Change vs. Terms Only
	au cr bc ln cc			
x		E	.3153	
x	x	E	.2698	-14.4
x		E	.2953	-6.3
x	x	E	.3431	+8.8
x		E	.3107	-1.4
x	x	E	.2942	-6.7
x	x	E	.3187	+1.1
x	x	E	.3063	-2.9
x	x	E	.3272	+3.8
x	x	E	.3198	+1.4
x	x	E	.2962	-6.1
x	x	R	.3268	+3.6
x	x	R	.3212	+1.9
x	x	R	.3470	+10.0
x	x	R	.3261	+3.4
x	x	R	.3507	+11.2
x	x	R	.3469	+10.0
x	x	R	.3328	+5.6
x	x	R	.3463	+9.8
x	x	R	.3437	+9.0
x	x	R	.3535	+12.1

obs Dec., IPR2013-00478 Exhibit 2113 at ¶ 244-250 ; Fox Thesis at 242-260; IPR2013-00478 POR at 50-54.

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