

# 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	.261	+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.

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.