IN THE UNITED STATES PATENT AND TRADEMARK OFFICE PATENT TRIAL AND APPEAL BOARD

Inter Partes Review No.: IPR2013-00479

Inter Partes Review of: U.S. Patent No. 5,832,494

Petitioner: Facebook, Inc.; LinkedIn Corp.; and Twitter, Inc.

Inventors: Daniel Egger

Patent Title: METHOD AND APPARATUS FOR INDEXING,

SEARCHING AND DISPLAYING DATA

Patent Filing Date: May 17, 1996

Patent Issue Date: November 3,

1998

Patent Assignee: Software Rights Archive, LLC

Petition for Review Filed: July 29, 2013

REPLY DECLARATION OF EDWARD A. FOX, PH.D.



I.	Summary8
II.	Claim by Claim Reply
A P	Reply to Dr. Jacobs' Opinions in the '478 Petition Relating to the '352 atent
	1. The Fox Papers Disclose and Render Obvious Claim 2610
	a. Fox Papers disclose "a method of 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"
	(1) Claim 26 does not claim a fully computerized method10
	(2) The Fox Papers disclose a database and the first numerical representations are stored as part of the SMART system in the database 13
	(3) Dr. Jacobs misinterprets my opinion regarding the INGRES database
	b. Fox Papers disclose "marking objects in the database so that each marked object may be individually identified by a computerized search" .44
	c. Fox Papers disclose creating a first numerical representation based upon the object's direct relationship with other objects in the database46
	d. Fox Papers disclose "storing the first numerical representations for use in computerized searching"
	e. Fox Papers disclose the steps of generating and storing second numerical representations based on analyzing the first numerical representation of claim 26
	f. Fox Papers disclose "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"49
	2. Fox Papers meet the claim limitations of claim 28 of the '352 Patent – 478 Petition
	a. Fox Papers disclose the first and second numerical representations are vectors that are arranged in first and second matrices
	3. Claims 29 and 30 of the '352 patent – Petition 47857
	a. Fox Papers disclose examining for the direct relationship B cites A57
	4. Claim 32 of the '352 patent – Petition 478



a. Fox Papers disclose that some indirect relationships are weighted more heavily than other indirect relationships
5. Claim 34 – marking subsets of objects with relationships60
a. Fox Papers disclose marking subsets of objects61
b. Fox Papers disclose and teach "relationships exist between or among subsets of objects in the database"
6. Fox Papers disclose claim 39 pool similarity and pool searching features 64
B. Reply to Dr. Jacobs' Opinions regarding the Tapper Papers and the '352 Patent – Case No. 2013-0047866
1. The Tapper Papers disclose and render obvious the claimed "database" features in claim 26 and dependent claims66
2. The Tapper Papers disclose and render obvious "creating a first numerical representation based on the object's direct relationship with other objects in the database."
 a. The Tapper Papers disclose numerically represented database objects, and it would have been obvious to use database object numbers as citations. 72
b. The Tapper Papers disclose and render obvious creating citation vectors that are numerical representations
c. The Tapper Papers disclose and render obvious numerical values based on direct relationships between database objects
3. The Tapper Papers disclose that citation vectors and numeric weights are "based on the object's direct relationship with other objects in the database" – Dr. Jacobs mischaracterizes the Tapper 1982 empirical work81
a. The Tapper Papers disclose and render obvious "analyzing the first numerical representations for indirect relationships existing between or among objects in the database."
(1) The Tapper Papers disclose and render obvious analyzing the numeric representation of first generation citations for "second generation citation" relationships.
(2) The Tapper Papers disclose and render obvious analyzing citation vectors and numeric values for indirect relationships through correlation analysis.



4. The Tapper Papers disclose and render obvious that the analyzing steps disclose "generating" second numerical representations in (1) second-generation citation vectors, (2) correlation values, and (3) similarity matrice 99	
5. The Tapper Papers disclose and render obvious the "storing" step1	00
6. The Tapper Papers disclose and render obvious claim 28	04
b. The Tapper Papers disclose and render obvious claim 30	16
c. The Tapper Papers disclose and render obvious claim 32	17
d. The Tapper Papers disclose and render obvious claim 34	23
e. The Tapper Papers disclose and render obvious claim 391	28
C. Reply to Dr. Jacobs' Opinions Regarding the Fox Papers in the -479 Petition – '494 Patent Claims 18-20, 48, 49, 45, 51, and 54	131
1. The Fox Papers render obvious claim 18	31
a. Fox Papers disclose and render obvious "[a] method of analyzing a database having objects and a first numerical representation of direct relationships in the database	31
(2) Fox Papers disclose a first numerical representation of direct relationships in the database1	131
(3) Fox Papers disclose a database1	37
b. Fox Papers disclose generating second numerical representation usin the first numerical representation, wherein the second numerical representation accounts for indirect relationships in the database	
c. Fox Papers disclose storing the second numerical representation1	39
d. Fox Papers disclose and render obvious the steps of identifying and displaying in claim 181	140
2. The Fox Papers render obvious claim 19	44
3. The Fox Papers render obvious claim 20	50
4. The Fox Papers render obvious claim 48	51
5. The Fox Papers render obvious claim 49	54
D. Reply to Dr. Jacobs' Opinions Regarding the Tapper Papers in the -479 Case – '494 Patent Claims 18-20, 48, 491	155
2. The Tapper Papers disclose and render obvious the claimed "database" features in claim 18 and dependent claims.	



3.	The Tapper Papers render obvious claim 18	56
4.	The Tapper Papers render obvious claim 1915	59
5.	The Tapper Papers render obvious claim 2010	50
6.	The Tapper Papers render obvious claim 4810	54
7.	The Tapper Papers render obvious claim 4910	56
E. 14-1	Reply to Dr. Jacobs' Opinions in -480 Case Relating to Claims 1, 5, and 6 of the '494 Patent	59
1.	The Board did not err in construing "indirect relationships in a database 169	·."
2.	Claim 1 is anticipated by Fox SMART17	70
	a. Fox SMART discloses "analysis of one or more indirect relationships in [a] database."	
	b. Fox SMART discloses "selecting a node for analysis."	71
	c. Fox SMART discloses "generating candidate cluster links for the selected node" by analyzing "indirect relationships in the database."1"	72
	d. Fox SMART discloses "deriving actual cluster links from the candida cluster links."	
	e. Fox SMART discloses "identifying one or more nodes for display" ar "displaying the identity of one or more nodes using the actual cluster links."	
	f. Fox SMART discloses the steps of claim 1 as arranged in the claim.1	76
3.	Claim 5 is anticipated by Fox SMART17	76
	a. Fox SMART discloses "eliminating candidate cluster links" by choosing the closest links	76
4.	Claim 14 is anticipated by Fox Thesis17	77
	a. Fox Thesis discloses "initializing a set of candidate cluster links."1"	77
	b. Fox Thesis discloses "selecting the destination node of a path as the selected node to analyze."	78
	c. Fox Thesis discloses "retrieving the set of direct links from the selected node to any other node in the database."	
	d. Fox Thesis discloses "determining the weight of the path using the	QΛ



DOCKET A L A R M

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.

