IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PERSONALIZED USER MODEL, L.L.P., Plaintiff,	)	
v.	)	C.A. No. 09-525-LPS
GOOGLE INC., Defendant.	)	**JURY TRIAL DEMANDED**
GOOGLE, INC. Counterclaimant,	)	**PUBLIC VERSION**
v.	)	
PERSONALIZED USER MODEL, LLP and YOCHAI KONIG Counterdefendants.	)	

REPLY BRIEF IN SUPPORT OF GOOGLE'S MOTION FOR SUMMARY JUDGMENT OF NONINFRINGEMENT

OF COUNSEL:

QUINN EMANUEL URQUHART & SULLIVAN, LLP
Charles K. Verhoeven
David A. Perlson
Joshua Lee Sohn
Antonio R. Sistos
Margaret Pirnir Kammerud
50 California St.
San Francisco, CA 94111

Andrea Pallios Roberts
555 Twin Dolphin Drive, Suite 560
Redwood Shores, CA 94065

Richard L. Horwitz (#2246)
David E. Moore (#3983)
Bindu A. Palapura (#5370)
POTTER ANDERSON & CORROON LLP
Hercules Plaza, 6th Floor
1313 N. Market Street
Wilmington, DE 19801
Tel: (302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com
bpalapura@potteranderson.com

Attorneys for Defendant Google Inc.

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NOTE ON CITATIONS

Google's Memorandum in Support of Its Motion for Summary Judgment on Non-Infringement is referenced as "Br." followed by the page cite. Thus a citation to (Br. 6) refers to page 6 of Google's Memorandum in Support of Its Motion for Summary Judgment on Non-Infringement.

PUM's Answering Brief In Opposition to Google's Motion for Summary Judgment on Non-Infringement is referenced as "Opp." followed by the page cite. Thus a citation to (Opp. 4) refers to page 4 of PUM's Answering Brief In Opposition to Google's Motion for Summary Judgment of Non-Infringement.

Citations to the asserted patents are referenced as "column number : line numbers." Unless otherwise indicated, all references are to the specification of the '040 Patent. For example, a citation to (6:23-26) refers to column 6 of the '040 Patent, lines 23-26.

I. PUM DEFIES THE COURT'S CONSTRUCTION OF "DOCUMENT"

A. No Accused Product Meets The "Set of Documents" Limitation in All Asserted Claims.

There is no dispute that all asserted claims require storing "a set of documents associated with the user." (Br. 5-6; Opp. 4.) Yet, for each accused product, PUM points to no documents—which the Court construed as "electronic file[s] including text or any type of media"—that are actually stored for each user. Instead, PUM's theory is that recording [redacted]—numbers or words—meets the "set of documents" limitation. (Opp. 4.) PUM's theory raises no factual dispute. Rather, the only dispute is whether a number or a word can be a "document." The Court has already decided this issue. In rejecting PUM's construction of document as "text or any type of media," the Court held that "[w]ords and phrases – in other words, 'text' – are not documents; instead, documents ***contain*** text and other kinds of data." (D.I. 347, 30-31 (emph. in original).) Yet, the [redacted] PUM points to are text; they do not "contain" text. Thus, they cannot be documents.

As purported support that storing [redacted] meets the required storing of a "set of documents," PUM points to Figure 14 and the corresponding discussion in the specification. (Opp., 4-5.) But, as the patents state, "Fig. 14 illustrates the user recently accessed buffer, which records all user interactions with documents." (6:39-40.) This reflects an embodiment of the separate "monitored user interactions with data" limitations in the claims. (32:30-31). Like the claims, the specification separately discusses storing the document itself: "After a document stored in the recently accessed buffer is parsed, parsed portions are stored in candidate tables." (22:64-65.)

PUM's argument that Google reads the word "associated" out of "a set of documents associated with the user" is without also merit. (Opp. 4.) The stored "set of documents" is "associated with" the user because the user selects it. (22:15-26.) And while PUM argues storing [redacted] is inefficient (Opp. 4), that is what the claims require. That Google does

something else that is more efficient, as PUM asserts (Opp. 4), is no basis for rewriting unambiguous claim language. *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) ("A claim is construed in the light of the claim language, the other claims, the prior art, the prosecution history, and the specification, *not* in light of the accused device.") (emph. in original).

Further, PUM does not actually dispute that, as Google demonstrated, storing [redacted] is not equivalent to storing documents. (Br. 6.) In fact, PUM argues that storing documents rather than [redacted] causes scalability issues. (Opp. 4.) Instead, PUM's only argument is that Google "incorrectly focuses on the claim as a whole" by supposedly referring to "retrieving" or "presenting" limitations in the '276 Patent. (Opp. 6.) But, Google's argument is explicitly directed to the "storing" and "analyzing" elements, making no mention of "retrieving" or "presenting." (Br. 5-6.)

B. The Recorded [redacted] in Search Ads, Content Ads, and Google Plus Do Not [redacted]

Even if a [redacted] could be a document, for Search Ads, Content/YouTube Ads, and Google Plus, the [redacted] PUM accuses do not even [redacted] Rather, it is undisputed that they [redacted] stored as [redacted] (Opp. 7.) While PUM argues that these [redacted] are somehow "electronic files," as PUM's own expert noted, an electronic file is "[a] complete, named collection of information, such as a program, a set of data used by a program, or a user-created document." (D.I. 461, ¶ 279 (emph. added).) The accused Google ads are [redacted] (Opp. 7) and thus not stored as a "complete [] collection of information." Nor do the accused [redacted] have filenames.

C. [redacted] Do Not Analyze Documents.

In addition to storing "set of documents," all asserted claims separately require analyzing a document to identify properties, and applying those properties to the learning machine to estimate a probability of user interest. (Br. 5-6.) Yet, there is no dispute that the accused functionality in

[redacted] used by Google Search analyze [redacted] which, as detailed above, are not documents. (Br. 3, 5-6.) While PUM asserts that "Google" as a whole analyzes documents (Opp. 3), that unrelated Google systems may analyze documents is not evidence that the accused functionalities do so. They do not.

II. PUM IGNORES THE COURT'S CONSTRUCTION OF "ESTIMATING".

Rejecting Google's construction of estimating as "calculating," the Court adopted PUM's construction of "approximating or roughly calculating," observing that "'estimating' was generally understood [] as a measurement that is not entirely precise." (D.I. 347, 33.) Yet, PUM presents no evidence that any of the accused parameters are approximated or roughly calculated. Rather, it is undisputed that, as PUM's expert testified, all of the accused "parameters" are precise measurements. (Br. 8) PUM instead rebuts a straw man: that Google interprets the Court's construction of "estimating" as precluding calculations (*i.e.*, math). Not so. The 60% chance of rain described in Google's opening brief would be derived through calculations involving historical statistical data, atmospheric pressure, temperature, etc. The weather prediction, however, is still an estimation because it does not determine the true chance of rain, only an approximation. In contrast, the accused "parameters" are all precise measurements, similar to the 50% coin flip that Google raised and that PUM ignores. (Br. 8.) PUM has failed to provide any evidence to the contrary.

III. THE ACCUSED "PROBABILITIES" ARE NOT PROBABILITIES.

The Court construed "probability" as "numerical degree of belief or likelihood." As PUM's validity expert Dr. Carbonell agrees, a probability falls within a scaled range. PUM's cited evidence in support of its construction states that "[p]robability is a real number between zero and one" where "[z]ero is interpreted as false and one as truth." (D.I. 161, Ex. B, 2.) As demonstrated in Google's opening brief, none of the computed numbers accused of meeting the "probability" limitation fall within the required scaled range and thus none can be probabilities. (Br. 9-10.)

PUM does not dispute that what it asserts are "probabilities" in the Accused Products can be smaller than 0 (or 0%) or larger than 1 (or 100%).[1] Instead, PUM asserts a "probability" can be less than zero—*i.e.*, be less likely to occur than "will never occur"—and/or that a probability can be greater than one—*i.e.*, be more likely to occur than "will definitely occur." (Opp. 9.) While PUM notes the Court rejected Google's proposal that a probability be a "percentage chance," the Court held only that a probability need not be *expressed* as a percentage chance: "PUM points out that nowhere does the patent require that the probability be expressed as a percentage chance....In light of PUM's agreement to include the requirement that the probability be expressed in numerical format, it is unclear whether the parties still have a material dispute with regard to this term." (D.I. 347, 33-34 (emphasis added).) It did not hold that, when expressed as a percentage, a probability could be less than 0% or greater than 100%. Such a holding would be contrary to PUM's own evidence and expert's testimony.

PUM's citation to a paper coauthored by its non-infringement expert, Dr. Pazzani (Opp. 9), also does not help PUM. The paper discusses odds, which as the paper explains, are not probabilities but are instead derived from probabilities.[2] PUM also asserts that the [redacted] used within [redacted] are probabilities. (Opp., 10 n.15.) But [redacted] are neither probabilities nor [redacted] they are simply [redacted][3]

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[1] PUM's assertion that numbers can be "normalized" misses the mark. (Opp. 10 n.14.) Under PUM's logic, "2" may be "equivalent" to 1, 0.5, 0.25, or 0.125 depending on whether one chose to divide it by 2, 4, 8, or 16. PUM's argument also contradicts its representations to the PTO that the prior art *Herz* reference does not meet the "probability" limitation because it does not "determine[] for each document an absolute scale of importance." ('040 File History, March 4, 2004 Reply at 6 (emph. added).) Knowing the number "2" does not provide such an absolute scale.

[2] "The odds of a proposition with probability p are defined to be $p/(1-p)$," i.e. by dividing the chance of occurrence (p) by the chance of nonoccurrence (1-p). (Opp. Ex. G at 181.)

[3] [redacted]

IV. THE ACCUSED "PARAMETERS" ARE NOT STORED.

The claims and the specification require that the parameters be stored as part of the User Model. As Google notes in its motion, PUM has no evidence that Search Ads, Content Ads, and [redacted]store the accused parameters. (Br. 10-11.) PUM does not contend otherwise. (Opp. 10-12.)

As to Search, PUM asserts that "the claims do not require that the parameters be stored." (Opp. 11.) But the Court explicitly found that "[p]arameters are 'stored.'" (D.I. 347, 18.) Indeed, PUM argued that Google's construction of "parameters" requires "each user [to] have a separate model made up of hundreds of thousands of words and all these other things." (*Id.*) That argument makes no sense if parameters need not be stored at all. In any event, the claims require a "learning machine having the parameters defined by the User Model," and the Court construed learning machine as "attempt[ing] to improve its predictive ability over time by altering the values/weights (i.e., parameters) given to its variables." (D.I. 348, 1-2; 8:43-50.) The claims and the Court's construction of "learning machine" thus require storing the parameters so that they may be "altered."

Next, PUM asserts that storing a [redacted]category corresponds to storing a parameter of "1." (Opp. 11-12.) But the category is the accused *variable* (e.g., "Sports"), not the *value* or *weight* associated with that variable (e.g., "5"). It was PUM who insisted that "parameters" be construed as "values or weights" rather than "variables." (D.I. 347, 17-18.) By asserting that storing an accused *variable* alone corresponds to storing a default *value* of "1," PUM again seeks to avoid its successful construction. Moreover, storing only a category without values does not permit the accused profilers to "improve its predictive ability over time," as required by the Court's construction, because they have no values of interest from prior iterations to access, or "improve" from.

V. SUMMARY JUDGMENT AS TO THE '031 CLAIMS IS APPROPRIATE.

PUM's cited case relates to invalidity counterclaims after the plaintiff dropped infringement charges. It does not rebut the propriety of dismissing PUM's dropped '031 claims with prejudice.

Respectfully submitted,

POTTER ANDERSON & CORROON LLP

By: */s/ David E. Moore*
Richard L. Horwitz (#2246)
David E. Moore (#3983)
Bindu A. Palapura (#5370)
Hercules Plaza, 6th Floor
1313 N. Market Street
Wilmington, DE 19801
Tel: (302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com
bpalapura@potteranderson.com

Attorneys for Defendant Google Inc.

OF COUNSEL:

Charles K. Verhoeven
David A. Perlson
Joshua Lee Sohn
Antonio R. Sistos
Margaret Pirnir Kammerud
QUINN EMANUEL URQUHART
& SULLIVAN, LLP
50 California St.
San Francisco, CA 94111
Tel.: (415) 875-6600

Andrea Pallios Roberts
QUINN EMANUEL URQUHART
& SULLIVAN, LLP
555 Twin Dolphin Drive, Suite 560
Redwood Shores, CA 94065
Tel.: (650) 801-5000

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CERTIFICATE OF SERVICE

I, David E. Moore, hereby certify that on February 15, 2013, the attached document was electronically filed with the Clerk of the Court using CM/ECF which will send notification to the registered attorney(s) of record that the document has been filed and is available for viewing and downloading.

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Karen Jacobs Louden
Jeremy A. Tigan
Morris, Nichols, Arsht & Tunnell LLP
1201 North Market Street, 18th Fl.
Wilmington, DE 19899-1347
klouden@mnat.com
jtigan@mnat.com

Marc S. Friedman
SNR Denton US LLP
1221 Avenue of the Americas
New York, NY 10020-1089
marc.friedman@snrdenton.com

Jennifer D. Bennett
Matthew P. Larson
SNR Denton US LLP
1530 Page Mill Road, Ste. 200
Palo Alto, CA 94304-1125
jennifer.bennett@snrdenton.com
matthew.larson@snrdenton.com

Mark C. Nelson
Robert Needham
SNR Denton US LLP
2000 McKinney, Suite 1900
Dallas, TX 75201
mark.nelson@snrdenton.com
robert.needham@snrdenton.com

Christian E. Samay
SNR Denton US LLP
101 JFK Parkway
Short Hills, NJ 07078
christian.samay@snrdenton.com

/s/ David E. Moore
Richard L. Horwitz
David E. Moore
Bindu A. Palapura
POTTER ANDERSON & CORROON LLP
(302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com
bpalapura@potteranderson.com

932168 / 34638