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.	)	

PLAINTIFF'S OPENING CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Personalized User Model, L.L.P. ("PUM") asserts that Google, Inc. ("Google" or "Defendant") infringes 15 claims of two patents.[1] As the Court's September 30, 2010 Order (D.I. 104) requires, the parties have agreed upon 12 claim disputes for construction by the Court. (D.I. 115)[2] After describing the technology of the patents, this brief provides an overview of the disputed terms and phrases, and explains why PUM's proposed constructions are proper and should be adopted.

II. TECHNOLOGY OVERVIEW

The amount of information available on the Internet exploded during the late 1990s and has grown exponentially since then. By 1999, there were over a billion web documents available on the Internet. *See* Ex. 4. As a result, individuals searching for specific information on the Internet were often overwhelmed by the sheer volume of information provided (much of it useless and uninformative) by their chosen search engine. *See, e.g.,* '040::1:22-26.[3] A method was needed that would enable a search engine to provide more relevant information to a user by taking into account information known about the user. To meet this critical need, Yochai Konig, Roy Twersky, and Michael Berthold, who together had decades of experience in machine

[1] Per the Court's Sept. 30, 2010 Order (D.I. 104), PUM was required to select 15 claims for purposes of claim construction. PUM reserves its right to assert additional claims at a later date. The claims currently asserted are claims 1, 11, 21, 22, and 34 of U.S. Patent No. 6,981,040 ("the '040 patent") and claims 1, 3, 5-7, 14, and 21-24 of U.S. Patent No. 7,685,276 ("the '276 patent"). The '040 and '276 patents are attached as Exhibits 1 and 2 of the Declaration of Jennifer D. Bennett in support of Plaintiff's Opening Claim Construction Brief ("Bennett Decl."). Unless otherwise noted, all exhibits are attached to the Bennett Decl.

[2] A table summarizing these 12 disputed areas as addressed in the order appearing in this Brief is attached as Exhibit 3.

[3] Citations to "'040::xx:y-z" refer to the '040 patent, col. xx, ll. y-z. Because the '040 and '276 patents share the same specification, all citations are to the '040 patent unless otherwise noted. All emphasis is added unless noted.

learning, statistical pattern recognition, and business technologies, pioneered a highly innovative technology that provided personalized information services to Internet users. Over the next several years, Dr. Konig and Mr. Twersky attempted to commercialize this technology while at a company they founded in order to do so, Utopy, Inc. They also protected this technology by obtaining the patents-in-suit in this case.

Generally, the patents-in-suit are directed to methods and devices that personalize, and make more relevant, the search results, product results, and other information (such as advertising) provided or presented to an Internet user. *See generally*, '040::4:2-6:2. This personalization is accomplished by storing information about a user that is obtained, for example, by monitoring an individual user's use of their computer and/or browser (such as, searching and browsing) to create a profile of the user (*i.e.*, a user profile). *See*, *e.g.*, '040::4:22-29; 8:67-9:2. Utilizing this user profile and the information it contains about the individual user, the inventions employ sophisticated machine learning (*i.e.*, a "learning machine") to move beyond simple information filtering to generalization, thereby enabling prediction of the user's interests based on information known about the user. Search results, product information, advertising, news, and other information are then provided based upon the individual user's interests. This personalized information is more relevant, and thus much more useful, than non-personalized results. *See, e.g.*, '040::1:22-6:2; 8:43-54.

Figure 2 of the '040 patent reproduced below is a simple diagram of a preferred embodiment of the invention ("Personal Web"). '040::6:63-7:11; 8:58-9:9. Specifically, the patent teaches that Personal Web operates in a dynamic learning mode to transparently monitor user interactions with data (step 30) and to update the User Model to reflect the user's current interests and needs. '040::8:59-64. This is accomplished by updating user-specific data files

(step 32) and then using that data to update the User Model (*i.e.*, a learning machine specific to the user) (step 34). '040::8:64-67. Personal Web then applies the User Model to documents, which are, or previously have been, analyzed (step 36) to determine the user's likely interest in the document (step 38), and performs a variety of services based on the predicted user interest (step 40). '040::9:2-9. In response to the information provided, the user typically performs one or more actions, and these actions are again monitored to further update the User Model and then repeat the cycle. '040::9:6-9.

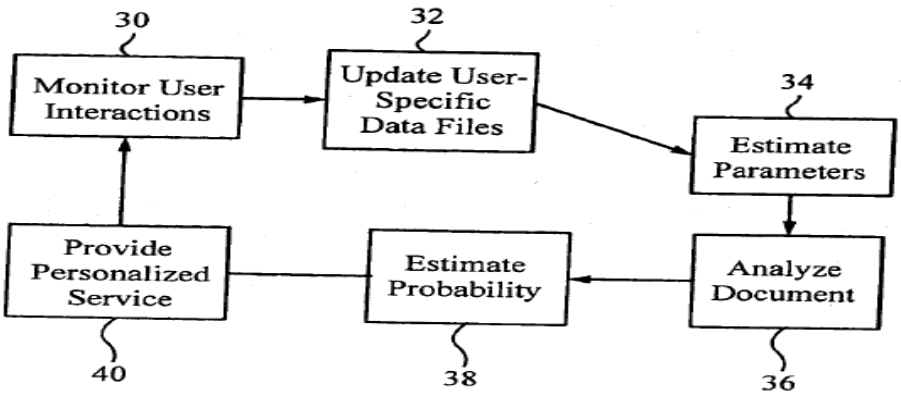

Fig. 2

In accordance with the Scheduling Order, PUM will provide the Court with Plaintiff's Technical Tutorial that will further explain the technical details of the inventions of the patents-in-suit, and the concepts underlying them.

III. OVERVIEW OF THE DISPUTED CLAIM TERMS/PHRASES AND AGREED TERMS

The parties met and conferred as part of the claim construction process. The table below identifies the two terms/phrases for which the parties were able to agree on a construction:

Term/Phrase	Agreed Meaning
"automatic" ('040 patent, claims 1, 32)	"without human intervention"
"central computer" ('040 patent, claim 32)	"one or more computers on the server side of a client server relationship"

To provide context for the parties' various disputes, independent claim 1 of the '040

patent and independent claim 1 of the '276 patent, which contain many of the disputed terms and phrases, are reproduced in Exhibit A with the disputed terms and phrases highlighted in ***bold italics***.

In addition to the above disputed terms, Defendant also (i) seeks to impose an order of steps on these and other claims, (ii) argues that certain of the terms and phrases above would lack an antecedent basis unless its constructions are adopted, and (iii) argues that the terms/phrases "user interest information derived from the User Model," "documents of interest to the user," and "documents [that are] not of interest to the user" are indefinite. As explained below, these arguments are without merit and PUM's proposed constructions should be adopted.

IV. LEGAL PRINCIPLES

The words of a claim are generally given the "ordinary and customary meaning" that they would have to a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc). Where that ordinary meaning is "readily apparent," claim construction "involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314. In other instances, however, the ordinary and customary meaning of claim language is not apparent and thus must be derived from other sources, including "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms and the state of the art." *Id.*

The claims themselves provide "substantial guidance" as to the meaning of a particular claim term. *Id.* For example, the claims themselves may specifically define a term. *See Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1375-77 (Fed. Cir. 2009) (rejecting the district court's construction where the term at issue was defined by the claim language). Likewise, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that

the limitation is not present in the independent claim. *Phillips*, 415 F.3d at 1314-15.

The claims, of course, do not stand alone. Rather, the person of ordinary skill in the art is deemed to have read the claim terms in the context of the entire patent, including the specification and the prosecution history. *Id*. at 1313. The Federal Circuit's *Phillips* decision emphasized the importance of the specification in construing claims. *Id*. at 1315-17. For example, where the specification reveals a special definition that the inventor gave to a claim term that differs from the meaning it would otherwise possess, the inventor's lexicography controls. *Id.* at 1316. Similarly, where the specification reveals an intentional disclaimer, or disavowal, of claim scope by the inventor, the objective evidence of the inventor's intent is again dispositive. *Id*. But, the *Phillips* court cautioned, "[a]lthough the specification often describes very specific embodiments of the invention," it is improper to "confin[e] the claims to those embodiments." *Id.* at 1323; *see also Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) ("the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using 'words or expressions of manifest exclusion or restriction.'") (citations omitted). The function of the specification is, after all, "to teach and enable those of skill to make and use the invention," and one way to do so is to provide examples. *Phillips,* 415 F.3d 1323.

Although a court should also consider a patent's prosecution history, it should not be used to "enlarge, diminish, or vary" the limitations of the claims. *Id.* at 1317; *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff'd* 517 U.S. 370 (1996). Also, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Phillips*, 415 F.3d at

1317. Additionally, although extrinsic evidence (*e.g.*, expert testimony, dictionaries, and treatises) may be used in claim construction, such evidence is generally "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.* at 1318.

There is, ultimately, no magic formula for claim construction - the correct construction will be the one that "stays true to the claim language and most naturally aligns with the patent's description of the invention." *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

V. DISPUTED CLAIM LANGUAGE

The parties agreed on 12 areas of dispute to be briefed for construction. For clarity, PUM has combined some of these areas so that logically similar arguments, and terms and smaller phrases that are part of the same larger phrase, may be considered together.

A. The Disputes Relating to the Claims as a Whole: Defendant's Attempt to Impose an Order of Steps and Defendant's Argument Regarding a Purported Lack of Antecedent Basis.

1. "Order of Steps" ('040 Patent, Claims 1 and 32; '276 Patent, Claims 1 and 23)

Term/ Phrase	PUM's Proposed Construction	Google's Proposed Construction
"order of steps"	No construction needed. If the Court is inclined to address the issue, then it should hold that the steps may be performed in a consecutive manner, in an overlapping manner, or a combination of the two, except as set forth below.	'040 patent, 1 and 32: Steps (a), (b), and (c) must be performed in that order and before steps (e) and (f); step (d) must be performed before steps (e) and (f); and step (e) must be performed before step (f). '276 patent, 1: steps (a), (b), and (c) in that order; step (d) before step (e); step (f) must be performed after steps (c) and (e); and step (g) must be performed after step (f). '276 patent, 23: step (a), (b), (c), (d), (e), and (f) in that order.

This dispute revolves around whether the claims should be construed to require that the steps of the claims be performed in a specific order. The Federal Circuit holds that "[u]nless the

steps of a method actually recite an order, the steps are not ordinarily construed to require one." *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003); *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1342-43 (Fed. Cir. 2001). Here, the claims recite no such order. Further, as explained below, neither the logic nor grammar of the claims, nor the specification require a specific ordering of the steps, as Defendant contends. *See Altiris*, 318 F.3d at 1369 (the test to determine whether the steps of a method that do not recite an order must nonetheless be performed in a specific order is to look at the logic and grammar of the claim as well as the specification).

Besides not dictating a specific order, the claims also do not prohibit repetition of certain steps before others are performed. According to one preferred embodiment, the invention is capable of operating in at least three modes: initialization, updating or dynamic learning, and application. '040::8:54-56. Figure 2 (reproduced at p. 2 above) illustrates dynamic learning and application. '040::8:58-59. As set forth in Figure 2, although it may be preferable that the steps occur in a particular order, with certain limited exceptions,[4] such an order is not required. For example, many of the steps in the claims can be performed in a repeating and/or overlapping manner consistent with the logic or grammar of the claim. Referring to Figure 2, although this preferred embodiment suggests a step-wise sequence of events (with the exception of step 36), the specification does not suggest, let alone require, that each iteration of steps must proceed in

[4] The exceptions include that the documents must be analyzed (at least once) to identify properties (step (d) of claims 1 and 32 of the '040 patent) (step 36 of Figure 2)) before those identified properties are applied to the learning machine (step (e) of claims 1 and 32 of the '040 patent (step 38 of Figure 2)). Likewise, for claim 1 of the '276 patent, logic dictates that the search query is received (step (d)) before documents are retrieved based on the search query (step (e)), such that documents are retrieved before their identified properties can be applied to the user-specific learning machine to estimate a probability that the retrieved document is of interest to the user (portion of step (f)), and that the probability must be estimated before it can be used in step (g). Steps (d), (e), and (f) of claim 23 of the '276 patent contain similar language.

the preferred order. The system could, for example, analyze the documents (step 36), followed by the monitoring of user interactions (step 30), followed by the updating of the User Model (steps 32 and 34), followed by additional, monitored user interactions (*e.g.*, navigation, reading news, shopping, or other actions)[5] (step 30), followed by one or more searches requiring the use of the not-yet-updated User Model (step 34) to be applied to the previously analyzed documents of step 36 to determined the user's interests in documents (step 38), followed by the provision of some personalized service (step 40). This sequence of events could happen without another cycle of updating the user-specific data files (step 32 and/or updating the User Model 34), which could occur later in time.[6] Other scenarios are equally plausible.[7] Defendant's proposed ordering precludes these possibilities and, thus, should be rejected.

Defendant's proposed ordering also seemingly requires that all of the steps occur for each iteration of the proposed cycle. The specification, however, does not require that the documents, be analyzed each time (step (d) of '040 patent), for example, before an unseen document is applied to the learning machine (step (e) of the '040 patent), or that the document properties be identified (portion of step (f) of the '276 patent, claim 1) after each search query is received from the user (step (d) of the '276 patent, claim 1). Under Defendant's proposal, the documents

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[5] *See*, *e.g.*, '040::10:5-12.

[6] The specification, in fact, specifically contemplates such a scenario: "It is not feasible to update the user model after every newly reviewed document or search, but the User Model can be updated effectively instantaneously by incorporating the context of user interaction." '040::26:4-15; *see also* '040::22:55-63 (discussing the inefficiency of applying the initialization process to update the User Model each time and instead referring to incremental learning and updating techniques).

[7] For example, the specification discusses buffering information about the document, the user's interactions with the document, and storing different types of information obtained from the user's interactions generally. *See*, *e.g.*, '040::22:27-23:54. This buffering capability is further evidence that certain steps may occur in a different order, in parallel, or repeat before other steps occur, without running afoul of the specification or the claims.

would need to be re-analyzed to again identify properties before the next iteration (*i.e.*, with respect to the '276 patent, before the next search query is received from the user and the document's identified properties are applied to the user-specific learning machine and a probability is estimated). There is simply no support for such a construction. Rather, all that is required is that the documents are analyzed at some point to identify their properties and that those identified properties may then be used in other steps. '040::17:48-51.

In short, the claims are clearly written and understandable, and do not require the steps be performed in the sequence as Defendant contends. Accordingly, the Court should reject Google's "order of steps" construction.

2. The Antecedent Basis Disputes

This dispute relates to numerous claim terms and phrases appearing throughout the asserted claims. Defendant asks that the Court construe these terms and phrases as always referring to the same thing. For example, Defendant proposes that (1) the term "a document d" and "the document" (as used in, for example, the '040 patent claims 1 and 34 (which depends on claim 32)), be construed to refer to the same document; and (2) the phrases "a probability P(u|d) that an unseen document d is of interest to the user u," "the probability P(u|d)," and "the estimated probability" (as used in the '040 patent claims 1 and 34) be construed as referring to the same probability.[8] Defendant contends that if such a construction were not adopted, the claims would lack antecedent basis. This is incorrect.

The use of an indefinite article such as "a" or "an" normally introduces a new claim element as opposed to referring back to a previously introduced element. *See, e.g.*,

[8] A full list of the terms and phrases that Defendant wants the Court to consider can be found in the antecedent basis section of the table, attached hereto as Ex. 3.

MercExchange, LLC v. eBay, Inc., 401 F.3d 1323, 1338 (Fed. Cir. 2005); U.S. PAT. & TRADEMARK OFFICE, U.S. DEPT. OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE § 2173.05(e) (8th ed., rev. July 2010), attached as Ex. 5; *Slimfold Mfg. Co. v. Kinkead Props., Inc.*, 626 F. Supp. 493, 495 (N.D. Ga. 1985). Here, step (d) introduces "a document d" and then refers back to that document d as "the document" within step (d). '040::32:37-38. Step (e), however, introduces "an unseen document d" representing a subset of document d, which the user has not seen before, and then refers back to applying the identified properties of the "document d" later in step (e). Thus, although "the document" of step (e) needs to have been previously analyzed at some point in time, step (e)'s reference to "the document" does not necessarily refer to the same "document d" that is being analyzed in step (d) because not all of the documents analyzed in step (d) will be unseen documents by the user.

Similarly, step (e) requires estimating "a probability P(u|d) that an unseen document is of interest to the user u," and step (f) uses "the estimated probability" to provide automatic, personalized information services to the user. '040::32:39-44. Thus, although "the estimated probability" of step (f) refers back to the estimated "probability P(u|d)" of step (e), such a probability is estimated for each unseen document by applying the identified properties of the document to the learning machine having parameters defined by the User Model. Therefore, it is not a single probability, but rather is a probability for each unseen document. Thus, the claim terms are readily understood to one skilled in the art, and do not require that different claim terms be read the same way.

Defendant does not contest that antecedent bases exist for these terms; rather, Defendant essentially argues that if the claims are not read its way - a way that departs from the clear language of the claims - then antecedent basis would not exist. Contrary to Defendant's

assertion, there is an antecedent basis for the claim terms which does not require that they all be read the same way. As Justice Bryson noted in *Phillips*, "[i]n some cases[] the ordinary meaning of claim language … may be readily apparent … and claim construction involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. Because Defendant has not presented any basis for construing these so-called "antecedent basis" terms, and because PUM has demonstrated that adopting Defendant's proposed construction would result in a departure from the clear language of the claims, these claim terms should, instead, be construed based on the plain language of the claims themselves.

B. "user" / "user [u]" -- ('040 Patent, claims 1, 11, 21, and 34 (depending from claim 32); '276 Patent, claims 1, 5, 6, 21, 23, and 24)

Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"user" / "user [u]"	"a person operating a computer as represented by a tag or identifier"	"person operating a computer"

The dispute regarding this term relates to Defendant's anticipated non-infringement argument that a cookie (*i.e.*, a block of data that represents a user) is not a user.

Computers identify users by their electronic tags or identifiers. The tag or identifier is a representation of the user. The specification of the patents-in-suit expressly states that the "user" and/or "user u" includes a user's associated representation: "The following notation is used in describing the presentation invention. The user ***and*** his or her associated representation are denoted with u…" '040::9:10-12. Likewise, the cluster tree shown in Figure 5A depicts user "Bob" as the tag or identifier "u." Figure 5A; '040::14:27-32.

Defendant's proposed construction ignores these basic principles of computer science and limits the "user" to the actual physical person operating the computer. Although in lay parlance the "user" is the person operating the computer, in the patents-in-suit a "user" also expressly includes the representative tag or identifier that allows the computer to associate the data with a

physical person operating the computer. As the Federal Circuit stated in *Phillips*, where the specification reveals a special definition that the inventor gave a claim term that differs from the meaning it would otherwise possess, the inventor's lexicography controls. *Id.* at 1316. Because PUM's proposed definition is supported by the claim language, the specification, and the general understood meaning of the term to one of skill in the art, it should be adopted. *Id.* at 1313.

C. "user-specific data files" / "monitored user interactions with the data" / "set of documents associated with the user" -- ('040 Patent, claims 1 and 34 (depending from claim 32))

Claim Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"user-specific data files"	"the monitored user interactions with data and a set of documents associated with the user"	"data files unique to the user"
"monitored user interactions with the data"	"the collected information about the user's interactions with data"	"user interactions with data obtained from the monitoring step of 1(a)" "user interactions with data obtained from the monitoring step of 32(a)"
"set of documents associated with the user"	"a group or collection of text or other types of media associated with the user"	"group or collection of documents associated with the user"

The disputes regarding these terms are twofold: (i) Defendant's refusal to recognize the definition explicitly recited in the claim for the term "user-specific data files," and (ii) Defendant's proposed definition for "monitored user interactions with data" is unhelpful.[9]

1. "user-specific data files"

When a patentee explicitly defines a claim term in the specification, the patentee's definition controls. *Id*. at 1321. Here, the claim term "user-specific data files" is defined in the claims; thus, no further construction is necessary. *See Agilent Techs.*, 567 F.3d at 1375-77; *see*

[9] The dispute concerning "set of documents associated with the user" centers around the term "document," which will be addressed in the next section under "document."

also Cheetah Omni, LLC v. Verizon Servs. Corp., No. 09-260, 2010 WL 4510986, at *7 (E.D. Tex. Nov. 9, 2010) ("[T]he Court finds that this term is defined in the claims and no construction is necessary.") The term appears in step (b) of claims 1 and 32 which recite, "updating user-specific data files, wherein the ***user-specific data files*** comprise ***the monitored user interactions with the data*** and ***a set of documents associated with the user.***" '040::32:29-33; 35:21-24.

Even though there is no need to look beyond the claim language, the specification also supports this meaning. For example, column 8 of the '040 patent provides that the "user-specific data files" include "a set of documents and products associated with the user," and "monitored user interactions with data." '040::8:67-9:2; *see also* 4:22-26 (discussing updating "user-specific data files" using monitored user interactions that include a set of documents associated with the user). Conversely, nothing in the claims or the specification defines or suggests that "user-specific data files" simply means "data files unique to the user."

Defendant will likely accuse PUM of trying to read the word "files" out of the claims. This argument is belied by the specification, which only uses the word "file" or "files" in two contexts outside of "user-specific data files." First, "files" are used to describe a preferred embodiment of initializing the User Model using information stored in the user's browser: "In one embodiment, the user documents for initializing the User Model are identified by the user's web browser. Most browsers contain *files* that store user information and are used to minimize network access." '040::17:19-23. Second, the "background art" section of the patent refers to "log files" of documents requested by users. *Id.* at 2:33-35.

Neither of these instances constitute any disavowal or disclaimer of claim scope. Consequently, there is no reason to depart from the meaning that the *claims* and specification impart to the phrase "user-specific data files." *See Martek Biosciences Corp. v. Nutrinova, Inc.*,

579 F.3d 1363, 1380 (Fed. Cir. 2009) (construing "animal" to include humans because specification defined "animal" to include organisms belonging to the kingdom Animalia); *Agilent Techs.*, 567 F.3d at 1375-77. Thus, as PUM contends, *user-specific data files* comprise and mean *the monitored user interactions with the data* and *a set of documents associated with the user*." '040::32:29-33; 35:21-24.

2. "monitored user interactions with the data"

One of ordinary skill in the art reading the specification would understand this phrase to mean "the collected information about the user's interactions with data." The specification, for example, contemplates that the user-specific data files are modified with the information that is ***collected*** as a result of monitoring the user interactions with the data:

> While the user is engaged in the normal use of a computer, Personal Web 12 operates in the dynamic learning mode to transparently monitor user interactions with data (step 30) and update the User Model 12 to reflect the user's current interests and needs. This updating is performed by updating a set of user-specific data files in step 32. '040::8:60-66.
>
> * * * *
>
> Multiple distinct modes of interaction with the user are monitored, …. As a result of the interactions, the set of user documents and the parameters of each user representation in the User Model are modified…. Information about each document the user views is stored in a recently accessed buffer for subsequent analysis…. The recently-accessed buffer contains, for each viewed document, a document identifier (e.g., its URL); the access time of the user interaction with the document; the interaction type, such as search or navigation; the context, such as the query: and the degree of interest, for example, whether it was positive or negative, saved in the bookmarks file, how long the user spent viewing the document…. '040::21:66-22:42.[10]

Defendant's proposed construction - "user interactions with data obtained from the monitoring step of 1[32](a)" - should be rejected because it is unhelpful and creates confusion. It simply

[10] *See also* '040::23:10-46; 27:49-54.

reorders the words, rather than defines the term. It, therefore, does not help one of ordinary skill in the art or the jury's understanding of the issues and should be rejected. *See Am. Patent Dev. Corp. v. Movielink, LLC*, 604 F.Supp.2d 704, 716 (D. Del. 2009) (refusing to adopt a construction which "merely a verbose paraphrasing of claim language that otherwise offers little to assist one of skill in the art in understanding the claims"); *see also Stanacard, LLC v. Rebtel Networks, AB*, 680 F.Supp.2d 483, 493 (S.D.N.Y. 2010) (rejecting defendant's proposed construction, holding "[defendant]'s proposed definition serves only to introduce additional terms into the claim and would result in confusion for the jury.").

D. "document" -- ('040 Patent, claims 1, 11 and 34; '276 Patent, claims 1, 5-7, 14, and 21-24)

Claim Term/Phrase	PUM's Proposed Construction	Defendant's Proposed Construction
"document	"text or any type of media"	"electronic file"

The crux of the parties' dispute revolves around Defendant's importation of the word "file" into the definition of "document."

As noted above, the specification acts as its own dictionary when it expressly defines terms. *Martek*, 579 F.3d at 1380; *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication."). The patents-in-suit clearly define the term "document" broadly as "text or any type of media": "[t]he term 'document' includes not just ***text***, but ***any type of media***, including, but not limited to, hypertext, database, spreadsheet, image, sound, and video." '040::9:14-17.

Defendant's proposed construction ignores this explicit definition, and seeks to limit a "document" to an "electronic file." Nowhere in the specification, however, is the term so limited. Defendant's proposed construction follows the often-trod, but improper, path of

attempting to import non-existent limitations into the claims and it should be rejected.

E. "[estimating] parameters of a learning machine" / "[estimating] parameters of a user-specific learning machine"[11] -- ('040 Patent, claims 1(c) and 32(c); '276 Patent, claims 1(f), 5 and 23(c))

Claim Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"[estimating] parameters of a learning machine"	"estimating values or weights of the variables of a learning machine"	"estimating a value or weight of each of the variables that are used by the learning machine to calculate a probability"
"[estimating] parameters of a user- specific learning machine"	"estimating values or weights of the variables of a user-specific learning machine"	"estimating a value or weight of each of the variables that are used by the user-specific learning machine to calculate a probability"

The dispute over these claim phrases relates to Defendant's import attempt to import an element of step (e) of claims 1 and 32 of the '040 patent, and from steps 1(f) and step 23(e) of the '276 patent into this element. The effect of this importation would be to require that all "parameters" be used by the respective learning machines to "calculate a probability." Such a construction is not supported by the specification and does not comport with the plain and ordinary meaning of the phrase "[estimating] the parameters of a learning machine."

As *Phillips* instructs, one begins with the language of the claims. *Phillips*, 415 F. 3d at 1314. Here, the disputed language occurs in steps 1(c) and 32(c) of the '040 patent and in claims 1(c), 5, and 23(c) of the '276 patent. Nowhere in these steps is the word "probability" used. And, although later steps of these claims "estimate a probability" by applying the identified properties of the document to the learning machine having the parameters defined by the User Model ('040 patent, claims 1(e) and 32(e)), and/or estimate a probability that the retrieved

[11] The dispute relating to "learning machine" is addressed in the next section.

document is of interest to the user by "applying the identified properties of the retrieved document to the user-specific learning machine" ('276 patent, claims 1(f) and 23(e)), none of these later elements require the use of ***all*** of the parameters to "calculate a probability." In fact, the later steps of the '276 patent do not even use the term "parameters."

The specification also does not support Defendant's proposed construction. The specification discusses storing parameters that define a User Model and updating these parameters based on the monitored user interactions with the data. '040::8:46-50. And, although the specification states that parameters of a learning machine are used to estimate (not "calculate" as Defendant's propose) a probability ('040::4:26-34), it does not require that ***all*** such parameters be used in such estimation. Defendant is wrong in insisting that the phrase "to calculate a probability" that it proposes for the step (e) learning machine be incorporated into "estimating ***parameters*** of a learning machine." It is the clear that the specification does not contain such a disclaimer or disavowal, and Defendant's attempt to limit the claim scope should be rejected. *See, e.g., Liebel-Flarsheim*, 358 F.3d at 908.

Extrinsic evidence contemporaneous with the '040 patent's filing shows that "parameter" means "a variable that must be given a specific value during the execution of a program or of a procedure within a program." Ex. 6, *Random House Webster's Unabridged Dictionary* 1408 (2d ed. 1999); *see also* Ex. 7, *Microsoft Press Computer Dictionary* 354 (3d ed. 1997) ("a value that is given to a variable."). These sources further support that "[estimating] the parameters of a learning machine" should be construed to mean "estimating the values or weights of the variables of the learning machine." Accordingly, the Court should adopt PUM's construction.

F. "learning machine" / "user-specific learning machine"/ "User Model specific to the user" -- ('040 Patent, claims 1, 21, 23, and 32; '276 Patent, claims 1, 5 and 23)

Claim Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"learning machine"	"a model and/or mathematical function that is used to make a prediction or intelligent decision that attempts to improve performance in part by altering the values/weights given to its variables depending upon past observations or experiences"	"program that contains parameters used to calculate a probability, and where the predictive ability of the program improves over time with the addition of new data"
"user-specific learning machine"	"a model and/or mathematical function that is used to make a prediction or intelligent decision that attempts to improve performance in part by altering the values/weights given to its variables depending upon past observations or experiences specific to the user"	"learning machine unique to the user"
"User Model specific to the user"	"an implementation of a learning machine updated in part from data specific to the user "	"model unique to the user, that is created and updated by the learning machine and stored in a data structure"

1. "a learning machine"

The parties seemingly agree that "a learning machine" is used to make a prediction and that such ability should improve over time. The disputes arise in connection with the details of the precise phrasing of the definition. Specifically, the parties dispute whether (i) the learning machine must be a "program," (ii) whether its parameters must be used to "calculate" rather than "estimate" a probability, and (iii) whether its predictive ability must necessarily improve over time with the addition of "new data."

Contrary to Defendant's assertion, a learning machine is not necessarily limited to a program, but may also be "a model or mathematical function." The specification discusses a learning machine in numerous places, which do not require a program *per se*. For example, column 8, lines 44-46 of the '040 patent states that a learning machine "contains tunable

parameters that are altered based on past experience." The specification also describes the learning machine as predicting user interest in documents based on the user's actions and/or the actions of similar users: "This invention relates generally to … methods for ***predicting user interest in documents*** and products using a learning machine that is ***continually updated based on actions of the user and similar users.***" '040::1:12-18. This predictive ability is accomplished by applying analyzed properties of documents to the learning machine. '040::4:35-36. The patent also states that the "User Model 13, with its associated representations, is an implementation of a learning machine." '040::8:43-44. Thus, the specification teaches that a learning machine can be implemented as a model and is not, as Defendant contends, limited to a "program."

That learning machines are not limited to "programs" is also supported by the technical literature. For example, the *Dictionary of Computer, Science, Engineering and Technology* defines "learning" as "generally, any scheme whereby ***experience or past actions and reactions*** are automatically used to change parameters in an ***algorithm***," and "machine learning" as "the component of artificial intelligence that deals with the ***algorithms that improve with experience***." Ex. 8, at 273, 291 (Phillip A. Laplante ed., 2001). Further, contemporaneous literature referenced in the patents-in-suit, and incorporated therein by reference, explain "the learning machine is capable of implementing a set of ***functions***." *See* Ex. 9, at 18.

The second dispute relates back to the parties' respective definitions of the phrase "estimating the parameters." Defendant's definition requires that the learning machine "contain parameters used to 'calculate' a probability." The claim language, however, consistently uses the term "estimate," not "calculate," and discusses using the parameters to estimate a probability by applying the analyzed properties of documents to the learning machine:

> Parameters of a learning machine, which define a User Model specific to the user, are estimated from the user-specific data files…. The parameters are used to estimate a probability P(u|d) that a document is of interest to the user…. The probability is estimated by analyzing the properties of the document and applying them to the learning machine. '040::4:26-36.

Nowhere in the specification are parameters limited to "calculat[ing] a probability." As a result, there is no support for Defendant's attempt to narrow the claims by requiring that the learning machine contain parameters that "calculate [rather than ***estimate***] a probability."

The true motivation behind Defendant's attempt to narrow the learning machine element becomes clear in the next section relating to the construction of "estimating the probability P(u|d) …" As discussed more fully below, Defendant defines probability P(u|d) as "percentage chance." When "percentage chance" is substituted for "probability" in Defendant's learning machine definition, the learning machine is limited to a program containing parameters used to "calculate a percentage chance." Not only does Defendant's overly narrow construction find no support in the specification, but literature referenced in the patents-in-suit further refutes Defendant's construction. For example, Vladimir S. Cherkassky and Filip M. Mulier, *Learning from Data: Concepts, Theory, and Methods,* describes "[l]earning [a]s the process of *estimating* the function." *See* Ex. 9, at 21 (1998).

Finally, the parties disagree on the phrasing of the predictive ability of the learning machine. PUM states that a learning machine need only attempt to improve its predictive performance based on past observations or experience, but Defendant's proposed construction requires that the predictive ability improve over time with the addition of "new data." The crux of this dispute relates to whether the learning machine *must* improve with each addition of information collected about the user, and whether so-called "new data" (Defendant's construction) is required as opposed to attempting to improve based upon "past observations or experience" (PUM's construction). First, the "learning machine" attempts to improve based

upon observations and/or experiences, but not necessarily in every case or every time it is updated. Second, the specification is replete with examples of monitored user interactions that are used to estimate the parameters of the learning machine. *See e.g.*, '040::4:57-64; 21:64-22:7. Therefore, PUM's "observations and experience" language better captures all of the possible sources of information that could be used to improve the performance of the learning machine, as opposed to Defendant's "new data" language, and should be adopted.

2. "user-specific learning machine"

The dispute relating to this phrase is narrow. Specifically, PUM contends that the "user-specific learning machine" is a learning machine that improves performance based upon past observations "specific" to the user, whereas Defendant contends that the "user-specific learning machine" must be "unique" to the user.

The specification never states that the learning machine be "unique" to the user. Rather, it describes monitoring user interactions with data, updating the parameters of the learning machine with the information obtained from the monitoring, and defining a User Model "specific" (not unique) to the user. *See, e.g.*, '040::4:22-5:14; 8:43-53. The specification also states that the User Model is an implementation of a learning machine. *Id*. at 8:43-44. Thus, according to the specification, a "user-specific learning machine" is just that - a learning machine specific to (*i.e.*, related to or associated with) the user.

The commonly understood meaning of the words "specific" and "unique" further support PUM's proposed construction. For example, *Webster's Third New International Dictionary* defines "specific" as, among other things: " **2 :** having a real and fixed relationship to … **3 :** restricted by nature to a particular individual, situation, relation, or effect…"[12] The term

[12] Ex. 10 at 2187 (Phillip Babcock Grove et al. eds. 2002).

"unique," on the other hand, is defined as "**1 a :** being the only one," "**2 :** being without like or equal."[13] In sum, PUM's construction should be adopted because it more closely aligns with the description of the invention in the specification and with the commonly understood meaning.

3. "User Model specific to the user"

The are two disputes relating to this phase. First, as with "user-specific learning machine," there is a dispute as to whether model needs to be "specific" to the user (PUM's position) or "unique" to the user (Defendant's position). Second, the parties dispute whether the model (or function) needs to be stored in a data structure.

Unlike Defendant's construction, PUM's construction is supported by the specification. As discussed above, the specification describes the User Model as "an implementation of a learning machine." '040::8:43-44. Additionally, the specification contains many examples of updating the User Model based on data specific to the user. *Id.* at 7:27-32; 8:46-50; 8:60-67. But, as explained above, nowhere does the specification require that the User Model be "unique" to the user.[14] Rather, the specification repeatedly describes the User Model as relating to and/or associated with a user. *Id*. at 7:31-34; 8:29-32; 17:13-15.

Nor does it require that the User Model be stored in a data structure. The Personal Web embodiment of the User Model describes it as a "function that is developed and updated using a variety of knowledge sources ***and that*** is ***independent*** of a ***specific representation*** or ***data structure***." *Id*. at 8:28-35. Further, although the specification discusses storing components of

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[13] *Id.* at 2500.

[14] Note, although the specification indicates that the User Model represents the user interest in a document independent of any specific user need and that this ***estimation*** is unique to the user, it does not require that the User Model be unique to the user -- only that the model be associated with the specific user. *See, e.g.*, '040::9:35-38.

the User Model in data structure(s),[15] the specification does not require storage in a data structure. Thus, there has been no disclaimer or disavowal of claim scope and, moreover, Defendant's proposed construction is directly at odds with the specification and thus should not be adopted. *See, e.g., Phillips*, 415 F.3d at 1319-1320; *Liebel-Farsheim*, 358 F.3d at 904.

G. "[estimating a] probability P(u|d) that an unseen document d is of interest to the user u" ('040 Patent, claims 1(e) and 32(e)) / "[estimating a] posterior probability P(u|d,q) that the document d is of interest to the user u, given a query q submitted by the user" (claim 11).

Claim Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"[estimating a] probability P(u|d) that an unseen document d is of interest to the user u"	"approximating or roughly calculating the degree of belief or likelihood that an unseen document d is of interest to the user u given the information that is known about the unseen document"	"calculating the percentage chance that an unseen document d is of interest to the user u given the information that is known about the unseen document."
"[estimating a] posterior probability P(u|d,q) that the document d is of interest to the user u, given a query q submitted by the user"	"approximating or roughly calculating the degree of belief or likelihood that a document d is of interest to the user u given the information that is known about the document, and given a query q"	"calculating the percentage chance of the user u being interested, taking into account what is previously known about that user's interests in general, given new knowledge of the document d the user is considering and a search query q submitted by the user"

The dispute over these claim phrases boils down to three issues. Defendant's attempt to: (i) overly narrow "probability" to "percentage chance," (ii) read "estimating" out of the claims, and (iii) import additional limitations into the remainder of the phrases.

It is clear from the claim language that "a probability P(u|d)" is the probability "that an unseen document d is of interest to the user u." '040::32:39-43. Similarly, claim 11 of the '040 patent recites "P(u|d,q)" as the "posterior probability that the document d is of interest to the user

[15] *See, e.g.,* '040::10:30-51; 17:13-16.

u, given a query q submitted by the user."

The specification provides additional context for these terms. For example, the specification states that "P(u|d) is the probability of the event that the user u is interested in the document d, given everything that is known about the document d." '040::9:38-42. "The term 'P(u|d)' ***represents*** the user interest in the document regardless of the current information need." '040::28:10-12. Similarly, "P(u|d,q)" is the posterior probability of "the event that a document d is of interest to a user u having an information need q." '040::27:60-28:10.

Nowhere does the specification require that the user's estimated need be expressed as a "percentage chance." This is not surprising considering that contemporaneous dictionaries define "probability" as (i) "a degree of belief or likelihood, "[16] (ii) "the likelihood that an event will happen."[17] Consequently, there is no support for limiting the probability terms to specific "percentage chance" and the Court should not do so.

Defendant contends that "estimating" means "calculating." However, one of ordinary skill in the art would understand "estimating" to mean "approximately or roughly calculating" because the specification repeatedly discusses estimating probabilities in a broad context of whether the user would be interested in a document as opposed to calculating a percentage chance. *See e.g.,* '040:9:35-42; 24:59-25:5. Dictionaries contemporaneous with the filing date of the patent further support such a construction defining the term "estimating" to mean "calculate approximately,"[18] or "to make a rough calculation."[19] Accordingly, this Court should

[16] *See* Ex. 11, *The Oxford English Reference Dictionary* 1152 (2d ed. 1996)

[17] *See* Ex. 7, at 382.

[18] Ex. 6, at 663.

[19] Ex. 11, at 480.

adopt PUM's construction of "estimating" which "stays true to the claim language and most naturally aligns with the patent's description of the invention." *Phillips,* 415 F.3d at 1316.

Lastly, Defendant's proposed construction for "posterior probability" includes additional language about the "user's interests in general" and "given new knowledge of the document d the user is considering." Defendant, however, is simply trying to import additional limitations that are not found in the claims or the specification. Moreover, Defendant's proposed construction does not clarify the claim language, but rather creates ambiguity and confusion. How far into the past does one look to see what was "previously known" about the user's interests? What does "given new knowledge of the document" mean? Is the knowledge new to every user or just the specific user? The Court should reject Defendant's attempt to engraft additional language onto the plain language of the claim. *See Omega Eng'g, Inc., v. Raytek Corp.*, 334 F.3d 1314, 1322 (Fed. Cir. 2003) (rejecting additional negative limitation that had "no anchor in the explicit claim language.").

H. "unseen document" -- ('040 Patent, claims 1 and 32)

Claim Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"unseen document"	"document not previously seen by the user"	"document not previously seen by any user"

The parties' dispute centers on whether "unseen document" requires that the document has not been "previously seen by ***the*** user" or "not previously seen by ***any*** user."

The term "unseen," to the extent it requires any construction at all, is used to signify that the document was not previously seen by ***the*** user, not that it was unseen by ***any*** user. The claim language, for example, refers to the unseen document in the context of "the user u" not "all users": "estimating a probability P(u|d) that an ***unseen document d*** is of interest ***to the user u***, wherein the probability P(u|d) is estimated by applying the ***identified properties*** of ***the document***

to the learning machine having the parameters defined by the User Model." '040::32:39-43; 35:31-35. Thus, the claim refers to an unseen document with respect to a specific user. *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) ("the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms").

The specification also supports PUM's proposed construction. Figure 2, for example, refers to the preferred embodiment "Personal Web" as applying "the User Model 13 to unseen documents, which are first analyzed in step 36, to determine the 'user's' [(singular) not users' (plural)] interest in the document (step 38)." '040::9:2-6. Similarly, the section of the patent entitled "Applying the User Model to Unseen Documents" discusses such application in the context of a "user" (singular), not "users" (plural). *Id.* at 24:51-26:67. Additionally, claim 7(i)(j)(k) provides that "the identified properties of the document d" include: a ***number of users*** who have accessed the document; a ***number of users*** who have saved the document in a favorite document list; and a ***list of users*** previously interested in the document. *Id.* at 33:16-19; 25:56-59. Although this dependent claim refers back to step 1(d) of the '040 patent, that is because the "unseen document d" of step 1(e) is a document that has at some point been previously analyzed in step 1(d). Claim 7, therefore, directly refutes Defendant's proposed construction because it indicates that such an unseen document to the user ***may*** have been accessed and/or saved by previous users. None of the language in the claims or specification refers to a document unseen by all users. As a result, Defendant's proposed construction should be rejected. *See Phillips*, 415 F.3d at 1314-15.

I. "present" or "presenting" -- ('276 Patent, claims 1, 21 and 23)

Claim Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"present" or "presenting"	"to provid[ing] or mak[ing] available"	"display[ing]"

The crux of this dispute relates to whether "presenting" at least a portion of the retrieved documents to the user (step 1(g) and 23(g) of the '276 patent) requires that such documents actually be "displayed" on the user's computer (Defendant's position) or simply requires that the documents be provided or made available to the user (PUM's position).

The claim language clearly supports PUM's construction. An independent claim is generally broader than a claim dependent on it. *See Nazomi Commc'ns, Inc. v. Arm Holdings, PLC*, 403 F.3d 1364, 1370 (Fed. Cir. 2005) ("claim differentiation 'normally means that limitations stated within dependent claims are not to be read into the independent claim from which they depend.'") (quoting *Karlin Tech., Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir. 1999)). Additionally, the doctrine of claim differentiation dictates that "different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scopes." *Karlin*, 177 F.3d at 971-72.

Here, claim 24 of the '276 patent, which depends on claim 23, recites, "[t]he method of claim 23, wherein ***presenting*** said selected collected documents to said user comprises ***displaying*** said selected collected documents to said user…". Within the context of claim 24, "presenting" and "displaying" clearly have two distinct meanings. Likewise, the specification differentiates between "present[ing]" and "display[ing]." Throughout the specification, "present[ing]" is used to communicate a broad category of acts by which information is provided or made available. *See, e.g.*, '276::1:67-2:4 ("Information retrieval is typically a two step process, collection followed by filtering; information filtering techniques personalize only the

second part of the process. They assume that each user has a personal filter, and that every network document is ***presented*** to this filter."); *Id*. at 7:35-37 ("[A]ll information that is ***presented*** to the user has been evaluated by the User Model to be of interest to the user."); '276::8:15-21 ("Personal Web collects and ***presents*** personal information to a user based on the User Model.").

In contrast, the specification uses "display[ing]" to refer to a subset of situations in which links, ads, or other forms of selected content are actually ***shown*** to a user. *See, e.g.*, '276::28:44-49 ("In the personal websites application…[p]arameters of the User Model are transferred to the site ***when a user requests a particular page***, and ***only selected content or links are displayed to the user***."); '276::29:15-18 ("Upon the user's request (e.g., by clicking a button with a mouse pointer), the related pages are ***displayed***."); '276::30:15-21 ("[U]sers receive email messages containing URLs of interesting pages, or links are ***displayed on a personal web page*** that the user visits."). Because claim 24 and the specification clearly differentiate between "presenting" and "displaying" documents to a user, the term "presenting" cannot mean "displaying."

Extrinsic evidence further supports that one of ordinary skill in the art would understand the term "present[ing]" to mean "to provide or make available." For example, when used as a verb, the term "present" relates to offering, introducing, making available:

> **1. a.** To introduce, especially with a formal ceremony ... **b.** To introduce (a girl) to society with conventional ceremony ... **2.** To bring before the public**… 3. a.** To make a gift or award of ... **b.** To make a gift to; bestow formally ... **4.** To offer to view; display: *present one's credentials*... **5.** to offer for consideration." *See* Ex. 12, at 1035.

All of these meanings support PUM's construction that "presenting" means "providing" or "making available," as opposed to, displaying. Accordingly, the Court should adopt PUM's construction.

J. The Definiteness Disputes: "user interest information derived from the User Model"/ "documents of interest to the user"/ "documents [that are] not]of interest to the user" -- ('040 Patent, claim 21; '276 Patent, claims 1, 5, 14, and 23)

Claim Term/Phrase	PUM's Proposed Construction	Google's Proposed Construction
"user interest information derived from the User Model"	"interests or other information inferred from the User Model"	Indefinite
"documents of interest to the user"	"text or media for which the user has a positive response"	Indefinite
"documents [that are] not of interest to the user"	"text or media for which the user has a negative response or has ignored"	Indefinite

Defendant asserts that the above claim terms are insolubly ambiguous so as to render the claims indefinite. Defendant, however, plainly cannot meet its burden of proving indefiniteness, which is an issue of invalidity, not claim construction. *See, e.g., Telecordia Techs., Inc. v. Alcatel USA, Inc.*, slip op. at 2 (D. Del. Apr. 21, 2006) ("the Court does not permit summary judgment arguments, including indefiniteness arguments, during the claim construction phase of litigation) (Ex. 13); *NetRatings, Inc. v. Coremetrics, Inc.*, slip op. at 1-2 (D. Del. June 7, 2006) (Ex. 14).

The standard for indefiniteness is very high: A claim is indefinite only if it is insolubly ambiguous such that no narrowing construction is possible. *See Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). A claim is ***not*** indefinite if "one skilled in the art would understand the bounds of the claim when read in light of the specification." *Id.* A claim is also ***not*** indefinite "[i]f the meaning of the claim is discernable, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree." *Id.*

Not only are each of these phrases capable of construction, but PUM's proposed construction is the correct construction. For example, "user interest information derived from

the User Model" is simply "interests or other information inferred from the User Model." The specification discloses: "the User Model represents the user's ***information*** and product ***interests***; all information that is presented to the user has been evaluated by the User Model to be of interest to the user." '040::7: 31-33. The specification further describes: "the User Model reflects the ***user's current interests and needs***." '040::8:63-64.

Similarly, PUM's proposed constructions of "documents of interest" and "documents [not] of interest" are directly supported by the intrinsic evidence. As discussed above, PUM's construction of "documents" as "text or media" is described in the patent. *See* Section V.D. Further, the specification contemplates the meaning of "documents of interest" and "documents [that are not] of interest to a user":

> Through his or her actions, the user creates positive and negative patterns. Positive examples are documents of interest to a user: search results that are visited following a search query, documents saved in the user favorites or bookmarks file, web sites that the user visits independently of search queries, etc. Negative examples are the documents that are not of interest to the user, and include search results that are ignored although appear at the top of the search result, deleted bookmarks, and ignored pushed news or email. '040::22:15-23(emphasis added); 22:33-41.

Given the explicit examples of the meanings of these terms/phrase that are provided in the specification, one of ordinary skill in the art would understand the meaning of these terms and phrases. Defendant, therefore, cannot meet its heavy burden of proving that these phrases are incapable of construction. Because the terms/phrases are not insolubly ambiguous, they are not indefinite. PUM's constructions should be adopted.

VI. CONCLUSION

For the foregoing reasons, PUM's claim constructions should be adopted.

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CERTIFICATE OF SERVICE

I hereby certify that on November 17, 2010, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF which will send electronic notification of such filing to all registered participants.

Additionally, I hereby certify that true and correct copies of the foregoing were caused to be served on November 17, 2010, upon the following individuals in the manner indicated:

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