EXHIBIT A

PUM v. Google

CLAIM CONSTRUCTION COMPARISON

Agreed Terms:

Claim Term/Phrase	Claim(s)	Google's Construction	P.U.M.'s Construction
"*automatic*, personalized information services to the user"	'040 Patent: 1, 32	"without human intervention"	"without human intervention"
"central computer"	'040 Patent: 32	"computer on the server side of a client-server relationship"	"computer on the server side of a client-server relationship"
"set"	'040 Patent: 1, 32	"group or collection"	"group or collection"

Disputed Terms:

Claim Term/Phrase	Claim(s)	Google's Construction	P.U.M.'s Construction
LEARNING MACHINE TERMS AND PHRASES			
"User Model specific to the user"	'040 Patent: 1, 21, 32	Google's original construction: "model unique to the user, that is created and updated by the learning machine and stored in a data structure" Google's alternative construction: "model restricted to the user, that is created and updated by the learning machine and stored in a data structure"	"an implementation of a learning machine updated in part by data specific to the user"
"user specific learning machine"	'276 Patent: 1, 5, 23	Google's original construction: "learning machine unique to the user" Google's alternative construction: "learning machine restricted to a	PUM's original construction: "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

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		particular user"	values/weights given to its variables depending upon past observations or experiences specific to the user" PUM's alternative construction: "a learning machine specific to the user"
"learning machine"	'040 Patent: 1, 32	Google's original construction: "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" Google's alternative construction: "program that contains parameters used to estimate a probability and attempts to improve its predictive ability over time and as the program receives new data by altering the values/weights given to its parameters"	PUM's original construction: "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" PUM's alternative construction: "a model and/or mathematical function that is used to make a prediction that attempts to improve performance in part by altering the values/weights given to its variables depending upon past observations or experiences"
"estimating parameters of a [user specific] learning machine"	040 Patent: 1, 32; '276 Patent: 1, 5, 23	"estimating a value or weight of each of the variables that are used by the [user specific] learning machine to calculate a probability"	"estimating values or weights of the variables of the [user specific] learning machine"
"parameters of a [user specific] learning machine"	'040 Patent: 1, 32 '276 Patent: 1, 5, 23	"variables, having a value or weight, that are used by the [user specific] learning machine to calculate a probability"	"values or weights of the variables of a [user specific] learning machine"
PROBABILITY TERMS AND PHRASES			
"probability"	'040 Patent: 1,	"percentage chance"	PUM's original construction: "degree of

Claim Term/Phrase	Claim(s)	Google's Construction	P.U.M.'s Construction
	11, 32 '276 Patent: 1, 21, 23		belief or likelihood" PUM's alternative construction: "numerically-based degree of belief or likelihood"
"estimating a probability P(u|d) that an unseen document d is of interest to the user u"	'040 Patent: 1, 32	"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."	PUM's original construction: "approximating or roughly calculating a 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" PUM's alternative construction: "approximating or roughly calculating a numerically-based 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"
"estimating a posterior probability P(u|d,q) that a document d is of interest to the user u given a query q submitted by the user"	'040 Patent: 11	"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."	PUM's original construction: "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" PUM's alternative construction: "approximating or roughly calculating the numerically-based 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"

Claim Term/Phrase	Claim(s)	Google's Construction	P.U.M.'s Construction
USER-SPECIFIC DATA FILES/USER			
"user-specific data files"	'040 Patent: 1, 32	<u>Google's original construction:</u> "data files unique to the user" <u>Google's alternative construction:</u> "data files restricted to a particular user"	"the monitored user interactions with data and a set of documents associated with the user"
"user" / "user [u]"	'040 patent: 1, 11, 21, 22, 32 '276 patent: 1, 3, 5, 6, 21, 23, 24	"person operating a computer"	"a person operating a computer as represented by a tag or identifier"
"monitored user interactions with data"	'040 Patent: 1, 32	"user interactions with data obtained from the monitoring step of 1(a)" "user interactions with data obtained from the monitoring step of 32(a)"	"the collected information about the user's interactions with data"
DOCUMENT/UNSEEN DOCUMENT			
"document"	Passim	<u>Google's original construction:</u> "an electronic file" <u>Google's alternative construction:</u> "an electronic file including text or any type of media"	<u>PUM's original construction:</u> "text or any type of media" <u>PUM's alternative construction:</u> "electronic text or any type of electronic media"
"unseen document"	'040 Patent: 1; 32	"document not previously seen by any user"	"document not previously seen by the user"
PRESENT/PRESENTING			
"present" or "presenting"	'276 Patent: 1, 21, 23	"display[ing]"	"to provide or make available"
INDEFINITE PHRASES			

Claim Term/Phrase	Claim(s)	Google's Construction	P.U.M.'s Construction
"documents of interest to the user" / "documents [that are] not of interest to the user"	'276 patent: 1, 5, 14, 21, 23	Indefinite	<u>PUM's original construction:</u> "text or media for which the user has a positive response" / "text or media for which the user has a negative response or has ignored" <u>PUM's alternative construction:</u> "electronic text or media for which the user has a positive response"/ "electronic text or media for which the user has a negative response or has ignored"
"user interest information derived from the User Model"	'040 Patent: 21	Indefinite	"interests or other information inferred from the User Model"
ORDER OF STEPS AND ANTECEDENT BASIS			
order of steps	'040 Patent: 1, 32 '276 Patent: 1, 23	<u>Google's original constructions:</u> <u>'040 Patent, 1 and 32</u>: 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). <u>'276 Patent, 1</u>: 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). <u>276 Patent, 23</u>: step (a), (b), (c), (d), (e), and (f) in that order <u>Google's alternative constructions:</u>	<u>PUM's original constructions:</u> <u>'040 Patent, claims 1 and 32</u>: "steps may be performed in a consecutive, non-consecutive, repeating, and/or overlapping order, except that step (d) must be performed (at least once) before step (e) is performed" <u>276 Patent, claims 1 and 23</u>: "steps may be performed in a consecutive, non-consecutive, repeating, and/or overlapping order, except that step [d] must be performed before step [e] and the 'applying' portion of step [f] must be

Claim Term/Phrase	Claim(s)	Google's Construction	P.U.M.'s Construction
		'040 Patent, 1 and 32; '276 Patent, 1 and 23: "The claimed steps must be performed in order, but individual steps may be repeated."	performed before step [g]"

PUM's alternative constructions:

'040 Patent, claims 1 and 32: "steps may be performed in a consecutive, non-consecutive, repeating, and/or overlapping order, except that step (d) must be performed (at least once) before step (e) is performed, and step (f) is performed after step (e)"

'276 Patent, claim 1: "steps may be performed in a consecutive, non-consecutive, repeating, and/or overlapping order, except that step [d] must be performed before step [e] and the 'applying' portion of step [f] must be performed before step [g]; the 'identifying' portion of step [f] must be done at least once before the applying portion of step [f], but need not occur after steps [d] and [e]"

'276 Patent, claim 23: "steps may be performed in a consecutive, non-consecutive, repeating, and/or overlapping order, except that step [d] must be performed before the 'applying' portion of step [e], which must be performed before step [f], which must be performed before |

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			step [g]; the 'identifying' portion of step [e] must be done at least once before the applying portion of step [e], but need not occur after step [d]"
antecedent basis terms			
"User u"/ "the user" and "the user u"	'040 Patent: 1, 11, 21, 32	"A user u" and "the user" / "the user u" refer to the same user.	No construction necessary
"user" / "the user"	'276 Patent: 1, 6, 21, 23	"A user" and "the user" refer to the same user	No construction necessary
"user-specific data files" / "the user-specific data files"	'040 Patent: 1, 32	"user-specific data files" and "the user-specific data files" refer to the same files	No construction necessary
"a document d" / "the document"	'040 Patent: 1, 11, 32	"a document d" and "the document" refer to the same document.	No construction necessary; alternatively, "the document" in step (e) of the '040 patent refers to "the unseen document d" earlier in that claim element
"a document" / "the document"	'276 Patent: 6	"a document" and "the document" refer to the same document	No construction necessary
"a learning machine" / "the learning machine"	'040 Patent: 1, 32	"a learning machine" and "the learning machine" refer to the same learning machine.	No construction necessary
"a user-specific learning machine" / "the user-specific learning machine"	'276 Patent: 1, 5, 23	"a user-specific learning machine" and "the user-specific learning machine" refer to the same user-specific learning machine	No construction necessary
"a probability $P(u|d)$ that an unseen document d is of interest to the user u"/ "the probability	'040 Patent: 1, 32	"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" refer to the same probability.	No construction necessary

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P(u|d)" / "the estimated probability"			
"parameters of a learning machine" / "the parameters"	'040 Patent: 1, 32	"parameters of a learning machine" and "the parameters" refer to the same parameters.	No construction necessary
"a user model" / "the user model"	'040 Patent: 1, 21, 32	"a user model" and "the "user model" refer to the same user model.	No construction necessary
"a search query" / "the search query"	'276 Patent: 1, 21	"a search query" and "the search query" refer to the same search query	No construction necessary