

EXHIBIT 7

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PATENT OWNER SUBMISSION
RESPONSE TO OFFICE ACTION

Sir:

The following remarks are submitted in response to the Office Action of May 27, 2011.

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INTRODUCTION

In the first Office Action on the merits, claims 1, 11, 21, 22, 32 and 34 were rejected as follows:

1. Primary reference: *Mladenic*

a. Claims 1, 11, 32 and 34 were rejected under 35 USC 102(a) and (b) as being anticipated by *Mladenic*.

b. Claims 1, 11, 32 and 34 were rejected under 35 USC 103(a) as being obvious when considering *Mladenic* in view of *Yang*.

c. Claim 11 was rejected under 35 USC 103(a) as being obvious when considering *Mladenic* in view of *Culliss*.

d. Claim 21 was rejected under 35 USC 103(a) as being obvious when considering *Mladenic* in view of *Refuah*.

e. Claim 22 was rejected under 35 USC 103(a) as being obvious when considering *Mladenic* in view of *Culliss*.

f. Claim 34 was rejected under 35 USC 103(a) as being obvious when considering *Mladenic* in view of *Culliss*.

2. Primary reference: *Wasfi*

a. Claims 1, 21, 22 and 32 were rejected under 35 USC 102(a) and (b) as being anticipated by *Wasfi*.

b. Claim 11 was rejected under 35 USC 103(a) as being obvious when considering *Wasfi* in view of *Culliss*.

c. Claim 22 was rejected under 35 USC 103(a) as being obvious when considering *Wasfi* in view of *Culliss*.

d. Claim 34 was rejected under 35 USC 103(a) as being obvious when considering *Wasfi* in view of *Culliss*.

3. Primary reference: *Refuah*

a. Claims 1, 11, 21, 22, 32 and 34 were rejected under 35 USC 102(e) as being anticipated by *Refuah*.

b. Claims 1, 21, 22, 32 and 34 were rejected under 35 USC 103(a) as being obvious when considering *Refuah* in view of *Mladenic*.

4. Primary reference: *Culliss*

a. Claims 1, 11, 22, 32 and 34 were rejected under 35 USC 102(e) as being anticipated by *Culliss*.

b. Claims 1, 11, 22, 32 and 34 were rejected under 35 USC 103(a) as being obvious when considering *Culliss* in view of *Mladenic*.

c. Claim 21 was rejected under 35 USC 103(a) as being obvious when considering *Culliss* in view of *Refuah*.

d. Claim 21 was rejected under 35 USC 103(a) as being obvious when considering *Culliss* in view of *Mladenic* and *Refuah*.

SUMMARY OF RESPONSE

In this response, no claims are being amended. As demonstrated in detail below, claims 1, 11, 21, 22, 32 and 34 are patentable and should be confirmed over the cited references, whether considered alone or in the combinations proposed in the Office Action.

STATUS OF CLAIMS

Claims 1, 11, 21, 22, 32 and 34 are presented without amendment in the form as issued in US Patent 6981040 (hereinafter, the “‘040 Patent”). No new claims are being added.

STATEMENT REGARDING CONCURRENT PROCEEDINGS

The '040 Patent is the subject of a litigation styled Personalized User Model LLP v. Google, Inc., Case No. 1:09-CV-525-LPS, currently pending in the United States District Court for the District of Delaware.

STATEMENT REGARDING DECISION GRANTING REEXAMINATION

In the Decision Granting Reexamination, a summary of the prosecution history of the '040 Patent stated that “Applicants argued that Gerace had no way of recommending a document that was entirely unseen by any user.” Decision Granting Inter Partes Reexamination, dated 05/27/2011, at p. 5. Commentary by the Reexamination Examiner suggested that this was the basis on which the '040 Patent was granted. These comments are not supported in the record.

During prosecution of the application which led to the '040 Patent, and in response to an Office Action, the then applicant of US Application 09/597,975 (the “'975 application”) submitted a response which stated,

Gerace's teaching is concerned with finding similar user(s), among the existing set of users with a fixed set of categories. By having a set of users that clicked or viewed an Ad that was served to them *Gerace* finds similar users (i.e. user(s) that like similar categories within the fixed set of categories) to serve them that Ad. If the AD or document belongs to a category X that is not listed or not part of the set of existing users, then *Gerace's* system has to present this Ad or unseen document to a random set of users until sufficient statistics about the users that like this has emerged. In other words, it is not taught nor is it suggested how the first set of users or the first user are/is presented

with an unseen document or an unseen Ad. *Gerace* has no answer to that problem!

Accordingly, it is noted that *Gerace* does not and can not estimate probability $P(u|d)$ that an unseen document is of interest to a user (*See independent claims elements 1(e) and 32(e)*).¹

In the subsequent Notice of Allowance dated 12/22/2005, no “reasons for allowance” were provided. The Notice simply indicated that claims 1-62 were allowed.

The Reexamination Examiner has no basis for concluding that “Applicants argued that *Gerace* had no way of recommending a document that was entirely unseen by any user”, or suggesting that this was a basis for allowance. In fact, the record is silent as to a basis for allowance. Moreover, the foregoing argument does not state that “*Gerace* had no way of recommending a document that was entirely unseen by any user”. Instead, the argument was, “*Gerace* does not and can not estimate probability $P(u|d)$ that an unseen document is of interest to a user”.

¹ Reply under 37 CFR 1.111 in U.S. Application No. 09/597,975, dated 8/4/2005, at p. 4 (emphasis in original).

REMARKS

1. Response to Rejections Based on Primary Reference Mladenic

*A. Claims 1, 11, 32 and 34 are Not Anticipated Under 35 USC 102(a) or 102(b) by Mladenic.*²

The Office Action asserts that claim 1 is anticipated by Mladenic's article describing the design and implementation of the *Personal WebWatcher*, a system that "observes users of the WWW and suggests pages they might be interested in." *Mladenic* at p. 2, ll. 17-18. For at least the reasons discussed below, this conclusion is wrong.

"A claim is anticipated only if **each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.**" *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), *see also* MPEP § 2131.02. "The **identical invention must be shown in as complete detail as is contained in the . . . claim.**" *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Accordingly, "there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic &*

² The *Mladenic* reference bears no date of publication. Accordingly, its status as a reference suitable for consideration under either 35 USC 102(a) or 102(b) has not been established by the Examiner.

Section 102(b) provides, in relevant part, that an invention is not patentable if it was "described in a printed publication" more than one year prior to the filing date of the application from which the patent issued. 35 U.S.C. § 102(b). Section 102(a) focuses on the date of invention, rather than an application's filing date, and negates patentability if "the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent". 35 U.S.C. § 102(a). In either instance, a reference cannot constitute a "printed publication" if it has not been made "publicly accessible." *In re Klopfenstein*, 380 F.3d 1345, 1348, 72 USPQ2d 1117, 1119 (Fed. Cir. 2004). That inquiry focuses on the reference's accessibility to the "public interested in the art." *Id.*

The Examiner bears the burden of establishing an asserted reference's suitability as prior art under section 102 and must, as part of presenting a *prima facie* case of unpatentability supplying a factual basis for any rejection. *See, e.g., In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). An important component of that factual basis is establishing the status of a cited reference as prior art under a statutory provision. *See* MPEP 706.02(a), requiring examiners to determine and compare the effective date of an application with the date of the reference.

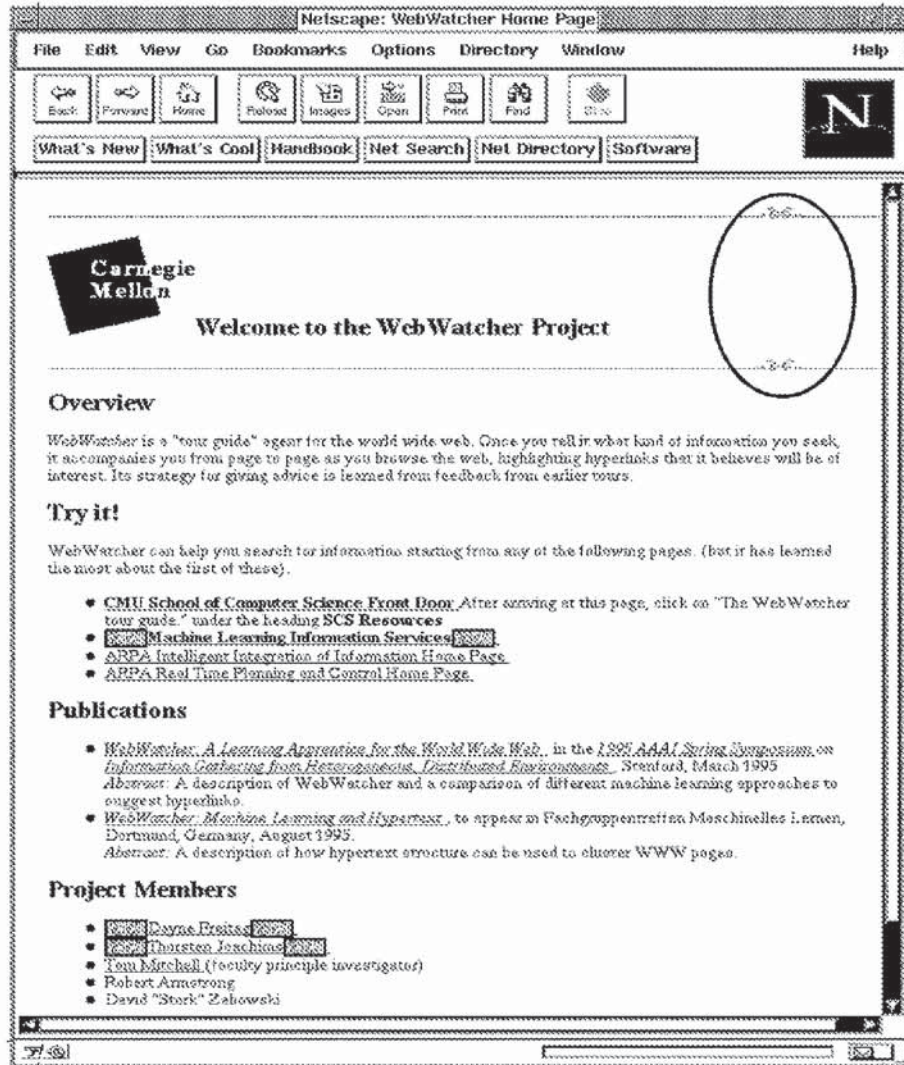
Here, there has been no basis provided for establishing the date of the *Mladenic* reference. The reference itself bears no such date and the Examiner has not proffered any basis for concluding that the reference is, in fact, prior art to the '040 Patent under any statutory provision. Absent such evidence, there has been no *prima facie* case of unpatentability established, and all rejections based on *Mladenic* should be removed.

Research Found. v. Genentech, Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

The Personal WebWatcher system uses a “learned model of user interests” to “suggest hyperlinks on new HTML-pages requested by and presented to the user via Web browser [sic] that enables connection to ‘proxy’ [sic] eg. Netscape.” *Mladenic* at p. 2, ll. 19-21. Importantly, like its WebWatcher forerunner, the Personal WebWatcher highlights related hyperlinks on the current page and/or adds new hyperlinks to the current page. *See id.* at p. 2, ll. 37-38. An example of an HTML page returned by the Personal WebWatcher system is provided in Figure 3 of *Mladenic*, and is reproduced below for convenience.

The figure has been annotated to highlight a “banner”, which *Mladenic* describes on p. 8, “There is a banner at the top of the page showing that PWW is ‘watching over the user’s shoulder’.” *Id.* at p. 8, ll. 4-5. The annotated hyperlinks illustrated in the page are the means by which the Personal WebWatcher makes suggestions to the user. *See id.* at p. 8, ll. 2-4 ([I]n Figure 3 three hyperlinks are suggested by PWW . . .”).

In order to make suggestions such as those illustrated in the figure, the Personal WebWatcher employs a learning process in which “requested pages are analyzed and a model of user interests is generated/updated.” *Id.* at p. 3, ll. 6-7. This model is “designed to predict if some document is positive or negative example of user interests.” [sic] *Id.* at p.10, ll. 2-3. However, during its actual operation (i.e., during the time the Personal WebWatcher is ‘watching over a user’s shoulder’ to determine which hyperlinks to highlight, etc.), the Personal WebWatcher “actually predict[s] interestingness of [a] document based on the hyperlink pointing to it, and not [on the] document itself”. *Id.* at p. 10, ll. 5-6.



During the learning phase, the Personal WebWatcher examines documents represented as a *bag of words* using frequencies of words, *id.* at p. 4, ll. 17-18, and a Naïve (Simple) Bayesian classifier operates on the frequency vectors to generate the model of user interests. *Id.* at p. 7, ll. 20-22. The learning makes use of documents actually visited by the user and documents one step behind the hyperlinks of visited documents and stores them as positive or negative examples of user interests (depending on whether the user visited the document or not). *Id.* at p. 8, ll. 13-16. Note that this analysis of the actual documents occurs only at “off-line” times (*e.g.*, at night) and that during actual Web browsing times, interestingness of a document is based solely on a hyperlink pointing to it. *Id.* at p. 10, ll. 5-9.

From the above, it is immediately apparent that the invention recited in claim 1 of the '040 Patent is not shown or described in *Mladenic*. Stated differently, the reference fails to disclose each and every element as set forth in the claim. Accordingly, claim 1 cannot be anticipated by *Mladenic*.

Claim 1 recites,

A computer-implemented method for providing automatic, personalized information services to a user u , the method comprising:

a) transparently monitoring user interactions with data while the user is engaged in normal use of a computer;

b) 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;

c) estimating parameters of a learning machine, wherein the parameters define a User Model specific to the user and wherein the parameters are estimated in part from the user-specific data files;

d) analyzing a document d to identify properties of the document;

e) 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; and

f) using the estimated probability to provide automatic, personalized information services to the user.

Beginning with “transparently monitoring”, it is readily apparent from *Mladenic*'s discussion that Personal WebWatcher is not transparent in its monitoring. Indeed, the

whole purpose of the Personal WebWatcher is to be explicitly overt in its monitoring. Highlights that are believed to point to Web pages of interest to a user are specifically called out through highlighting or other modification. *See, e.g., Mladenic* at p. 9, Fig. 3, showing three specially highlighted links to Web pages. In some cases, new hyperlinks are even added to documents. *Id.* at p. 2, l. 38. Moreover, users are continuously reminded that Personal WebWatcher is watching their every activity through the addition of the banners shown in the highlighted section of the Web page illustrated in *Mladenic*'s Fig. 3, above.

Returning pages that are specially highlighted and/or annotated in this fashion is not “transparent monitoring”. If anything, it is the antithesis of same. Users are constantly reminded of the monitoring that is taking place. *Mladenic*'s Personal WebWatcher is akin to a Web-based “Big Brother”, keeping a user under constant overt surveillance, monitoring the user's activities, and acting thereon. Accordingly, because *Mladenic* fails to teach or suggest “transparently monitoring” user interactions with data while the user is engaged in normal use of a computer, as recited in claim 1 and, if anything, teaches exactly the opposite thereof, *Mladenic* cannot anticipate claim 1.

Additionally, *Mladenic* does not teach “analyzing a document *d* to identify properties of the document”, as recited in claim 1.

In the claim, it is these *identified properties* that are applied to the learning machine to estimate a probability, $P(u|d)$, that an unseen document *d* is of interest to the user *u*. That is, the claim is concerned with the properties of the unseen document. These properties are identified through analysis of the unseen document.

Above, it was noted that Personal WebWatcher “actually predict[s] interestingness of [a] document based on the hyperlink pointing to it, and not [on the] document itself”. *Id.* at p. 10, ll. 5-6. First, the hyperlinks pointing to a document are attributes of a current document being viewed by a user, not properties of some other document. Second, it is a currently viewed document (and not the unseen document) that is analyzed in order to identify the hyperlinks. These are two distinct differences from the method recited in claim 1.

Even if the hyperlinks analyzed by Personal WebWatcher are somehow interpreted as “properties” of the documents pointed to by those hyperlinks (a point which is not conceded here), it is still the case that the documents pointed to by the hyperlinks are not analyzed in order to identify the hyperlinks. Instead, it is the documents on which the hyperlinks are presented which are analyzed. This is in sharp contrast to the language of claim 1 and, accordingly, claim 1 cannot be anticipated by *Mladenic*.

Finally, *Mladenic* does not teach *estimating parameters of a learning machine, wherein the parameters define a User Model specific to the user and wherein the parameters are estimated in part from the user-specific data files*, as recited in claim 1.

In the Personal WebWatcher system, the “learner” that generates the model of user interests examines documents visited by the user, assigns indices to words in those documents, calculates scores for each word, and produces a representation of the documents as bags-of-words with the assigned scores. *Id.* at p. 9, ll. 3-8. These scored word representations form the “model” of user interests and when new hyperlinks on newly visited documents are encountered, the new hyperlinks are deconstructed in a similar fashion and compared against the model to be scored. *Id.* at p. 7, ll. 36-39 (describing the “advisor”). Those scoring above a threshold are recommended to the user. *Id.* at p. 7, l. 39 - p. 8, l. 1.

Thus, in producing the model of user interests, the “learner” portion of the Personal WebWatcher does not *estimate parameters of a learning machine*. Instead, the “learner” assembles a scored word map that is used for comparison purposes whenever new hyperlinks are encountered. Such a word map is useful for the thresholding operation described by *Mladenic*, but does not rise to the level of the learning machine with parameters estimated from user-specific data files recited in claim 1. Accordingly, claim 1 is patentable over *Mladenic*.

Claim 11 depends from claim 1 and recites,

The method of claim 1 further comprising 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.

Because of its dependency, claim 11 is patentable over *Mladenic* for at least all of the same reasons as claim 1. Furthermore, *Mladenic* fails to teach estimating a posterior probability $P(u|d,q)$ that a document is of interest to *the* user, as recited in the claim.

In claim 11, the posterior probability is a probability assigned after a relevant event is taken into account. More specifically, the event is the query q , and the probability in question is that of a document d being of interest to *the* user. The Office Action overlooks the important distinction between *the* user and *all* users. At p. 2. (the portion of the reference relied upon in the Office Action), *Mladenic* is describing the previously developed WebWatcher, which “is designed to serve all users”. *Mladenic* at p. 2, ll. 41-42. Because WebWatcher is concerned with all users, and not *the* user, it follows that WebWatcher cannot and does not determine a posterior probability that a document is of interest to *the* user. Indeed, this much is reported in the reference. This is yet a further reason that *Mladenic* does not anticipate claim 11.

Claim 32 recites,

A program storage device accessible by a central computer, tangibly embodying a program of instructions executable by the central computer to perform method steps for providing automatic, personalized information services to a user u , the method steps comprising:

a) transparently monitoring user interactions with data while the user is engaged in normal use of a client computer in communication with the central computer;

b) 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;

c) estimating parameters of a learning machine, wherein the parameters define a User Model specific to the

user and wherein the parameters are estimated in part from the user-specific data files;

d) analyzing a document d to identify properties of the document;

e) 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; and

f) using the estimated probability to provide automatic, personalized information services to the user.

As demonstrated above with respect to claim 1, *Mladenic* does not teach “transparently monitoring user interactions”, “analyzing a document d to identify properties of the document” or estimating parameters of a learning machine, wherein the parameters define a User Model specific to the user and wherein the parameters are estimated in part from the user-specific data files, as recited in claim 32. Accordingly, for at least the same reasons as claim 1, claim 32 is not anticipated by *Mladenic*.

Claim 34 recites,

The program storage device of claim 32 wherein analyzing the document d provides for the analysis of documents having multiple distinct media types.

Because of its dependency from claim 32, claim 34 is not anticipated by *Mladenic* for at least the same reasons as claim 32.