

EXHIBIT 8

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**PATENT OWNER SUBMISSION
RESPONSE TO OFFICE ACTION**

Sir:

The following remarks are submitted in response to the Office Action of October 24, 2011.

Please charge any shortages and credit any overages of fees in connection with this application to Deposit Account No. 19-3140.

Respectfully submitted,
SNR Denton US LLP

Date: December 23, 2011

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SUMMARY OF RESPONSE

In this response, no claims are being amended. As demonstrated in detail below, claims 1, 3, 5-7, 14 and 21-24 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, 3, 5-7, 14 and 21-24 are presented without amendment in the form as issued in US Patent 7,685,276 (hereinafter, the “‘276 Patent”). No new claims are being added.

STATEMENT REGARDING CONCURRENT PROCEEDINGS

The ‘276 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.

The ‘276 Patent claims priority to U.S. Patent 6,981,040, which is the subject of the above-mentioned litigation and a pending *inter partes* reexamination proceeding, Control No. 95/001,569.

REMARKS

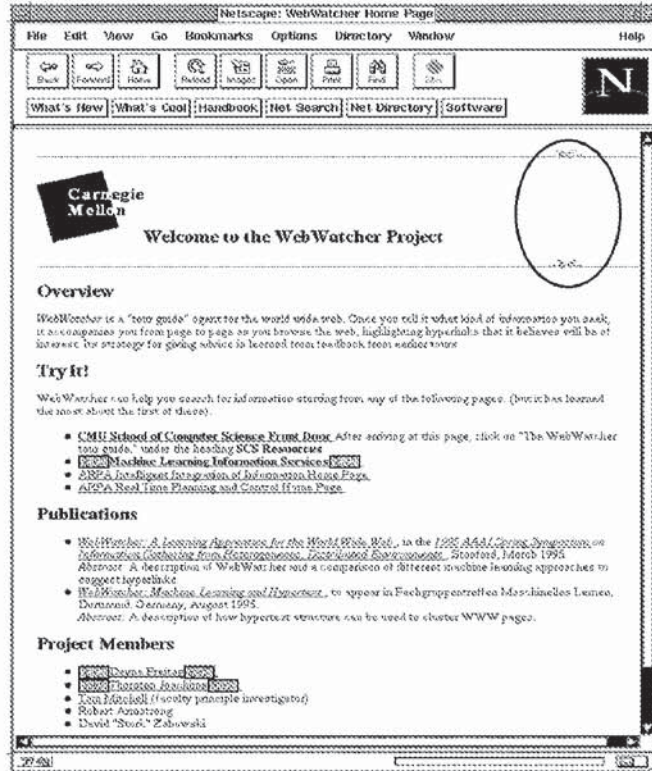
1. Response to Rejections Based on Primary Reference Mladenic

Issue #1: Claims 1, 5, 6, 14, 21 and 23 are Not Anticipated Under 35 USC 102(a) or 102(b) by Mladenic.

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 & 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. 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 . . .”).

Unlike the WebWatcher, which “assist[ed] user[s] in locating information on the World Wide Web [by] taking keywords from the user, suggesting hyperlinks and receiving evaluation”, *id.* at p. 1, ll. 17-19, and see *id.* at p. 2, the Personal WebWatcher does not involve search. Instead, the personal WebWatcher observes HTML pages that are specifically requested by a user. *Id.* at p. 2, ll. 18-19, and see *id.* at p. 3, l. 5 (“it doesn’t ask the user for any keywords”). The addresses of these pages are stored, *id.* at p. 3, ll. 5-6, so that during an off-line, learning phase, the Personal WebWatcher can revisit those pages in order to analyze them and generate/update a model of user interests. *Id.*

Stated differently, rather than interacting with a user on the basis of search requests and responses in order to make suggestions such as those illustrated in the figure above, the Personal WebWatcher employs a separate 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. During actual operations (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 ‘276 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, *Mladenic* cannot anticipate claim 1.

To better understand these conclusions, consider claim 1 of the ‘276 Patent, which recites,

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

transparently monitoring user interactions with data while the user is engaged in normal use of a browser program running on the computer;

analyzing the monitored data to determine documents of interest to the user;

estimating parameters of a user-specific learning machine based at least in part on the documents of interest to the user;

receiving a search query from the user;

retrieving a plurality of documents based on the search query;

for each retrieved document of said plurality of retrieved documents: identifying properties of the retrieved document, and applying the identified properties of the retrieved document to the user-specific learning machine to estimate a probability that the retrieved document is of interest to the user; and

using the estimated probabilities for the respective plurality of retrieved documents to present at least a portion of the retrieved documents to the user.

According to claim 1, a search query is received from a user and a plurality of documents is retrieved based on the search query. *Mladenic* describes no such search query or any documents returned in response to it. Instead, as indicated above, *Mladenic's* Personal WebWatcher operates on specific Web pages requested by a user via a browser, storing the addresses of those pages for the later, learning phase. While the prior WebWatcher may have interacted with its users in the context of a search, *Mladenic* is quite clear that such a mechanism is not employed by the Personal Web Watcher (“it doesn’t ask the user for any keywords”). *Mladenic* at p. 3, l. 5. Consequently, *Mladenic* does not teach “receiving a search query from the user”, as recited in claim 1.

Because *Mladenic* does not teach receiving a search query from the user, it follows that *Mladenic* cannot teach “retrieving a plurality of documents based on the search query”, as further recited in claim 1. Instead, *Mladenic* relies on users to specify

particular documents of interest, and the Personal WebWatcher “watches over the user’s shoulder” to record the addresses of those documents. *Id.* at p. 2, ll. 18-19, p. 3, ll. 3-7.

Because *Mladenic* does not teach receiving a search query from the user, and so cannot teach “retrieving a plurality of documents based on the search query”, it follows that none of the documents discussed in the *Mladenic* paper are “retrieved documents” as recited in claim 1. Hence, *Mladenic* cannot be said to teach “for each retrieved document of said plurality of retrieved documents: identifying properties *of the retrieved document*, and applying the identified properties *of the retrieved document* to the user-specific learning machine to estimate a probability that *the retrieved document* is of interest to the user”, as recited in claim 1 (emphasis added). The claim recites the retrieved documents, being those documents retrieved “based on the search query”. Because *Mladenic* does not teach such a search query (indeed, specifically indicates that no such search query exists in the Personal Web Watcher system), it necessarily follows that *Mladenic* cannot teach any procedures (such as “identifying properties”, and “applying the identified properties”) that involve such retrieved documents.

Because *Mladenic* cannot teach “identifying properties”, and “applying the identified properties” for the reasons discussed above, it further follows that *Mladenic* cannot teach “estimat[ing] a probability that the retrieved document is of interest to the user”, as recited in claim 1. Of course, this must necessarily be the case because there is no *retrieved document* based on the search query.

Finally, because *Mladenic* cannot be said to teach estimating a probability that the retrieved document is of interest to the user, it necessarily follows that *Mladenic* cannot be said to teach “using the estimated probabilities for the respective plurality of retrieved documents to present at least a portion of the retrieved documents to the user”, as recited in claim 1. Of course, this conclusion is inescapable because, once again, there are no *retrieved documents* (based on the search query) in the *Mladenic* Personal Web Watcher system.

In short, *Mladenic*’s failure to teach a system which employs search query leads to an inescapable conclusion that this reference cannot anticipate claim 1 inasmuch as none of the elements of the claim which recite such a search query and/or retrieved

documents based on the search query are found in this reference. Hence, claim 1 is patentable over *Mladenic*.

Claim 1 is further patentable over *Mladenic* because it is readily apparent from *Mladenic*'s discussion that Personal WebWatcher does not “transparently monitor[]” user interactions with data, as recited in the claim. Instead, the Personal WebWatcher is explicitly overt in its monitoring. Links that are believed to point to Web pages that will be of interest to a user are specifically called to the user’s attention 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 it. 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 “applying the identified properties of the retrieved document to the user-specific learning machine to estimate a probability that the retrieved document is of interest to the user”, as recited in claim 1.

In the claim, the *identified properties* that are applied to the learning machine are properties of the retrieved document and the properties are applied to the user-specific learning machine to estimate the probability that the retrieved document is of interest to the user. Above, it was noted that there are no “retrieved documents” in the sense used in claim 1. Further, 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. If somehow a Web page that is currently being viewed by a user is regarded as

a “retrieved document”, and hyperlinks on that Web page are regarded as properties of the retrieved document (the one currently being viewed by the user), then the claim limitation at issue is not met because those hyperlinks are not applied to any learning machine to estimate a probability that the same currently viewed document is of interest to a user. Instead, the hyperlinks are used to predict the interestingness of the document to which the hyperlinks point (a document that is not the retrieved document). If, on the other hand, one regards the hyperlinks on the currently viewed Web page as properties of the documents to which they point, then the hyperlinks are not properties of the retrieved document, as required by claim 1. Instead, they are properties of some other documents. In either instance, the teachings of *Mladenic* fail to meet the requirements of the claim and, accordingly, *Mladenic* cannot anticipate claim 1.

Finally, *Mladenic* does not teach *estimating parameters of a user-specific learning machine*, 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 user-specific 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 user-specific learning machine recited in claim 1. Accordingly, claim 1 is patentable over *Mladenic*.

Claim 5 depends from claim 1 and recites,

The method of claim 1, further comprising analyzing the monitored data to determine documents not of interest to the user, and wherein estimating parameters of a user-specific learning machine further comprises estimating parameters of a user-specific learning machine based at least in part on the documents not of interest to the user.

Because of its dependency on claim 1, claim 5 is patentable over *Mladenic* for at least all of the same reasons as claim 1. Furthermore, it follows that because *Mladenic* fails to teach *estimating parameters of a user-specific learning machine*, as discussed above, *Mladenic* cannot teach “wherein estimating parameters of a user-specific learning machine further comprises estimating parameters of a user-specific learning machine based at least in part on the documents not of interest to the user”, as recited in claim 5. This is a further reason why claim 5 is patentable over *Mladenic*.

Claim 6 depends from claim 1 and recites,

The method of claim 1, wherein monitoring user interactions with data for a document comprises monitoring at least one type of data selected from the group consisting of information about the document, whether the user viewed the document, information about the user's interaction with the document, context information, the user's degree of interest in the document, time spent by the user viewing the document, whether the user followed at least one link contained in the document, and a number of links in the document followed by the user

Because of its dependency on claim 1, claim 6 is patentable over *Mladenic* for at least all of the same reasons as claim 1. Further, because the monitoring of user actions recited in the parent claim is “transparently monitoring”, it follows that the monitoring recited in claim 6 is also “transparently monitoring” and that all of the recited instances thereof must be instances of such transparently monitoring. As discussed above, *Mladenic* does not teach “transparently monitoring”, hence, it follows that *Mladenic* cannot teach the

kinds of instances of transparently monitoring recited in claim 6. Thus, *Mladenic* cannot anticipate claim 6.

Claim 14 recites,

The method of claim 1, wherein identifying properties of the retrieved document comprises determining whether at least one of said documents of interest contains a link to said retrieved document.

Because of its dependency on claim 1, claim 14 is patentable over *Mladenic* for at least all of the same reasons as claim 1.

Further, because *Mladenic* does not teach “retrieved document[s]” of the kind recited in claim 1, it follows that *Mladenic* cannot teach “determining whether at least one of said documents of interest contains a link to *said retrieved document*”, as recited in claim 14. As explained above, *Mladenic* does not teach receiving a search query from the user, and so cannot teach, “retrieving a plurality of documents based on the search query”. It therefore follows that none of the documents discussed in the *Mladenic* paper are “said retrieved document”, recited in claim 14. Because there is no teaching of a “retrieved document” in *Mladenic*, there can be no determination as to whether any documents of interest contain a link to “said retrieved document”. Thus, *Mladenic* does not anticipate claim 14.

Claim 21 recites,

The method of claim 1, wherein using the estimated probabilities for the respective plurality of retrieved documents to present at least a portion of the retrieved documents to the user comprises presenting to the user at least said portion of the retrieved documents based on the estimated probability that the retrieved document is of interest to the user and the relevance of the retrieved document to the search query.

Because of its dependency on claim 1, claim 21 is patentable over *Mladenic* for at least all of the same reasons as claim 1.

Further, because *Mladenic* does not teach “receiving a search query”, “retrieved document[s]” or using “estimated probabilities for the respective plurality of retrieved documents to present at least a portion of the retrieved documents to the user”, as in claim 1, it follows that *Mladenic* cannot teach “presenting to the user at least said portion of the retrieved documents based on the estimated probability that the retrieved document is of interest to the user and the relevance of the retrieved document to the search query”, as recited in claim 21. As explained above, *Mladenic* does not teach receiving a search query from the user. It therefore follows that none of *Mladenic*’s computations can be made based on any “relevance of the retrieved document to the search query”. Indeed, and as discussed above, there are no “retrieved documents” in the sense of claim 1 (or claim 21) in *Mladenic*’s Personal WebWatcher. Consequently, not only can there be no presentation (of anything) based on relevance of the retrieved document to the search query, there can be no presentation of “portion of the retrieved documents” either. Simply put, *Mladenic* cannot anticipate claim 21, because *Mladenic* does not teach or suggest any of these elements of the claim.

Claim 23 recites,

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

transparently monitoring user interactions with data while the user is engaged in normal use of a browser program running on the computer;

analyzing the monitored data to determine documents of interest to the user;

estimating parameters of a user-specific learning machine based at least in part on the documents of interest to the user;

collecting a plurality of documents of interest to a user;

for each of said plurality of collected documents:
identifying properties of the collected document, and
applying the identified properties of the collected document to the user-specific learning machine to estimate a probability that the collected document is of interest to the user;

using the estimated probabilities for the respective plurality of collected documents to select at least a portion of the collected documents;

presenting said selected collected documents to said user.

As discussed above with respect to claim 1, *Mladenic* does not teach “transparently monitoring”. Instead, the Personal WebWatcher is explicitly overt in its monitoring. Links that are believed to point to Web pages that will be of interest to a user are specifically called to the user’s attention 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 it. 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 browser program running on a computer, as recited in claim