

B. Claims 1, 11, 32 and 34 are Not Obviated Under 35 USC 103(a) by Considering Mladenic in View of Yang.

With respect to claims 1 and 32, the Office Action asserts that *Yang*'s disclosure of a k-Nearest Neighbor algorithm somehow cures any deficiencies of *Mladenic* that might be present. This is error.

At the outset, it is important to understand that *Yang*'s teachings of a k-Nearest Neighbor approach are entirely cumulative to those of *Mladenic*. The *Mladenic* reference itself discusses the use of a k-Nearest neighbor approach and in fact reports that it yields better results than the Naïve Bayesian classifier. See *Mladenic* at p. 11, bottom paragraph (reporting the use of both approaches), and p. 12, ll. 8-9 (indicating the k-Nearest Neighbor approach yielded better results). Accordingly, there would be no need for one of ordinary skill in the art to combine the teachings of *Yang* with those of *Mladenic* inasmuch as *Mladenic* already reports on the use of same.

Further, even if for some reason one of ordinary skill in the art did combine the teachings of these two references, manifest deficiencies still remain. It remains the case that the proposed combination of references still fails to 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 claims 1 and 32 and discussed above.

The Office Action makes no assertion that *Yang* teaches the elements of “transparently monitoring user interactions” or “analyzing a document d to identify properties of the document”, hence, combining *Yang* with *Mladenic* cannot cure any deficiencies of *Mladenic* in this regard.

Also, it has already been observed that the Personal WebWatcher system employs a “learner” that fails to 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 claims 1 and 32. Irrespective

of the classification approach employed (k-Nearest Neighbor or Naïve Bayesian), this failing would still remain. Accordingly, claims 1 and 32 remain patentable over *Mladenic* even when considered in combination with *Yang*.

With respect to additional subject matter recited in claims 11 and 34, nothing in *Yang* is cited as adding to the teachings of *Mladenic* in any regard. Accordingly, claims 11 and 34 remain patentable over the combination of *Mladenic* and *Yang* for at least the reasons discussed above with respect to *Mladenic*.

C. Claim 11 is Not Obviated Under 35 USC 103(a) by Considering Mladenic in View of Culliss.

Claim 11 depends from claim 1 and is patentable over *Mladenic* for all of the reasons set forth above with respect to claim 1. The Office Action relies on *Culliss* for its teachings regarding a search query that is accepted from a user and a resultant display of squibs of matched articles in accordance with their comparison scores. Such teachings are duplicative and cumulative to those of *Mladenic*. *Mladenic* already describes returning search results in response to a query and highlighting links in those search results. Adding the teachings of *Culliss* does not enhance the knowledge of one of ordinary skill in the art with respect to the subject matter of claim 11.

As indicated above, claim 11 concerns the posterior probability that a document d is of interest to user u , given a query submitted by the user. In the *Culliss* scheme, a user's personal data is used to retrieve articles related to the user's search request and the retrieved articles are ranked according to a relevancy score. *Culliss* at 5:40-48. In this scheme there is no estimating of a posterior probability, all that is done is matching of various key words and related personal interests of different users in order to rank search results. The scheme operates on the notion that if one user who had certain associated personal profile data selected a search item, then that item should be ranked higher in search results for a second user sharing that certain associated personal profile data (assuming the two users used similar search queries). *See, e.g., Culliss* at 12:41 - 13:24. No probability estimate is involved in such a determination. Instead, the ranking is governed solely by matchings of the various elements. Adding such teachings to those of

Mladenic would, therefore, not yield the subject matter of claim 11 and so claim 11 is not obvious in view of the combination of these references.

*D. Claim 21 is Not Obviated Under 35 USC 103(a) by Considering Mladenic in View of Refuah.*³

Claim 21 recites,

The method of claim 1 further comprising sending to a third party web server user interest information derived from the User Model, whereby the third party web server may customize its interaction with the user.

This claim depends from claim 1 and is patentable over *Mladenic* for all of the reasons set forth above with respect to claim 1.

The Office Action relies on *Refuah* for its teachings regarding the use of a user's "mood" and "persona" to affect web pages provided to the user, and asserts that it "would have been obvious to one skilled in the art [to apply the teachings of *Refuah* to *Mladenic*], as it merely would have shifted the location where the document analysis and filtering takes place." This conclusion is unsupported speculation. The Office Action provides nothing to support this contention and, indeed, it appears insupportable. Personal privacy is an ever-evaporating thing in the Internet age and many have commented on the lack of one's ability to control information being provided to third parties such as advertisers and the like. Ceding control over filtering of search results and the like to unknown third party web servers seems highly unlikely inasmuch as users would quickly lose control over their Internet "personas".

Moreover, the virtual personas described by *Refuah* are not "derived from [a] User Model" which defines parameters of a learning machine, as required by the present claim. Instead, the virtual personas are either defined through a question and answer session, *Refuah* at 22:15-18, are selected from a library of pre-defined personas and

³ For the reasons discussed below, *Refuah* is not properly considered as prior art to the '040 Patent and all rejections which rely on *Refuah* should be removed.

modified by individual users, *id.* at 21:40-44, or are compiled through monitoring of user actions on the Internet. *Id.* at 21:22-24. Hence, even if the teachings of *Refuah* were combined with those of *Mladenic*, one would not arrive at the presently claimed invention because the interest information would not be derived from a User Model that defines parameters of a learning machine, as claimed. Accordingly, claim 21 is not obviated by the combination of *Mladenic* and *Refuah*.

E. Claim 22 is Not Obviated Under 35 USC 103(a) by Considering Mladenic in View of Culliss.

Claim 22 recites,

The method of claim 1 wherein the monitored user interactions include a sequence of interaction times.

Claim 22 remains patentable over *Mladenic* for all of the same reasons as claim 1 discussed above. Further, the Office Action does not allege that *Mladenic* teaches “the monitored user interactions include a sequence of interaction times”, as recited in claim 22.

As discussed above, *Culliss* is concerned with the use of key terms. *Culliss* discloses altering the key term scores or key term total scores of articles “according to whether they were displayed to a user, whether they were selected by a user, how much time users spent with the article, etc.” *Culliss* at 2:43-46. However, determining how much time the user spends with an article is not the same as monitoring a sequence of interaction times. Moreover, it remains the case that any monitoring as taught by *Mladenic* is not transparent monitoring. Hence, the combination of *Mladenic* and *Culliss* would, at best, teach overt monitoring of how much time a user spends with an article, and this is not what is recited in claim 22. Hence, claim 22 remains patentable over this combination of references.

F. Claim 34 is Not Obviated Under 35 USC 103(a) by Considering Mladenic in View of Culliss.

By virtue of its dependency, claim 34 remains patentable over *Mladenic* for all of the same reasons as claim 32 discussed above. Adding any teachings of *Culliss* concerning items such as text, audio clips, video clips, etc. fails to cure any of these deficiencies. Hence, even if the proposed combination of the teachings of *Mladenic* and *Culliss* were made, one would not arrive at the invention recited in this claim. In particular, the combination of the references would still fail to 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.

Further, while *Culliss* may indicate that the Internet can include a variety of different kinds of documents, files, etc., *id.* at 2:19-25, *Culliss* does not teach how to *analyze* documents having multiple distinct media types, as claimed. Indeed, nowhere does the Office Action indicate where such teachings (of analysis of these different media types, rather than simple acknowledgment of their existence) can be found in the cited reference. Accordingly, claim 34 is not obvious in view of the combined teachings of *Mladenic* and *Culliss*.

2. Response to Rejections Based on Primary Reference Wasfi

A. Claims 1, 21, 22 and 32 are Not Anticipated Under 35 USC 102(a) or 102(b) by Wasfi.

The Office Action alleges anticipation of the claims under both 102(a) and 102(b). However, the *Wasfi* reference itself provides only a copyright date of 1999.⁴ At best, this could only indicate a publication date as early as January 1, 1999 (although this is extremely unlikely considering this day is a holiday). At worst, the publication date is

⁴ The form PTO/SB08 that was initial by the examiner asserted a publication date of Jan. 1999, however, the reference itself does not support any such determination. Instead, the reference bears only a legend that states, “Copyright ACM 1999 1-58113-098-8/99/01”. It is irrelevant, for purposes of this reexamination, whether the conference at which the paper was delivered occurred in 1999. The only date of importance is the date on which the subject reference qualified as a printed publication. A copyright date of 1999 does not allow for specificity of such a date.

December 31, 1999. In either case, the publication date would be less than one year prior to the priority date of the present patent, December 28, 1999.

The Office Action has not alleged that any of the claimed subject matter of the present patent is not entitled to its December 28, 1999, priority date. Accordingly, the *Wasfi* reference cannot be prior art under 35 USC 102(b) and any such rejection should be removed.

Furthermore, *Wasfi* does not anticipate claim 1 under any statutory provision. As indicated above, to anticipate a claim, “The **identical invention must be shown in as complete detail as is contained in the . . . claim.**” *Richardson, supra*, 868 F.2d at 1236, 9 USPQ2d at 1920. In this case, claim 1 recites several features which are not disclosed by *Wasfi*, including,

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.

The Office Action correctly notes that *Wasfi* discloses a context model that is “built progressively as users jump from one page to another using any navigation technique.” *Wasfi*, p. 61, col. 2, ll. 7-8. However, these monitored access patterns are collected across *all users* of a Web site and are specific, not to any particular user, but *to the Web site*. That is, the data files highlighted in the commentary set forth in the Office Action are Web-site specific data files, not user-specific data files. In contrast, claim 1 requires the updating of data files that are *user-specific*. Because *Wasfi* fails to disclose the updating of user-specific data files as required by claim 1, the claim cannot be anticipated by *Wasfi*.

Claim 1 also recites,

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.

Wasfi describes a learning module that “handles the task of mapping user interest to the profile [a description of a user’s interests] and maintaining the correlation between the two.” *Id.* at p. 61, col. 1, ll. 38-40, and see *id.* at p. 58, col. 1, l. 24. This learning module is used to determine how many times a particular Web page is referenced within a Web site (visibility) and to determine a frequency of occurrence for a user’s viewing a particular page based on the user’s previously viewed page by using a context model module that is built progressively as users jump from one page to another within a Web site. *Id.* at p 61, col. 1, l. 48 - col. 2, l. 8. The context model is built by updating the frequency of occurrence of a user selection of a particular page in an order-0 sub-model and updating the frequency of occurrence of the particular page in order-1 sub-model based on the user’s previous page. *Id.* at p. 61, col. 2, ll. 9-12.

Thus, the context model is *not* specific to a particular user. Instead, it is assembled from monitored actions of a large number of users. Indeed, this was one of the principal limitations of the scheme acknowledged in *Wasfi* at p. 63, col. 1, ll. 39-41. Without the collection of a large population of user information, the context model is not able to accurately represent page entropies (the basis on which next page likelihoods are based).

Thus, even if the learning module of *Wasfi* were analogous to the learning machine of claim 1 (a point which is not conceded here),⁵ it would still remain the case that this learning module is constructed on the basis of *Web-site specific* data files that represent the activities of *many users*. This is in sharp contrast to the present claim, which recites parameters of a learning machine estimated from *user-specific* data files. Accordingly, claim 1 is not anticipated by *Wasfi*.

Claim 1 further recites,

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

⁵ *Wasfi* describes a learning module that determines Web site / page usage by measuring how many times a particular page is referenced within the Web site and how often a user accesses the particular page based on a user’s previously accessed page. Such measurements do not appear to be estimates of any parameters. Instead, they appear to be rote data compilations.

document to the learning machine having the parameters defined by the User Model;

Wasfi's profile builder assumes that the importance or interestingness of a page to a user is the entropy of the page based on its conditional probability of being accessed following a sequence of pages accessed by the user. *Id.* at p. 59, col. 1, ll. 32-36. As noted above, the page entropy is determined on the basis of data collected for a large number of users. *Id.* at p. 63, col. 1, ll. 39-41. Thus, rather than determining interestingness of a document on the basis of an individualized learning machine (*i.e.*, one that has its parameters defined by a User Model), *Wasfi* determines interestingness on the basis of a collaborative filter than relies on actions of many prior users. *See Id.* at p. 61, col. 2, ll. 42-54.

It is true that *Wasfi* also describes the use of a content-based filter, however, the content-based filter does not determine a probability. Instead, the content-based filter correlates page content with the user's preferences according to a scalar product of two vectors, D (the page vector) and Q (the user interest vector). *Id.* at p. 61, col. 2, ll. 22-40. *Wasfi* identifies this as a "similarity metric". *Id.* Nowhere does *Wasfi* identify the similarity metric as an estimated probability. Instead, it is a measurable value determined from empirical data (*e.g.*, weights of keywords within a page). Thus, *Wasfi* does not disclose estimating probability as presently claimed, and claim 1 is not anticipated by *Wasfi*.

Claim 21 depends from claim 1 and is not anticipated by *Wasfi* for at least all of the same reasons as claim 1. Further, *Wasfi* fails to teach "sending to a third party web server user interest information derived from the User Model, whereby the third party web server may customize its interaction with the user", as recited in claim 21.

The ProfBuilder of *Wasfi* assists the user by finding relevant information on a single Web site. It is left for "future research" to determine how to maintain "user profiles across different Web sites . . . [s]o that when the user jumps to another site, the users profile will also be transferred to the new site whose ProfBuilder will search for pages similar to the profile." *Id.* at p. 63, col. 2, ll. 6-10. In other words, the transfer of user interest information is acknowledged as an unresolved issue by *Wasfi* and this cannot

qualify as an enabling disclosure which would anticipate the present claim. *See, e.g.*, MPEP 2121.01 (recognizing that in order for a cited reference to anticipate a claim, the reference must provide an enabling disclosure of the claimed subject matter), *and see Elan Pharm., Inc. v. Mayo Found. For Med. Educ. & Research*, 346 F.3d 1051, 1054, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003).

Furthermore, even if this description is somehow read as sufficiently enabling, according to *Wasfi*, any transferred user profile is for subsequent use by a ProfBuilder application operating in conjunction with the new site not the third party Web server. Consequently, *Wasfi* fails to anticipate claim 21.

Wasfi also fails to anticipate claim 22. Claim 22 depends from claim 1 and therefore is patentable over *Wasfi* for at least all of the same reasons as claim 1. Moreover, claim 22 specifies the monitored user interactions include a sequence of interaction times. *Wasfi* simply fails to mention monitoring a sequence of interaction times of any user when interacting with data. At best, *Wasfi* discloses implementing a timeout mechanism for an IP address after a predetermined amount of idle time so that when the IP address becomes active after the predetermined period of time, the user is identified as a new user. While this may somehow determine when a user has been inactive it is not monitoring a sequence of interaction times as required by claim 22. Hence, claim 22 is not anticipated by *Wasfi*.

Like claim 1, claim 32 recites

- 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, and

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.

Above, it was demonstrated that *Wasfi* fails to teach each and every one of these features, Hence, claim 32 is not anticipated by *Wasfi* for at least the same reasons as claim 1.

B. Claim 11 is Not Obviated Under 35 USC 103(a) by Considering Wasfi in View of Culliss.

Claim 11 depends from claim 1 and is patentable over *Wasfi* for all of the reasons set forth above with respect to claim 1. The Office Action relies on *Culliss* for its teachings regarding a search query that is accepted from a user and a resultant display of squibs of matched articles in accordance with their comparison scores. Assuming for the moment that such a combination is proper, adding these teachings of *Culliss* to those of *Wasfi* are irrelevant to the reasons for patentability of claim 11 over *Wasfi* and therefore does not render the subject matter of claim 11 obvious to one of ordinary skill in the art.

Further, *Culliss* does not teach the subject matter recited in claim 11. Claim 11 concerns the posterior probability that a document d is of interest to user u , given a query submitted by the user. In the *Culliss* scheme, a user's personal data is used to retrieve articles related to the user's search request and the retrieved articles are ranked according to a relevancy score. *Culliss* at 5:40-48. In this scheme there is no estimating of a posterior probability, all that is done is matching of various key words and related personal interests of different users in order to rank search results. The scheme operates on the notion that if one user who had certain associated personal profile data selected a search item, then that item should be ranked higher in search results for a second user sharing that certain associated personal profile data (assuming the two users used similar search queries). *See, e.g., Culliss* at 12:41 - 13:24. No probability estimate is involved in such a determination. Instead, the ranking is governed solely by matchings of the various elements. Adding such teachings to those of *Wasfi* would, therefore, not yield the subject

matter of claim 11 and so claim 11 is not obvious in view of the combination of these references.

Finally, the proposed combination of these references is not one which would be made by those of ordinary skill in the art and certainly not one that would have a likelihood of success. It is a known limitation of the *Wasfi* ProfBuilder that it can only handle the pages of a single Web site. *Wasfi* at p. 63, col. 2, ll. 4-5. Nothing in the *Wasfi* reference provides an indication of how the problem of multiple web sites can be addressed. Indeed, this is a topic specifically left for “future work”. *Id.*

Culliss, on the other hand, is directed to organizing the hundreds of millions of documents, files, databases, text collections, audio clips, video clips available via the Internet in order to provide answers to user’s queries. *Culliss* at 2:19-24 and 5:40-48. How one would apply such teachings in the context of *Wasfi*’s ProfBuilder is a subject of complete speculation. It is apparent that the author of the *Wasfi* reference felt the problem was one requiring research and in fact the usefulness of ProfBuilder had not even been formally evaluated at the time the *Wasfi* reference was published. *Wasfi* at p. 63, col. 2, ll. 28-30.

At a minimum, application of *Culliss* teachings to the *Wasfi* ProfBuilder systems would require the analysis of each and every Web site and each and every page within the Web sites in order to determine it’s similarity to each and every user of the Internet. Such an embodiment is neither contemplated by *Culliss* nor would it be reasonable for any person of ordinary skill in the art to undertake such an endeavor with any expectation of success. This is much more than simply the application of a known technique to a known problem to achieve a predictable result. It is an area of research that not even the *Wasfi* author had completed at the time his paper was published. Such speculative endeavors are not a proper basis on which to make a determination of obviousness.

C. Claim 22 is Not Obviated Under 35 USC 103(a) by Considering Wasfi in View of Culliss.

Claim 22 depends from claim 1 and is patentable over *Wasfi* for all of the same reasons as claim 1, as discussed above. Even if *Culliss* were to teach the subject matter of claim 22 (which it does not), adding such teachings would not cure the underlying deficiencies of *Wasfi* and claim 22 would remain patentable over the combination of references.

Further, as discussed above with reference to claim 21, the combination of *Wasfi* and *Culliss* is not one which would be made by someone of ordinary skill in the art. In particular, the speculative nature of any outcome of such a combination, as well as its impracticability, make such a combination an improper basis on which to reject the present claim.

Finally, *Culliss* does not teach the subject matter of claim 22. *Culliss* is concerned with the use of key terms and discloses altering the key term scores or key term total scores of articles “according to whether they were displayed to a user, whether they were selected by a user, how much time users spent with the article, etc.” *Culliss* at 2:43-46. However, determining how much time the user spends with an article is not the same as monitoring a sequence of interaction times. Hence, the combination of *Wasfi* and *Culliss* would, at best, teach monitoring of how much time a user spends with an article, which is essentially cumulative to *Wasfi*’s teachings regarding timeout of an IP address. In any event, this is not what is recited in claim 22, and so claim 22 remains patentable over this combination of references.

D. Claim 34 is Not Obviated Under 35 USC 103(a) by Considering Wasfi in View of Culliss.

Claim 34 depends from claim 32 and is patentable over *Wasfi* for all of the same reasons as claim 32 discussed above. Even if *Culliss* were to teach the subject matter of claim 34 (which it does not), adding such teachings would not cure the underlying deficiencies of *Wasfi* and claim 34 would remain patentable over the combination of references.

Further, as discussed above with reference to claim 21, the combination of *Wasfi* and *Culliss* is not one which would be made by someone of ordinary skill in the art. In particular, the speculative nature of any outcome of such a combination, as well as its impracticability, make such a combination an improper basis on which to reject the present claim. For example, *Wasfi* provides no insight as to how to assess anything except web pages. The reader is provided no basis for understanding that entropies would be an appropriate (or even possible) means for assess interestingness of any other media type. Similarly recognizing that other media types exist within the vast reaches of the Internet (the sole basis for the combination articulated in the Office Action) is not sufficient to teach one of ordinary skill in the art to somehow modify the *Wasfi* ProfBuilder to accommodate such media types. Accordingly, the rejection of claim 34 on this basis should be removed.

3. Response to Rejections Based on Primary Reference Refuah

A. Refuah is not Prior Art to the '040 Patent under 35 USC 102(e).

The Office Action cites *Refuah*, US Patent 7631032, and alleges its status as prior art to the '040 Patent under 35 USC 102(e). This is error.

Under 35 USC 102(e), only if the subject US patent's international (*i.e.*, PCT) application parent was filed on or after November 29, 2000 (and its corresponding WIPO publication was in English and designated the United States), is the patent's 102(e) date the international filing date (or an earlier filing date if a priority benefit is properly sought). In all other cases, the subject patent's 102(e) date is the date on which the requirements of 35 USC 371(c) (1), (2) and (4) were satisfied. *See* 35 USC 102(e) and MPEP 706.02(a). *Refuah* is a US national stage application under 35 USC 371 that is based on an international application filed January 28, 1999, *i.e.*, before November 29, 2000. Hence, it's 102(e) date is the date on which the requirements of 35 USC 371(c) (1), (2) and (4) were satisfied. According to the face of the *Refuah* patent, this date was July 28, 2000.

The subject '040 Patent was filed June 20, 2000 (excluding any consideration of its priority claim to December 28, 1999), *i.e.*, before the effective 102(e) date of *Refuah*. Therefore, *Refuah* is not prior art under 35 USC 102(e) and all rejections based on *Refuah* must be removed.

B. Claims 1, 11, 21, 22, 32 and 34 are Not Anticipated by Refuah.

In the event the Examiner seeks to rely on the published version of International Application WO99/39281 under 35 USC 102(a), such reliance would be misplaced. *Refuah* does not teach or suggest the inventions recited in independent claims 1 and 32 of the '040 Patent.

Refuah describes a method of searching and retrieving information from the Internet, which is personalized to a particular user as identified by a persona and a mood. *See, Refuah* at Figs. 1 & 2, and 13:53-57, 16:35-37. Contrary to the conclusions set forth in the Office Action, however, *Refuah* does not teach 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. In particular, at 17:44-46, *Refuah* discusses how a site is evaluated for suitability and/or for qualities which are preferred and/or matched to a particular persona. Examples of such qualities include the number of images in the site, expected download times and/or the number of links from the site. *Refuah* at 17:46-48. Evaluation of such criteria is not an estimation of a probability, $P(u|d)$, as recited in claims 1 and 32. At best, it is perhaps a discussion of a matching process to determine if discrete qualities of a site are the same as those included in a persona. Certainly none of these measured qualities are estimates of probabilities.

The Office Action equates the personas described by *Refuah* to the User Model recited in the claims. *See* Office Action at p. 22. However, the Office Action does not identify any “learning machine” described by *Refuah*. Reciting a proposed claim construction advanced by the Patent Owner in the related litigation (as is done in the Office Action) is not a substitute for identifying where in the cited reference the claim

feature is purportedly taught. As stated above, “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). The burden is on the Examiner to present at least a *prima facie* case of anticipation by demonstrating where the features of the claims are found in the cited reference, *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986); *In re Wilder*, 429 F.2d 447, 450, 166 USPQ 545, 548 (CCPA 1970), and only if that burden is met, does the burden of going forward shift. *In re King*, 801 F.2d at 1327, 231 USPQ at 138-39; *In re Wilder*, 429 F.2d at 450, 166 USPQ at 548. Here, because the Examiner has failed to identify where *Refuah* describes a learning machine, no *prima facie* case of anticipation is presented and the rejections of claims 1 and 32 must be withdrawn.

Claim 11 depends from claim 1 (and is therefore not anticipated by *Refuah* for at least all of the same reasons as claim 1) and further recites 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. The Office Action relies on *Refuah* for teaching personalization that can affect “many methods” of information retrieval. *Refuah* at 17:22 -24. The search engine retrieves matches for a query and the user’s persona and mood affect the sorting or filtering of the results. *Id* at 17:27-36.

While interesting, this is not what is being claimed. Filtering search results according to a persona does not necessarily involve estimating a posterior probability. Indeed, it appears *Refuah* makes use of a simple comparison. *Refuah* at 17:36-48. No probabilities, posterior or otherwise, are estimated. Hence, this is a further reason why claim 11 is not anticipated by *Refuah*.

Claim 21 depends from claim 1 (and is therefore not anticipated by *Refuah* for at least all of the same reasons as claim 1) and further recites sending user interest information derived from the User Model to a third party web server. Such subject matter is not taught by *Refuah*. In particular, the virtual personas described by *Rafuah* are not “derived from [a] User Model” which defines parameters of a learning machine, as required by the present claims. Instead, the virtual personas are either defined through a

question and answer session, *Refuah* at 22:15-18, are selected from a library of pre-defined personas and modified by individual users, *id.* at 21:40-44, or are compiled through monitoring of user actions on the Internet. *Id.* at 21:22-24. Accordingly, claim 21 is not anticipated by *Refuah*.

Claim 22 depends from claim 1 and is therefore not anticipated by *Refuah* for at least all of the same reasons as claim 1.

Claim 34 depends from claim 32 and is therefore not anticipated by *Refuah* for at least all of the same reasons as claim 32. In addition, claim 34 recites analysis of documents of different media types. The Office Action hypothesizes that because websites in 1999 could include multiple media types, *Refuah* inherently provides for such analysis. This speculation finds no support in the cited reference. Nothing in *Refuah* describes how the teachings are applicable to documents of different media types, nor has the Office Action established how web pages including multiple types of media are documents of different media types. Without such a determination the Examiner has failed to make out a *prima facie* case of anticipation and the rejections must be removed. *In re King*, 801 F.2d at 1327, 231 USPQ at 138-39; *In re Wilder*, 429 F.2d at 450, 166 USPQ at 548.

C. Claims 1, 11, 21, 22, 32 and 34 are Not Obviated by Considering Refuah in View of Mladenic.

With respect to independent claims 1 and 32, it was previously noted that *Refuah* fails to teach or suggest 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. In particular, at 17:44-46, *Refuah* discusses how a site is evaluated for suitability and/or for qualities which are preferred and/or matched to a particular persona. Examples of such qualities include the number of images in the site, expected download times and/or the number of links from the site. *Refuah* at 17:46-48. Evaluation of such criteria is not an estimation of a probability, $P(u|d)$, as recited in claims 1 and 32. At best, it is perhaps a discussion of a matching process to determine if