UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA (NORFOLK DIVISION)

I/P ENGINE, INC. Plaintiff, v. AOL, INC., *et al.*, Defendants.	Civil Action No. 2:11-cv-512

MEMORANDUM IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT

As construed by the Court, the Asserted Patents in this case, U.S. Patent Nos. 6,314,420 ("the '420 Patent") and 6,775,664 ("the '664 Patent"), claim systems and methods for filtering search results by using content data and [collaborative] feedback data. Summary Judgment is appropriate on several grounds.

First, Plaintiff cannot show a genuine issue of material fact as to whether Defendants infringe the asserted patents; the facts show Defendants do not. [redacted]

[redacted]

Second, two prior art patents – U.S. Patent No. 6,185,558 to Bowman et al. ("Bowman") and U.S. Patent 6,006,222 to Culliss ("Culliss") – describe the same purported invention, and anticipate all asserted claims as construed by the Court and interpreted by Plaintiff. Thus, summary judgment of invalidity for all asserted claims under 35 U.S.C. § 102(e) is appropriate.

Third, laches presumptively applies if a patentee delays bringing suit for more than six years after it knew or should have known of the alleged infringement. In this case, public disclosures from as early as July 2005 mirror the infringement allegations from Plaintiff's Complaint. A reasonably diligent patentee would have investigated such statements to uncover the same supposed basis for Plaintiff's claims more than six years before Plaintiff filed suit in September 2011. Thus, a laches presumption applies in this case. As Plaintiff has come forward with no evidence to rebut the presumption, summary judgment of laches is appropriate.

STATEMENT OF UNDISPUTED FACTS

I. THE ASSERTED PATENTS TEACH FILTERING USING CONTENT AND COLLABORATIVE FEEDBACK DATA

1. Plaintiff alleges infringement of the '420 and '664 Patents. The Asserted Patents originally issued to Lycos, Inc. ("Lycos"), from whom Plaintiff acquired them in the summer of 2011. The '420 Patent issued on November 6, 2001 and the '664 Patent issued on August 10, 2004. The '664 Patent claims priority to, and shares a specification with, the '420 Patent. Both are directed to the concept of filtering search results by combining content data with user feedback data. Plaintiff asserts infringement of claims 10, 14, 15, 25, 27, and 28 from the '420 Patent and claims 1, 5, 6, 21, 22, 26, 28, and 38 from the '664 Patent.

2. Claim 10 of the '420 Patent recites "[a] search engine system comprising":

[a] a system for scanning a network to make a demand search for informons relevant to a query from an individual user;

[b] a content-based filter system for receiving the informons from the scanning system and for filtering the informons on the basis of applicable content profile data for relevance to the query; and

[c] a feedback system for receiving collaborative feedback data from system users relative to informons considered by such users;

[d] the filter system combining pertaining feedback data from the feedback system with the content profile data in filtering each informon for relevance to the query.[1]

'420 Claim 25 is substantially similar, but is cast as a method claim. The asserted dependent claims of the '420 Patent (claims 14, 15, 27, and 28), add limitations such as requiring that the feedback data be passive feedback data.

3. Claim 1 of the '664 Patent recites "[a] search system comprising:

[a] a scanning system for searching for information relevant to a query associated with a first user in a plurality of users;

[b] a feedback system for receiving information found to be relevant to the query by other users;

[c1] a content-based filter system for combining the information from the feedback system with the information from the scanning system and; **[c2]** for filtering the combined information for relevance to at least one of the query and the first user.

'664 Claim 26 is substantially similar, but is cast as a method claim. The asserted dependent claims of the '664 Patent (claims 5, 6, 21, 22, 28, and 38) add elements such as having the filtered information be an advertisement and delivering the filtered information to the first user.

4. During prosecution of the Asserted Patents, the PTO did not state that filtering information by combining content data and user feedback data was novel or patent-worthy. Rather, the PTO appears to have allowed the Patents based on the fact that no prior art taught the use of a "wire," which the patents cite as a continuous query whose results are updated over

[1] Throughout this brief, Defendants have added bracketed letters denoting the various claim steps or elements, for the Court's convenience.

time. (1:57-58.)[2] (Chen Decl. Ex. 1.) None of the asserted claims recite the "wire" that the PTO recited as the alleged point of novelty.

II. PLAINTIFF'S INFRINGEMENT ALLEGATIONS AND THE FUNCTIONALITY OF THE ACCUSED SYSTEMS

5. [redacted]

[2] Unless otherwise noted, all specification citations are from the '420 Patent.

A. Google's Advertising Services

8. [redacted]

B. The Smart Ad Selection System

[redacted]

11. [redacted]

[redacted]

[redacted] [redacted]

[redacted] [redacted]

[redacted] [redacted]

[redacted] [redacted]

3 [redacted]

III. THE BOWMAN PATENT DISCLOSES FILTERING SEARCH RESULTS BY COMBINING CONTENT DATA WITH COLLABORATIVE FEEDBACK DATA

16. The Bowman patent, entitled "Identifying the Items Most Relevant to a Current Query Based on Items Selected in Connection with Similar Queries," was filed on March 10, 1998 and claims priority to a provisional application filed one week earlier. Bowman is accordingly prior art to the Asserted Patents under 35 U.S.C. § 102(e).

17. Bowman functions similarly to a traditional search engine in that it accepts a query from a user and generates a body of results in response. (*See* Chen Decl. Ex. 2 at Abstract; 5:31-32; claim 28.) As in the asserted patents, Bowman then filters those results based on feedback of other users and content filtering. For example, if a user enters the search query "Paris museum vacations," Bowman would generate a body of search result items that contain the words "Paris," "museum," or "vacations." Bowman would then give each of these items a ranking score based on how often they were selected by other users who had entered the query "Paris museum vacations." (*See id.* at Abstract; 2:30-35; 5:32-35; claim 28.) Alternatively, rather than utilizing feedback from all users who entered the same query, Bowman may cluster users into discrete groups (such as age, income, or behavioral groups) and use feedback from users within the same group who entered the same query. (*See id.* at 3:28-33.) In this way, search results returned in response to a given query may have different ranking scores for users in different groups.

18. Some Bowman embodiments further adjust the ranking score of each search result according to its content, by analyzing how many of the terms in the query appear in the search result's content. (*See id.* at 8:50-53; claim 29.) Search results whose content contains all the terms in the query get higher ranking scores, while search results that contain fewer of the query terms get progressively lower ranking scores. (*See id.*) Thus, if a user entered the query "Paris museum vacations," Bowman would give search results that contain the terms "Paris,"

"museum," and "vacations" higher adjustments to their ranking score, while giving search results with two of these terms a lower adjustment (and giving even lower adjustments to search results that contain only one of these terms).

19. The search results are finally presented to the user in ranked order. (*Id.* at Abstract.) Additionally, the system may present only a subset of the search results whose ranking scores exceed a certain threshold, or a predetermined number of search results that have the highest ranking scores. (*See id.* at 9:60-64.)

20. In sum, the final ranking score for each search result in Bowman is generated through a combination of feedback-based data and content-based data. This ranking score is then used to filter which search results are presented to the user.

IV. THE CULLISS PATENT DISCLOSES FILTERING SEARCH RESULTS BY COMBINING CONTENT DATA WITH COLLABROATIVE FEEDBACK DATA

21. U.S. Patent No. 6,006,222 to Culliss, entitled "Method for Organizing Information," was filed on August 1, 1997 and issued on December 21, 1999. Culliss is accordingly prior art to the Asserted Patents under 35 U.S.C. § 102(e).

22. Culliss, like Bowman, is directed to a search engine system that ranks search results based on a combination of the content of the search results and feedback from prior users who had entered the same query and viewed these search results.

23. In Culliss, Internet articles are associated with key terms they contain. (Chen Decl. Ex. 3 at 3:60-64.) For example, two articles about museum-viewing vacations in Paris ("Article 1" and "Article 2") might be associated with the key terms "Paris," "museum," and "vacations" if they both contained those three words.

24. These articles are given a "key term score" for each of the key terms that they contain. (*Id.* at 3:65-66.) Culliss discloses that each key term score might initially be set at 1. (*Id.* at 3:10-4:9.) Thus, in the above example, Article 1 would have a key term score of 1 for

each of "Paris," "museum," and "vacations," and so would Article 2. Alternatively, Culliss discloses that the key term scores might be set to reflect how many times each of the key terms appeared in the document's content. (*See id.* at 14:32-36.)

25. Culliss discloses that the articles are presented to the user in the order dictated by their combined key term scores. (*Id.* at 5:7-17.) For example, if Article 1 had a key term score of 5 for "Paris," 3 for "museum," and 2 for "vacations," its aggregate score for the query "Paris museum vacations" would be 10 (5 + 3 +2). If Article 2 had a key term score of 4 for "Paris," 2 for museum," and 3 for "vacations," its aggregate score for the query "Paris museum vacations" would be 9 (4 + 2 +3). Thus, Article 1 would be presented above Article 2 because it had a higher aggregate score.

26. When a user selects an article whose squib is presented to him, the key term scores for that article which correspond to the terms in the user's query are increased. (*Id.* at 4:37-49.) This is because the user, by selecting the article in response to his query, has implicitly indicated that these key terms from the query are appropriately matched to the article. (*See id.*)

27. For example, if a hypothetical first user who queried "Paris museum vacations" selected Article 2, then Article 2's key term scores for "Paris," "museum," and "vacations" might each rise by +1. (*See id.* at 4:43-45.) The next user who enters the same query would thus see a different rank of articles, based on the new key term scores that reflect the input of the prior user. (*See id.* at 4:66-5:1.) Sticking with the same example, Article 2 would have a new aggregate score of 12 (instead of 9) after the first user selected it, because its key term scores for "Paris," "museum," and "vacations" each increased by +1 when the first user selected it. Thus, a later user who queries "Paris museum vacations" would see Article 2 (which has a new aggregate score of 12) presented above Article 1 (which still has its old aggregate score of 10).

28. In short, the article ranking in Culliss is based on a combination of the articles' content and feedback from previous users who entered the same query. This is because both factors (article content and user feedback) are used to calculate the key term scores that determine the article ranking.

V. GOOGLE PUBLICIZED THE ALLEGEDLY INFRINGING ACTIVITIES MORE THAN SIX YEARS BEFORE PLAINTIFF FILED SUIT

29. As stated above, Plaintiff asserts that AdWords's and AFS's alleged use of "Quality Score" to filter advertisements infringes the asserted claims. Google openly advertised and publicized Quality Score in July and August 2005. (*See* Chen Decl. Exs. 10, 11, 18) And in July 2005, numerous third-party publications also reported on Google's implementation of Quality Score. (*See id.* Exs. 13, 14, 17).

ARGUMENT

I. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

III. [redacted]

[redacted]

4 [redacted]

[redacted]

[redacted]

[redacted]

V. BOWMAN AND CULLISS ANTICIPATE ALL ASSERTED CLAIMS

The Bowman and Culliss references both anticipate every asserted claim of the '420 and '664 Patents. As detailed below, Bowman and Culliss use a combination of feedback-based filtering and content-based filtering to rank and filter search results for relevance to a query. These disclosures anticipate every asserted claim of the '420 and '664 Patents as construed by the Court and interpreted by Plaintiff.

A. Plaintiff's Own Validity Expert Disputes Very Few Elements from Bowman and Culliss

Plaintiff's validity expert (Dr. Jaime Carbonell) does not dispute that the vast majority of claim elements are met by Bowman and Culliss. For both references, Dr. Carbonell merely disputes three issues: (1) whether they employ content analysis; (2) whether they "filter" information; and (3) whether they "search for information" within the meaning of '664 claims 1 and 26. (*See* Chen Decl. Ex. 19 at pp. 17-28.) As discussed below, Dr. Carbonell's positions are demonstrably incorrect, and both Bowman and Culliss anticipate each asserted claim.

B. Bowman Anticipates Claim 10 of the '420 Patent

1. Bowman discloses a search engine system (claim 10 (preamble))

Bowman discloses a "search engine system" as recited by the claim 10 preamble. Specifically, Bowman includes "a query server for generating query results from queries." (*Id.* Ex. 2 at 5:31-32.)

2. Bowman discloses a system for scanning a network to make a demand search for informons relevant to a query from an individual user (claim 10[a])

Claim 10[a] recites "a system for scanning a network to make a demand search for informons relevant to a query from an individual user." The Court construed "scanning a network" as "looking for or examining items in a network" and construed "demand search" as "a single search engine query performed upon a user request." (*See* Dkt. 171 at 23.)

Bowman meets this element. Specifically, Bowman discloses the steps of: "receiving a query specifying one or more terms; generating a query result identifying a plurality of items satisfying the query." (Chen Decl. Ex. 2 at claim 28 [a-b].) This query is submitted by a user, and thus the resulting search is "performed upon a user request." (*See id.* at 7:43-46.) Further, Bowman operates on a networked system of computers. (*See id.* at 5:29-30; 7:66-67.)

3. Bowman discloses a content-based filter system for receiving the informons from the scanning system and for filtering the informons on the basis of applicable content profile data for relevance to the query (claim 10[b])

Claim 10[b] recites "a content-based filter system for receiving the informons from the scanning system and for filtering the informons on the basis of applicable content profile data for relevance to the query." Bowman meets this element, as it receives informons and filters them based on content.

After a search query is entered and search results retrieved, Bowman examines each search result's content profile to see how many query terms it contains. Bowman then may adjust each search result's ranking score so that search results containing every term in the query receive higher adjustments than search results containing fewer terms in the query. Specifically, Bowman explains: "The facility uses rating tables that it has generated to generate ranking values for items in new query results . . . scores may be adjusted to more directly reflect the number of query terms that are matched to the item, so that items that match more query terms than others

are favored in the rankings." (*Id.* at 9:28-53 (emphasis added).) Claim 29 of Bowman also recites adjusting search results' ranking scores based on how many terms from the query are found in each search result's content, by "adjusting the ranking value produced for each item identified in the query result to reflect the number of terms specified by the query that are matched by the item." (*Id.* at claim 29.)

Finally, Bowman filters out (*i.e.*, excludes) search results whose ranking scores fall below a certain threshold, or presents a predetermined number of search results that have the highest ranking scores and filters out all the rest. (*See id.* at 9:60-64.)

(a) Dr. Carbonell's argument that Bowman's "matching" does not use content analysis is incorrect

Plaintiff's expert, Dr. Carbonell, disputes whether Bowman's "matching" technique analyzes whether a query term appears in a search result's content. Dr. Carbonell argues that the matching technique analyzes whether a search result is associated with a query term in Bowman's rating table, which would merely mean that at least one prior user had selected that search result in response to a query containing that term. (*See* Chen Decl. Ex. 19 ¶¶ 84 fn. 3, 85, 88.) In purported support of his opinion, Dr. Carbonell points to two statements from Bowman that refer to ordering search results "in accordance with collective and individual user behavior rather than in accordance with attributes of the items." (*Id.* at ¶ 85 (citing Chen Decl. Ex. 2 at 2:59-3:22; 4:38-48).) But this is a non-sequitur. Neither of these statements mention, or have anything to do with, the "matching" technique disclosed in claim 29 and at 9:50-53 of Bowman. Rather, they occur when discussing more general Bowman embodiments that rely solely on user feedback to rank and filter search results. (*See* Chen Decl. Ex. 2 at 2:59-3:22; 4:38-48.)

Contrary to Dr. Carbonell's argument, Bowman makes clear that "matching" involves content analysis. Indeed, when discussing matching in connection with the prior art, Bowman explicitly states that a query term is "matched" to a search result if it appears in that search

result's content. For example, if the search results are books, Bowman states that a list of books will be "matching the terms of the query" if their "titles contain some or all of the query terms." (*See id.* at 1:30-38.) In that same paragraph, Bowman states that the list of books "may be ordered based on the extent to which each identified item matches the terms of the query." (*Id.* at 1:43-44 (emphasis added).) In other words, the list of books can be ordered based on how many of the query terms are matched to (*i.e.*, contained within) the title of each book.

In nearly verbatim language, dependant claim 29 of Bowman describes this prior art technique of ranking search results according to how many query terms are contained in their content. A simple comparison of claim 29 to the "matching" prior art discussion makes this clear. *Compare* claim 29 ("adjusting the ranking value produced for each item indentified in the query result to reflect the number of terms specified by the query that are matched by the item") *with* 1:43-44 ("the list may be ordered based on the extent to which each identified item matches the terms of the query.") Given the identity of language, the only logical interpretation is that claim 29's matching technique does involve content analysis, and no reasonable jury could find otherwise.

Because Dr. Carbonell's interpretation of Bowman's "matching" technique ignores the plain text of Bowman, Plaintiff cannot rely on Dr. Carbonell's implausible interpretation to alter what Bowman discloses and defeat summary judgment. *See Iovate Health Sci., Inc. v. Bio-Eng. Supp. and Nutrition, Inc.*, 586 F.3d 1376, 1381 (Fed. Cir. 2009) (upholding summary judgment of anticipation despite patentee's submission of an expert declaration, where the Court found that the expert took implausible positions that were inconsistent with the patent specification).

(b) Dr. Carbonell's argument that Bowman does not "filter" search results is incorrect

Although Dr. Carbonell admits that Bowman presents the user with search results that score above a numerical threshold and excludes the rest, he argues that this is somehow not

"filtering" because it is "relative and carried out with reference to the entire ranked list of search results" rather than being an "item-by-item process." (Chen Decl. Ex. 19 ¶ 90.) This argument makes no sense. By setting an absolute numerical threshold and presenting a user with the search results that score above this threshold, Bowman determines, on a non-relative and item-by-item basis, whether each search result has scored highly enough to be presented to the user. Furthermore, Bowman also teaches "select[ing] for prominent display items having top 3 combined scores." (Chen Decl. Ex. 2 at Fig., 9, step 907.) [redacted]

4. Bowman discloses a feedback system for receiving collaborative feedback data from system users relative to informons considered by such users (claim 10[c])

Claim 10[c] recites "a feedback system for receiving collaborative feedback data from system users relative to informons considered by such users." The Court construed "collaborative feedback data" as data from system users with similar interests or needs regarding what informons such users found to be relevant. (D.I. 212 (Revised Markman Order) at 23.)

Bowman meets this element by recording how often users in the same demographic or behavioral group who entered the same search query selected various search results. For example, claim 28[c] of Bowman recites: "for each item identified in the query result, combining the relative frequencies with which users selected the item in earlier queries specifying each of the terms in the query to producing [sic] a ranking value for the item." (emphasis added). Moreover, rather than recording feedback from all users who entered the same query, Bowman may cluster users into groups (such as age, income or behavioral groups) and use feedback from users within the same group who entered the same query. (Chen Decl. Ex. 2 at 3:28-33.)

Because Bowman receives feedback from users in the same demographic or behavioral group, Bowman receives feedback from users "with similar interests or needs" as required by the Court's construction of "collaborative feedback data." Additionally, Plaintiff takes the position that users have "similar interests or needs" as long as they entered the same query.[7] Thus, Bowman's feedback data qualifies as "collaborative feedback data" under Plaintiff's interpretation even when Bowman does not cluster users into discrete groups, because Bowman's feedback data still shows how often users who entered the same query selected a given search result. (*See* Chen Decl. Ex. 2 at 13:42-46; Abstract.)

5. Bowman discloses the filter system combining pertaining feedback data from the feedback system with the content profile data in filtering each informon for relevance to the query (claim 10[d])

Claim 10[d] recites "the filter system combining pertaining feedback data from the feedback system with the content profile data in filtering each informon for relevance to the query." Bowman meets this element, because Bowman combines data regarding the content of informons with collaborative feedback data from other users to determine the most relevant informons to a query. Specifically, Bowman determines each search result item's ranking score by combining collaborative feedback data (showing how often the item was selected by users from the same group who entered the same query) with content profile data (showing how many of the query terms appear in the item's content). (*See id.* at claim 29.) Bowman explicitly states that an item's feedback score is "combined" with its content matching score to produce a final ranking score for the item. (*Id.* at 9:49-53.) The final ranking score is used to determine the item's relevance to the query. (*See id.* at 2:23-24.) As noted above, Bowman then filters out

[7] As Plaintiff stated at the Markman Hearing: "when we look to see who has similar needs or interests, what we are looking at is who else made that same search? Who else made that same query?" (Chen Decl. Ex. 32 at 35:14-17.)

items whose scores fall below a certain threshold, or presents a predetermined number of items with the highest scores and filters out the rest. (*Id.* at 9:60-64.)

C. Bowman Anticipates Claims 14 and 15 of the '420 Patent

Claim 14 depends from claim 10 and further requires "wherein the collaborative feedback data comprises passive feedback data." Claim 15 adds the further requirement that "the passive feedback data is obtained by passively monitoring the actual response to a proposed informon." Bowman meets both these elements, because Bowman's feedback data is derived from passively monitoring users' actual responses to search results – namely, monitoring how often users selected each of those search results. (*See id.* at 2:31-35.)

D. Bowman Anticipates Claims 25, 27, and 28 of the '420 Patent

Claims 25, 27, and 28 contain the same substance as claims 10, 14, and 15, respectively, but are simply recast as method rather than system claims. Thus, Bowman anticipates claims 25, 27, and 28 for the same reasons that it anticipates claims 10, 14, and 15.

E. Bowman Anticipates Claim 1 of the '664 Patent

1. Bowman discloses a search system (claim 1 (preamble))

Bowman recites "a search system" as recited by the preamble. Specifically, Bowman accepts a search query from a user and returns a set of search results. (*See id.* Ex. 2 at 5:31-32 (stating that Bowman includes "a query server for generating query results from queries.").)

2. Bowman discloses a scanning system for searching for information relevant to a query associated with a first user in a plurality of users (claim 1[a])

Claim 1[a] recites "a scanning system for searching for information relevant to a query associated with a first user in a plurality of users." The Court construed "a scanning system" as "a system used to search for information." (Dkt. 171 at 23.) Thus construed, Bowman meets this limitation because it searches for information relevant to a query associated with a first user.

As recited in Claim 28 of Bowman, Bowman discloses "[a] computer-readable medium whose contents cause a computer system to rank items in a search result by: receiving a query specifying one or more terms; generating a query result identifying a plurality of items satisfying the query." (Chen Decl. Ex. 2 at claim 28[a-b].)

Furthermore, Bowman's system is intended for use by a plurality of users, as evidenced by the fact that the system records the collective preferences of multiple users. (*See id.* at 5:33-34; claim 28[c].) Within the plurality of users, Bowman searches for results to a query submitted by a particular user. (*See id.* at 7:42-45.) Therefore, Bowman meets the "first user in a plurality of users" aspect of this claim element.

(a) Dr. Carbonell's position that Bowman does not "search[] for information" is incorrect

Dr. Carbonell disputes that Bowman "searches for information," but he provides no support for this position. He merely states that Bowman lacks this element (Chen Decl. Ex. 19 ¶ 80) and later says that Bowman lacks "full search engine capabilities." (*Id.* at ¶ 83.) Yet, as shown in claim 28 of Bowman, Bowman explicitly claims the steps of "rank[ing] items in a search result" by "receiving a query" and "generating a query result identifying a plurality of items satisfying the query." Because Bowman generates a query result and explicitly calls this query result a "search result," Bowman necessarily teaches that it has searched for these results. Indeed, elsewhere in his report, Dr. Carbonell himself says that Bowman falls within a class of prior art references that he calls the "ad-hoc search group." (*Id.* ¶ 156.)

3. Bowman discloses a feedback system for receiving information found to be relevant to the query by other users (claim 1[b])

Claim 1[b] recites "a feedback system for receiving information found to be relevant to the query by other users." [redacted]

[redacted]

As previously noted, claim 28[c] of Bowman recites: "for each item identified in the query result, combining the relative frequencies with which users selected the item in earlier queries specifying each of the terms in the query to producing [sic] a ranking value for the item." (emphasis added). Thus, Bowman receives feedback about information found to be relevant to the query by other users – *i.e.*, it receives feedback about which search results were selected most often by other users who entered the same query, [redacted] *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) ("A patent may not, like a 'nose of wax,' be twisted one way to avoid anticipation and another to find infringement.").

4. Bowman discloses a content-based filter system for combining the information from the feedback system with the information from the scanning system and for filtering the combined information for relevance to at least one of the query and the first user (claim 1[c])

Claim 1[c] recites "a content-based filter system for combining the information from the feedback system with the information from the scanning system and for filtering the combined information for relevance to at least one of the query and the first user." Bowman also meets this element. As described above, Bowman uses ranking scores that reflect both content data and feedback data. (*See* Chen Decl. Ex. 2 at claims 28-29.) These ranking scores are used to filter the search results for relevance to the query. (*See id.* at Abstract; 2:23-24.)

Combining search results with ranking scores that reflect content and feedback data – as disclosed by Bowman – [redacted].

[redacted] *See Amazon*, 239 F.3d at 1351.

F. Bowman anticipates claim 5 of the '664 Patent

Claim 5 depends from claim 1 and further requires the filtered information to be an advertisement. Bowman meets this element. Specifically, Bowman discloses that system users can purchase the items represented by the search results, such as by adding these items to their virtual shopping carts. (*See* Chen Decl. Ex. 2 at 5:4; 9:2-3; claim 7.) Thus, the search results constitute advertisements for the purchasable items that they represent.

G. Bowman anticipates claim 6 of the '664 Patent

Claim 6 depends from claim 1 and further requires "an information delivery system for delivering the filtered information to the first user." Bowman discloses this element, as it recites that the software facility displays the filtered search results to the user. (*See id.* at 9:56-58.)

H. Bowman anticipates claim 21 of the '664 Patent

Claim 21 depends from claim 1 and further recites "wherein the content-based filter system filters by extracting features from the information." Bowman discloses this element. As discussed above, Bowman extracts words from the content of each search result in order to determine how many words from the query are found in the search result. (*See id.* at 9:50-53; claim 29.)[8]

I. Bowman anticipates claim 22 of the '664 Patent

Claim 22 depends from claim 21 and further recites "wherein the extracted features comprise content data indicative of the relevance to the at least one of the query and the user."

[8] Dr. Carbonell disputes that Bowman meets this limitation, but his position appears to be entirely derivative of his position that Bowman does not use content analysis. (*See* Chen Decl. Ex. 19 ¶ 96.)

Bowman discloses this element, because the words that Bowman extracts from a search result's content indicate how relevant the search result is to the query. (*See id.* at 9:50-53; claim 29.)

J. Bowman Anticipates Claim 26 of the '664 Patent

Claim 26 contains essentially the same elements as claim 1, but is simply recast as a method rather than system claim. Thus, Bowman anticipates claim 26 for the same reasons that it anticipates claim 1.

K. Bowman anticipates claim 28 of the '664 Patent

Claim 28 depends from claim 26 and further recites "the step of delivering the filtered information to the first user." As discussed with respect to claim 6, *supra*, Bowman discloses this element.

L. Bowman anticipates claim 38 of the '664 Patent

Claim 38 depends from claim 26 and further recites "wherein the searching step comprises scanning a network in response to a demand search for the information relevant to the query associated with the first user." Bowman meets this element, as construed, because Bowman looks for or examines items in response to a single search engine query. (*See* Chen Decl. Ex. 2 at claim 28[a-b] (disclosing the steps of "receiving a query specifying one or more terms; generating a query result identifying a plurality of items satisfying the query.") This query is submitted by a user, and thus the resulting search is "performed upon a user request." (*See id.* at 7:43-46.) Finally, Bowman operates on a computer network. (*See id.* at 5:29-30; 7:66-67.)

M. Culliss Anticipates Claim 10 of the '420 Patent

1. Culliss discloses a search engine system (claim 10 (preamble))

Culliss discloses "a search engine system" as required by the claim 10 preamble because Culliss accepts a user's search query and returns a set of search results. (*See* Chen Decl. Ex. 3 at

4:10-26.) Culliss also discloses that its content- and feedback-based methods may be used to rank and order the search results of traditional search engines like Excite and Lycos. (*See id.* at 13:35-45.)

2. Culliss discloses a system for scanning a network to make a demand search for informons relevant to a query from an individual user (claim 10[a])

Claim 10[a] recites "a system for scanning a network to make a demand search for informons relevant to a query from an individual user." The Court construed "scanning a network" as "looking for or examining items in a network" and construed "demand search" as "a single search engine query performed upon a user request." (*See* Dkt. 171 at 23.)

Culliss meets this element. Specifically, Culliss looks for search results (which it calls "articles") in response to a single search engine query entered by a user. (*See* Chen Decl. Ex. 3 at 4:10-25.) These articles are housed on the Internet, which is "an extensive network of computer systems." (*Id.* at 3:45-55 (emphasis added).)

3. Culliss discloses a content-based filter system for receiving the informons from the scanning system and for filtering the informons on the basis of applicable content profile data for relevance to the query (claim 10[b])

Claim 10[b] recites "a content-based filter system for receiving the informons from the scanning system and for filtering the informons on the basis of applicable content profile data for relevance to the query." Culliss meets this element, as it receives informons and filters them based on content. Specifically, Culliss uses articles' aggregate key term scores to rank the articles for relevance to the query (*id.* at 5:2-10), and the key term scores are calculated in part by analyzing each article's content to determine how many times each key term from the query appears in the article. (*See id.* at 14:35-36 ("the [key term] scores can be initially set to correspond with the frequency of the term occurrence in the article.").)

(a) Dr. Carbonell's argument that Culliss does not disclose content analysis is incorrect

Dr. Carbonell argues that Culliss does not disclose content analysis. But he does not dispute that Culliss calculates articles' key term scores in part by counting how many times each key term from the query appears in the article's content. He merely argues that this content-based metric gets diluted over time as an article's key term score gets repeatedly altered based on user feedback, so that "[f]or all intents and purposes, Culliss's rankings are based only on popularity information." (Chen Decl. Ex. 19 ¶ 106.) He gives a specific example of an article whose key term score is initially set at 1 based on content analysis, and then is later clicked on 1,000 times, so that its eventual key term score is based 99.9% on feedback on only .1% on the initial content analysis. (*See id.* at fn. 5.)

However, the fact that content analysis may play less and less of a role in Culliss's system as more and more user feedback is received does not mean that the content analysis is ever absent. Even in the stylized example from Dr. Carbonell's Report, the article's key term score is based on a combination of content data and feedback data – it is just based .1% on content and 99.9% on feedback. Moreover, Dr. Carbonell does not dispute that content analysis can play a dominant role in setting an article's key term score if the term appears many times in the article (thus yielding a high content score) but the article was selected few times by users who queried that term (thus yielding a small feedback-based alteration to the score). Thus, Dr. Carbonell's analysis only confirms that Culliss relies partly on content analysis to set the key term scores for its articles.

(b) Dr. Carbonell's argument that Culliss does not disclose filtering is incorrect

As to the "filtering" limitation, Dr. Carbonell argues that Culliss does not "filter" articles because it merely ranks them. (*See* Chen Decl. Ex. 19 ¶ 108.) Yet Culliss's ranking determines the position in which these articles are presented to users, because Culliss discloses that the article with the highest score is presented to the user in the first or highest position, the article

with the second-highest score is presented in the second position, etc. (*See id.* Ex. 3 at 5:7-17.)

[redacted] Thus, Culliss's system – which presents articles to the user in decreasing order of their key term scores – "filters" these articles [redacted].[9]

4. Culliss discloses a feedback system for receiving collaborative feedback data from system users relative to informons considered by such users (claim 10[c])

Claim 10[c] recites "a feedback system for receiving collaborative feedback data from system users relative to informons considered by such users." The Court construed "collaborative feedback data" as data from system users with similar interests or needs regarding what informons such users found to be relevant. (Dkt. 212 at 23.)

Culliss discloses this element by recording which articles were selected by users who entered a given query and raising the key term scores for terms in the selected articles that match terms in the query. (*See* Chen Decl. Ex. 3 at 4:37-49.) As discussed above, Plaintiff takes the position that users have "similar interests or needs" if they entered the same query. Thus, by receiving and recording the selection choices of users whose queries contained the same terms,

[9] Alternatively, if "filtering" required some articles to be excluded altogether, it would be obvious to modify Culliss so that articles scoring below a certain threshold would be excluded and not presented to the user. As explained above, Bowman discloses this precise technique. (*See* Chen Decl. Ex. 2 at 9:60-64). It would be obvious to modify Culliss so that it performed the same filtering as Bowman, particularly given Dr. Carbonell's position that Bowman and Culliss should be grouped together as fundamentally similar references. (*See id.* Ex. 19 at ¶¶ 136, 156).

Culliss receives "collaborative feedback data" under the Court's construction and Plaintiff's application of the claim.

5. Culliss discloses the filter system combining pertaining feedback data from the feedback system with the content profile data in filtering each informon for relevance to the query (claim 10[d])

Claim 10[d] recites "the filter system combining pertaining feedback data from the feedback system with the content profile data in filtering each informon for relevance to the query." Culliss meets this element. As discussed above, Culliss ranks articles for relevance to a query by calculating their aggregate key term scores for the terms in that query (*id.* at 5:2-10), and each key term score is based on a combination of feedback data and content data. (*See id.* at 4:37-49; 14:35-36.) Indeed, even Dr. Carbonell admits that each article's key term score is based on a combination of content and feedback data – he just asserts that the feedback data will tend to outweigh and dilute the content data over time. (*See id.* Ex. 19 at ¶ 106.)

N. Culliss Anticipates Claims 14 and 15 of the '420 Patent

Claim 14 depends from claim 10 and further requires "wherein the collaborative feedback data comprises passive feedback data." Claim 15 depends from claim 14 and further requires "wherein the passive feedback data is obtained by passively monitoring the actual response to a proposed informon." Culliss meets these limitations because Culliss's feedback data is derived from passively monitoring users' actual response to articles – namely, monitoring how frequently users who had entered the same query selected each of those articles. (*Id.* at 4:32-34.)

O. Culliss Anticipates Claims 25, 27, and 28 of the '420 Patent

30. Claims 25, 27, and 28 contain the same substance as claims 10, 14, and 15, respectively, but are simply recast as method rather than system claims. Thus, Culliss anticipates claims 25, 27, and 28 for the same reasons that it anticipates claims 10, 14, and 15.

P. Culliss Anticipates Claim 1 of the '664 Patent

1. Culliss discloses a search system (claim 1 (preamble))

Culliss discloses "a search system" as recited by the claim 1 preamble because Culliss accepts a search query from a user and returns a set of search results. (*See id.* at 4:10-26.) Additionally, Culliss's content- and feedback-based methods may be used to rank and order the search results of traditional search engines like Excite and Lycos. (*See id.* at 13:35-45.)

2. Culliss discloses a scanning system for searching for information relevant to a query associated with a first user in a plurality of users (claim 1[a])

Claim 1[a] recites "a scanning system for searching for information relevant to a query associated with a first user in a plurality of users." The Court construed "a scanning system" as "a system used to search for information." (Dkt. 171 at 23.) Thus construed, Culliss meets this claim element because it searches for articles relevant to a query associated with a first user among a plurality of users. (*See* Chen Decl. Ex. 3 at 4:10-26.) Culliss also states that its content- and feedback-based methods may be applied to traditional search engines like Excite and Lycos to rank their search results. (*See id.* at 13:35-45.)

Dr. Carbonell states that Culliss does not disclose "searching for information relevant to a query associated with a first user" (Chen Decl. Ex. 19 ¶104), but he provides literally no explanation or support for this statement. Accordingly, Dr. Carbonell's mere *ipse dixit* cannot raise a genuine issue as to whether Culliss discloses this element.[10]

3. Culliss discloses a feedback system for receiving information found to be relevant to the query by other users (claim 1[b])

Claim 1[b] recites "a feedback system for receiving information found to be relevant to the query by other users." [redacted]

[10] Moreover, Dr. Carbonell himself puts Culliss within a class of references that he calls the "ad-hoc search group." (*See* Chen Decl. Ex. 19 ¶ 156) (emphasis added).

[redacted] Culliss meets this element [redacted] because Culliss receives feedback about which articles were selected by other users and uses this data to adjust the articles' key term scores. (*See id.* Ex. 3 at 4:37-49.)

4. Culliss discloses a content-based filter system for combining the information from the feedback system with the information from the scanning system and for filtering the combined information for relevance to at least one of the query and the first user (claim 1[c])

Claim 1[c] recites "a content-based filter system for combining the information from the feedback system with the information from the scanning system and for filtering the combined information for relevance to at least one of the query and the first user." Culliss meets this element by giving articles key term scores that reflect both content and feedback data. (*See* Chen Decl. Ex. 3 at 4:37-49; 14:35-36.) These scores are used to "filter" the articles by determining the position in which the articles are presented to users. (*See id.* at 5:7-17.)

As discussed above, combining search results with ranking scores that reflect content and feedback data – as disclosed by Culliss – [redacted]

Q. Culliss Anticipates Claim 5 of the '664 Patent

Claim 5 depends from claim 1 and further requires the filtered information to be an advertisement. Culliss meets this element, because Culliss explicitly states that the articles which are filtered may be advertisements. (*See id.* at 9:56-62.)

R. Culliss Anticipates Claim 6 of the '664 Patent

Claim 6 depends from claim 1 and further requires "an information delivery system for delivering the filtered information to the first user." Culliss discloses this element, as it recites that the search engine displays squibs of the articles to the user. (*See id.* at 4:25-31.)

S. Culliss Anticipates Claim 21 of the '664 Patent

Claim 21 depends from claim 1 and further recites "wherein the content-based filter system filters by extracting features from the information." Culliss discloses this element. As discussed above, Culliss extracts words from the content of each article in order to determine how often the words from the query are found in these articles. (*See id.* at 14:34-36.)

T. Culliss Anticipates Claim 22 of the '664 Patent

Claim 22 depends from claim 21 and further recites "wherein the extracted features comprise content data indicative of the relevance to the at least one of the query and the user." Culliss discloses this element, because the words that Culliss extracts from an article's content indicate how relevant the article is to the query. (*See id.* at 14:34-36.)

U. Culliss Anticipates Claim 26 of the '664 Patent

Claim 26 contains essentially the same elements as claim 1, but is recast as a method rather than system claim. Thus, Culliss anticipates claim 26 for the same reasons that it anticipates claim 1.

V. Culliss Anticipates Claim 28 of the '664 Patent

Claim 28 depends from claim 26 and further requires "delivering the filtered information to the first user." As discussed with respect to claim 6, *supra*, Culliss discloses this element.

W. Culliss Anticipates Claim 38 of the '664 Patent

Claim 38 depends from claim 26 and further recites "wherein the searching step comprises scanning a network in response to a demand search for the information relevant to the query associated with the first user." As noted above, "scanning a network" has been construed as looking for or examining items in a network, and "demand search" has been construed as a single search engine query performed upon a user request. Culliss meets this element because Culliss searches for articles in response to a single user search query, and these articles are searched for on the vast network of the Internet. (*See* Chen Decl. Ex. 3 at 3:45-55; 4:10-26.)

VI. SUMMARY JUDGMENT THAT LACHES BARS PRE-FILING DAMAGES IS APPROPRIATE

The defense of laches, when proven, bars a patent plaintiff from winning any damages that accrued before the filing of suit. *See A.C. Auckerman Co. v. R.L. Chaides Const. Co.*, 960 F.2d 1020, 1041 (Fed. Cir. 1992) (en banc). A laches defense has two elements: "(1) the plaintiff delayed filing suit for an unreasonable and inexcusable length of time from the time the plaintiff knew or reasonably should have known of its claim against the defendant; and (2) the delay operated to the prejudice or injury of the defendant." *Id.* at 1032. "A presumption of laches arises where a patentee delays bringing suit for more than six years after the date the patentee knew or should have known of the alleged infringer's activity." *Id.* at 1037. When the presumption applies, the laches elements of undue delay and prejudice "must be inferred, absent rebuttal evidence." *Id.* at 1038 (emphasis in original). The plaintiff then bears the burden of rebutting the presumption by producing sufficient evidence to raise a genuine issue of material fact as to whether unreasonable delay and prejudice actually exist. *See id.* at 1038.

When a patent transfers ownership, "a transferee of the patent must accept the consequences of the dilatory conduct of immediate and remote transferors." Donald S. Chisum, CHISUM ON PATENTS § 19.05[2][A][ii] (2011); *accord Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1559 (Fed. Cir. 1997). Thus, if a series of patent owners collectively delayed asserting a patent for more than six years, a defendant may invoke the six-year presumption of laches against any later attempt to assert that patent.

Under these principles, a presumption of laches applies in this case. I/P Engine (the Asserted Patents' present owner) and Lycos (the prior owner) had actual or constructive notice of Google's allegedly infringing activities no later than July 2005, which is more than six years prior to the filing of this lawsuit on September 15, 2011. I/P Engine and Lycos nevertheless failed to assert the Patents for over six years, thereby triggering a presumption of laches.

A. I/P Engine and Lycos Had Actual or Constructive Knowledge of Google's Alleged Infringement Since at Least July 2005.

For purposes of triggering the six-year laches presumption, the period of delay begins when the patentee gains actual or constructive knowledge of the alleged infringement, meaning that patentees have a duty to police their rights. *Wanlass v. General Elec. Co.*, 148 F.3d 1334, 1337-38 (Fed. Cir. 1998). "[I]gnorance will not insulate [a patentee] from constructive knowledge in appropriate circumstances." *Id.* at 1338. Reasonable patentees must investigate potentially infringing "pervasive, open, and notorious activities," including "sales, marketing, publication, or public use of a product similar to or embodying technology similar to the patented invention, or published descriptions of the defendant's potentially infringing activities." *Id.*

A reasonably diligent company holding these asserted patents would have investigated Google's "open" search advertising systems more than six years before the filing of suit in September 2011. Indeed, a reasonably diligent patentee would have become aware of the potential infringement by July 2005, when Google publicly announced Quality Score – the precise aspect of Google's systems that I/P Engine ultimately accused in its Complaint. (*Compare* Chen Decl. Ex. 10 ("The Quality Score is simply a new name for the predicted CTR, which is determined based on the CTR of your keyword, the relevance of your ad text, the historical keyword performance, and other relevancy factors") *with* Dkt. 1 at ¶ 43 ("Google's search advertising systems filter advertisements by using 'Quality Score' which is a combination of an advertisement's content relevance to a search query (e.g., the relevance of the keyword and the matched advertisement to the search query), and click-through-rates from prior users relative to that advertisement (e.g., the historical click-through rate of the keyword and matched advertisement)").

I/P Engine and Lycos thus should have known of Google's alleged infringement by July 2005 at the very latest. In other words, constructive knowledge must be imputed to I/P Engine

and Lycos no later than July 2005. This is more than six years before I/P Engine filed suit on September 15, 2011. Therefore, a presumption of laches applies.

Even beyond the public disclosures of Quality Score in Google's advertising systems, Lycos has long been a Google partner. [redacted]

B. Plaintiff Has Offered No Evidence to Rebut the Laches Presumption.

As a result of the six-year presumption, Plaintiff bears the burden of producing sufficient evidence to raise a genuine issue of material fact as to whether unreasonable delay and prejudice actually exist. *See Aukerman*, 960 F.2d at 1038. To date, however, Plaintiff has come forward with no evidence to rebut the presumption. Accordingly, the presumption must stand.

CONCLUSION

For the foregoing reasons, Defendants respectfully request that the Court grant summary judgment that all asserted claims are not infringed and are invalid as anticipated by Bowman and Culliss. In the alternative, Defendants respectfully request that the Court grant summary judgment that Plaintiff's pre-suit damages are barred by laches.

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/s/ Stephen E. Noona

Stephen E. Noona
Virginia State Bar No. 25367
KAUFMAN & CANOLES, P.C.
150 West Main Street, Suite 2100
Norfolk, VA 23510
Telephone: (757) 624.3000
Facsimile: (757) 624.3169
senoona@kaufcan.com

David Bilsker
David A. Perlson
QUINN EMANUEL URQUHART &
SULLIVAN, LLP
50 California Street, 22nd Floor
San Francisco, California 94111
Telephone: (415) 875-6600
Facsimile: (415) 875-6700
davidbilsker@quinnemanuel.com
davidperlson@quinnemanuel.com

Counsel for Google Inc., Target Corporation, IAC Search & Media, Inc., and Gannet Co., Inc.

By: */s/ Stephen E. Noona*
Stephen E. Noona
Virginia State Bar No. 25367
KAUFMAN & CANOLES, P.C.
150 W. Main Street, Suite 2100
Norfolk, VA 23510
Telephone: (757) 624-3000
Facsimile: (757) 624-3169

Robert L. Burns
FINNEGAN, HENDERSON, FARABOW, GARRETT &
DUNNER, LLP
Two Freedom Square
11955 Freedom Drive
Reston, VA 20190
Telephone: (571) 203-2700
Facsimile: (202) 408-4400

Cortney S. Alexander
FINNEGAN, HENDERSON, FARABOW, GARRETT &
DUNNER, LLP
3500 SunTrust Plaza
303 Peachtree Street, NE
Atlanta, GA 94111
Telephone: (404) 653-6400
Facsimile: (415) 653-6444

Counsel for Defendant AOL, Inc.

CERTIFICATE OF SERVICE

I hereby certify that on September 12, 2012, I will electronically file the foregoing with the Clerk of Court using the CM/ECF system, which will send a notification of such filing (NEF) to the following:

Jeffrey K. Sherwood
Kenneth W. Brothers
DICKSTEIN SHAPIRO LLP
1825 Eye Street NW
Washington, DC 20006
Telephone: (202) 420-2200
Facsimile: (202) 420-2201
sherwoodj@dicksteinshapiro.com
brothersk@dicksteinshapiro.com

Donald C. Schultz **(also served by hand delivery on 9/12/12)**
W. Ryan Snow
Steven Stancliff
CRENSHAW, WARE & MARTIN, P.L.C.
150 West Main Street, Suite 1500
Norfolk, VA 23510
Telephone: (757) 623-3000
Facsimile: (757) 623-5735
dschultz@cwm-law.cm
wrsnow@cwm-law.com
sstancliff@cwm-law.com

Counsel for Plaintiff, I/P Engine, Inc.

/s/ Stephen E. Noona
Stephen E. Noona
Virginia State Bar No. 25367
KAUFMAN & CANOLES, P.C.
150 West Main Street, Suite 2100
Norfolk, VA 23510
Telephone: (757) 624.3000
Facsimile: (757) 624.3169
senoona@kaufcan.com