

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PERSONALIZED USER MODEL, L.L.P.,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 09-525 (JJF)
)	
GOOGLE, INC.,)	
)	
Defendant.)	

NOTICE OF RULE 30(b)(6) DEPOSITION OF GOOGLE, INC.

PLEASE TAKE NOTICE that, pursuant to Rules 26 and 30 of the Federal Rules of Civil Procedure, Plaintiff Personalized User Model, L.L.P. (“P.U.M.”) will take the deposition of Defendant Google, Inc. (“Google”) concerning the topics identified in Schedule A, beginning at 9:00 a.m. on September 10, 2010, or at an otherwise mutually agreeable date, and will be held at the offices of Sonnenschein, Nath & Rosenthal, LLP, 1530 Page Mill Road, Palo Alto, CA 94304, or at an otherwise mutually agreeable location. If the deposition is not completed on the date set out above, the taking of the deposition will continue day to day thereafter or pursuant to the parties’ agreement. The deposition will be recorded by stenographic, videographic, and/or audiographic means.

Pursuant to Rule 30(b)(6) of the Federal Rules of Civil Procedure, Google is directed to designate one or more officers, directors, or managing agents, or other persons who will testify on its behalf, who are most knowledgeable regarding the matters identified in the attached Schedule A. Google is requested to provide a written designation of the names and positions of the officers, directors, managing agents, or other persons designated to testify concerning the matters identified in the attached Schedule and, for each person, identify the matters on which he or she will testify.

P.U.M. reserves the right to serve additional 30(b)(6) notices.

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SCHEDULE A

I. Definitions and Instructions

1. The term “P.U.M.” means Personalized User Model, L.L.P., including all of its current and past officers, directors, agents, employees, consultants, attorneys, and others acting or purporting to act on behalf of Personalized User Model, L.L.P., including all predecessors, subsidiaries, parents, affiliates, and successors.

2. The term “Google” means Google, Inc., including all of its current and past officers, directors, agents, employees, consultants, attorneys, and others acting or purporting to act on behalf of Google, Inc., including all predecessors, subsidiaries, parents, affiliates, and successors.

3. The term “document” is synonymous in meaning and equal in scope to the usage of this term in Federal Rule of Civil Procedure 34(a), including without limitation electronic or computerized data compilations. A draft or non-identical copy is a separate document within the meaning of this term.

4. The term “person” means any natural person or any business, legal or governmental entity, or association.

5. When referring to a person, “to identify” means to give, to the extent known, the person’s full name, present or last known address, and when referring to a natural person, additionally, the present or last known place of employment.

6. When referring to documents, “to identify” means to provide, to the extent known, the: (i) type of document; (ii) general subject matter; (iii) date of the document; and (iv) author(s), addressee(s) and recipient(s).

7. The terms “plaintiff” and “defendant,” as well as a party’s full or abbreviated name or a pronoun referring to a party, mean the party and, where applicable, its officers, directors, employees, partners, corporate parent, subsidiaries, or affiliates. This definition is not intended to impose discovery obligations on any person who is not a party to the litigation.

8. The term “concerning” means relating to, referring to, describing, evidencing, or constituting.

9. The terms “all” and “each” when used individually shall be construed as both all and each.

10. The connectives “and” and “or” shall be construed either disjunctively or conjunctively as necessary to bring within the scope of the discovery requests all relevant responses that might otherwise be construed to be outside of its scope.

11. The use of the singular form of any word includes the plural and vice versa.

12. The term “including” means “including but not limited to.”

13. The term “relating to” means relating to, referring to, concerning, mentioning, reflecting, pertaining to, evidencing, involving, describing, depicting, discussing, commenting on, embodying, responding to, supporting, contradicting, or constituting (in whole or part), as necessary to bring within the scope of the request all relevant responses that might otherwise be construed to be outside of its scope.

14. The term “employee” means any director, trustee, officer, employee, partner, corporate parent, subsidiary, affiliate or servant of the designated entity, whether active or retired, full-time or part-time, current or former, and compensated or not.

15. The term “entity” means any individual and any other cognizable entity, including corporations, proprietorships, partnerships, joint ventures, businesses, consortiums, clubs, associations, foundations, governmental agencies or instrumentalities, societies, and orders.

16. The term “affiliate” means any corporation or entity related to Defendant through corporate ownership of stock such as a parent, subsidiary or sister company, or through common directors, officers, and employees, either at the present time or at any time in the past.

17. The term “the ’040 Patent” means U.S. Patent No. 6,981,040 B1, entitled “Automatic, Personalized Online Information and Product Services.”

18. The term “the ’031 Patent” means U.S. Patent No. 7,320,031 B2, entitled “Automatic, Personalized Online Information and Product Services.”

19. The term “the ’276 Patent” means U.S. Patent No. 7,685,276 B2, entitled “Automatic, Personalized Online Information and Product Services.”

20. The terms “the patents-at-issue” or “the patents-in-suit” mean the ’040 Patent, the ’031 Patent, and ’276 Patent, individually or collectively, and any other asserted patents in this litigation.

21. The term “personalized search” means “more relevant, useful search results, recommendations, and other personalized features that deliver to the user more useful, relevant information on the Internet,” as Google uses that term or variations of it. This term includes but is not limited to the personalization of search results, Adwords, AdSense, other personalized advertising, personalized news, as used, for example, in at least the following links:
<http://www.google.com/support/accounts/bin/answer.py?hl=en&answer=54041>,
<http://www.google.com/support/accounts/bin/answer.py?hl=en&answer=54048>,

<http://googleblog.blogspot.com/2009/12/personalized-search-for-everyone.html>,
<http://googleblog.blogspot.com/2005/06/search-gets-personal.html>,
<https://www.google.com/accounts/ServiceLogin?hl=en&continue=http://www.google.com/history/&nui=1&service=hist>,
www.google.com/press/guides/personalized_overview.pdf,
<http://www.google.com/support/accounts/bin/answer.py?hl=en&answer=54047>,
<http://www.google.com/support/accounts/bin/answer.py?hl=en&answer=55988>,
<http://www.google.com/support/accounts/bin/answer.py?hl=en&answer=106230>,
<http://www.google.com/support/accounts/bin/topic.py?hl=en&topic=14153>, and/or as used by Google in its videos on personalized search found at <http://www.youtube.com/watch?v=EKuG2M6R4VM> and <http://www.youtube.com/watch?v=UsUBnPRtTbI>.

22. The term “Personalized Search Products/Services” means all products or services that provide personalized search results, for example, Google Search and iGoogle.

23. The term “Other Personalized Products/Services” means all products or services that provide personalized features, results, or the display of personalized information found for example, in at least Google News, Blog Search, Google Reader, iGoogle, Google Product Search, and Google Mobile.

24. The term “Personalized Search Advertising Products/Services” means all products or services that provide personalized advertisements in conjunction with Google Search and iGoogle, *i.e.*, Adwords and Google Analytics, including, on thirty party websites.

25. The term “Other Personalized Advertising Products/Services” means all products or services that provide personalized advertisements found in at least Google’s Gmail, YouTube, iGoogle, and partner websites, *i.e.*, AdSense.

26. Grammar and syntax, as used in this Notice, shall be construed and interpreted to give proper meaning and consistency to their context. By way of illustration and not by way of limitation, the singular form of words may include the plural and the plural form of words may apply to each individual person and/or thing, and the use of any gender or tense may be construed to include all genders and tenses, wherever appropriate in these interrogatories, to bring within their scope any relevant information which might otherwise be construed to be outside their scope.

27. Unless otherwise indicated, the use of the name of any party, person, or business organization in the Notice shall specifically include all agents, employees, shareholders, owners, officers, directors, joint ventures, representatives, attorneys, and all other persons acting on behalf of the subject party, person, or business organization.

II. Topics of Deposition

1. Testimony relating to how Google personalizes advertisements, including, but not limited to, the identification of all source code, hardware, and/or other technology involved in such operation.

2. With respect to the testimony requested in Topic 1, provide detailed testimony relating to at least:

- a. Collecting and storing users previous queries, result clicks, ad impressions, ad clicks, ignored ads, the length of time a user spends at site after clicking on an ad, IP addresses, or other information collected or derived about a user, including, but not limited to demographic information, geographic information, web history, and bookmarks;

- b. The use of a GAIA ID and the use of cookies, including, but not limited to, Zweiback, prefID, session cookies and the DoubleClick cookie, to collect, store and retrieve information about a user;
- c. Storing information in Kansas, including, but not limited to, information associated with a logged-in user, a user who is not logged-in, Gaia ID, PREF ID, Zweiback cookie, session cookies, DoubleClick cookie, IP address, browser, toolbar, and/or other cookies and what columns, locations, files, tables, or other means for storing such information involved in those processes;
- d. The use of UBAQ, including, but not limited to, using a cookie to identify a user, the data used by UBAQ, how it is collected, stored and retrieved, and using SmartASS models to adjust the predicted CTR for candidate ad impressions;
- e. The use of all versions of the Ads Mixer to retrieve and serve ads to the user in response to a search request;
- f. The use of Rephil clustering in serving ads to the user, including the source of data used to create Rephil clusters and the process of creating Rephil clusters;
- g. The use of dilip clustering in serving ads to the user, including the source of data used to create dilip clusters and the process of creating dilip clusters;
- h. The use of profiles stored in Kansas;

- i. The calculation of a Quality Score, pCTR, and adjusted pCTR, to rank advertisements retrieved in response to a search request;
 - j. The process by which SmartASS trains models and the process by which these models are used to predict a probability that a user will click an ad (auction pCTR);
 - k. To the extent not covered by subtopics (a-j) above, a complete description of how the ad request is personalized in response to a search request received by Google, beginning with the receipt of the search request by Google and ending with the display of the search results and advertisements on the user's computer.
3. Testimony relating to how Google personalizes search results, including, but not limited to, the identification of all source code, hardware, and/or other technology involved in such operation.
4. With respect to the testimony requested in Topic 3, provide detailed testimony relating to at least:
 - a. The monitoring and collection of click information, keystrokes, submitted queries, results presented, links followed, ignored links, and bookmarks;
 - b. The logging and/or storage of all user actions and user information received by Google, including, but not limited to, click tracking, amount of time spent on a website the user has clicked on, keystrokes, submitted queries, results presented, links followed, ignored links,

bookmarks, demographic information, geographic information, and web history;

- c. The processes involved in storing information in Kansas, including, but not limited to, information associated with a logged-in user, a user who is not logged-in, Gaia ID, PREF ID, Zwieback cookie, IP address, browser, toolbar, session cookie, and/or other cookies and what columns, locations, files, tables, or other means for storing such information involved in those processes;
- d. The processes by which the various Google Search FrontEnds write user-specific data to Kansas;
- e. The analysis and/or processing of stored information, including, but not limited to, user logs, Session Logs, Sessions, Processes Sessions, permission server event logs, and other information associated with a particular user, user ID, cookie, browser, toolbar, or IP address;
- f. The use of the profiler infrastructure, including, but not limited to, how profilers are run; which profilers generate profiles, data, and/or other information used in presenting, collecting, and/or retrieving search results; a list of profilers used to generate profiles, data, and/or other information used by the various twiddlers involved in personalized search; the inputs to those profilers; the outputs of those profilers and where such profiles, data, and/or information is stored; the use of bookmarks to enhance profiles, including but not limited to, the kxp profile; how profiles are built to personalize results for users without a

kxp profile; how profiles are called, retrieved, or otherwise utilized during the use of Google Search;

- g. The use of MapReduce functionalities in document analysis and analysis of data associated with a particular user ID, cookie, browser, toolbar, or IP address, including, but not limited to, the combination of data from separate data sources; the combination of data from different SSTables; and other joins in MapReduce;
- h. The collection, analysis, and storage of information pertaining to particular documents and/or web sites maintained in Google's indices, including, but not limited to, how documents are indexed; what properties, data, statistics, or other information pertaining to a document is stored/indexed; what components of the crawling/indexing system are responsible for analyzing documents; how the properties of the indexed documents are retrieved when a query is received; how pages concerning products are handled, indexed and stored; records of users who have accessed a particular document or web page; the generation of quality signals, such as PageRank, IndyRank, AuthorRank; the generation of Topicality Signals, such as through the use of Mustang's ascorer; the assignment of DocID's; the identification of relevant terms; tokenization; the information available in per-doc data shards; the generation, storage and use of topic classifiers, including, but not limited to, ODP categories, Rephil clusters, and dilip

clusters; and the association of topics, clusters and categories with webpages;

- i. The processes involved in retrieving, collecting, and/or gathering a set of documents in response to a query, including, but not limited to, categorizing and expanding a user query, the collection of thin results in Superroot; the retrieval of documents using Mustang, Teragoole, and/or other indices; the process of fetching docinfo and/or fattening results in Superroot;
- j. The processes involved in ranking search results, including, but not limited to, how ranking scores are calculated; the use of twiddlers in re-ranking search results; the role of the Kaltix system/team in ranking search results; how twiddlers are called; what stored data is involved in these processes; the use of profiles in ‘twiddling’ search results; ranking recommendations made by pre-doc relevance twiddlers between passes; the use of profiles and bookmarks in making recommendations; what data kept in memory is involved in these processes; and session ranking;
- k. The use of machine learning or statistical algorithms including, but not limited to, logistic regression, Bayesian classifiers, Bayesian network, decision trees, to create models of individual users and groups of users, the data that is used by the algorithms, where the learned models are stored and how the models are used; and

1. To the extent not previously covered by subtopics (a-k), a complete description of how Google personalizes search results beginning with the receipt of the query from the user and ending with the display of the search results on the user's computer.

5. Testimony relating to the process by which Google's AdSense system (*e.g.*, third-party websites, Gmail and YouTube) personalizes advertisements to the user, including, but not limited to, the identification of all source code, hardware, and/or other technology involved in such operation.

6. With respect to the testimony requested in Topic 5, provide detailed testimony relating to at least:
 - a. Collecting and storing users previous queries, result clicks, ad impressions, ad clicks, ignored ads, the length of time a user spends at site after clicking on an ad, IP addresses, or other information collected or derived about a user, including, but not limited to, demographic information, geographic information, web history, and bookmarks;
 - b. The use of a GAIA ID to collect, store and retrieve information about a user;
 - c. The use of cookies, including, but not limited to Zweiback, prefID, session cookies, and the DoubleClick cookie, to collect, store and retrieve information about a user;
 - d. The use of web beacons to collect and store information about a user;
 - e. The use of UBAQ, including, but not limited to, using a cookie to identify a user, the data used by UBAQ, how it is collected, stored and

retrieved, and using SmartASS models to adjust the predicted CTR for candidate ad impressions;

- f. The use of CUBAQ, including but not limited to the types of signals used in CUBAQ, how those signals are generated, and the data used to generate those signals, including the extraction of information about a user based upon the user's browsing and search history, the use of both contextual and non-contextual signals from the user's use of Google products and the use of these signals in serving ads to the user;
- g. The use of UBAG, including but not limited to the sources of signals used in UBAG, and the use of these signals in serving ads to the user;
- h. The use of all versions of the Content-Ads Mixer to serve ads to the user, including how AdSense derives terms and keywords based on the contents of websites;
- i. The tools and processes used to classify online content, including webpages and ad text, ad keywords, ad landing pages and also including the process by which keywords, phil clusters, and verticals are extracted from online content;
- j. The use of Rephil clustering in serving ads to the user, including the source of data used to create Rephil clusters and the process of creating Rephil clusters;
- k. The use of dilip clustering in serving ads to the user, including the source of data used to create dilip clusters and the process of creating dilip clusters;

- l. The use of odp categories in serving ads to the user, including the source of data used to create odp categories and the process of assigning content to odp categories;
- m. The calculation of a Quality Score, pCTR, and adjusted pCTR, to rank advertisements retrieved in response to a request to display a content ad;
- n. The use of interest-based advertising, including but not limited to the process in which interests and preferences are derived from user's interactions with Google's products and those of third-party affiliates, associated with a user and how interests are used in serving ads to the user;
- o. The types of signals and other data about a user used in interest-based advertising, including the user browsing history, user demographics, user interests, and cookies;
- p. The use of segments and verticals to serve ads to a user;
- q. The use of remarketing and Boomerang to serve ads to a user, including how users are placed into segments and how the User Profile Services records and uses segment data;
- r. The use of the Ads Preference Manager to view, edit, and add interest categories;
- s. The scope of the AdSense Network and Google Content Network, including but not limited to the sources of data that these networks

utilize to serve ads to the user and the formats and types of websites that use AdSense to serve ads to the user; and

- t. To the extent not covered by subtopics (a-s) above, a complete description of how Google's AdSense system personalizes advertisements to the user, including the identification of the third-party websites to which such advertisements are provided, the terms of such provisions with each such website and/or advertiser, and the identification of information about users that is provided to the third-party websites.

7. Testimony relating to the process by which Google News personalizes news to the user, including, but not limited to, the identification of all source code, hardware, and/or other technology involved in such operation.

8. With respect to the testimony requested in Topic 7, provide detailed testimony relating to at least:

- a. Collecting and storing users previous queries, result clicks, ad impressions, ad clicks, ignored ads, the length of time a user spends at site after clicking on an ad, IP addresses, or other information collected or derived about a user, including, but not limited to, demographic information, geographic information, web history, and bookmarks;
- b. The types of information and other data about a user used in Google News, including the user browsing history, user demographics, user interests, and cookies;

- c. The use of cookies, including, but not limited to Zweiback, prefID, session cookies, and the DoubleClick cookie, to collect, store and retrieve information about a user;
 - d. The processes involved in storing information in Kansas, including, but not limited to, information associated with a logged-in user, a user who is not logged-in, Gaia ID, PREF ID, Zweiback cookie, IP address, browser, toolbar, session cookie, and/or other cookies and what columns, locations, files, tables, or other means for storing such information involved in those processes;
 - e. The calculation of any score or probability used to rank news articles to display to a user;
 - f. To the extent not covered by subtopics (a-e) above, a complete description of how Google News personalizes news shown to the user.
9. Testimony relating to the process by which Google Reader personalizes blogs to the user, including, but not limited to, the identification of all source code, hardware, and/or other technology involved in such operation.
10. With respect to the testimony requested in Topic 9, provide detailed testimony relating to at least:
- a. Collecting and storing users previous queries, result clicks, ad impressions, ad clicks, ignored ads, the length of time a user spends at site after clicking on an ad, IP addresses, or other information collected or derived about a user, including, but not limited to, demographic information, geographic information, web history, and bookmarks;

- b. The types of information and other data about a user used in Google Reader, including the user browsing history, user demographics, user interests, and cookies;
- c. The use of cookies, including, but not limited to Zweiback, prefID, session cookies, and the DoubleClick cookie, to collect, store and retrieve information about a user;
- d. The processes involved in storing information in Kansas, including, but not limited to, information associated with a logged-in user, a user who is not logged-in, Gaia ID, PREF ID, Zweiback cookie, IP address, browser, toolbar, session cookie, and/or other cookies and what columns, locations, files, tables, or other means for storing such information involved in those processes;
- e. The processes by which the recommendations list is automatically generated;
- f. The calculation of any score or probability used to rank blogs to display to a user;
- g. To the extent not covered by subtopics (a-f) above, a complete description of how Google Reader personalizes blogs shown to the user.

CERTIFICATE OF SERVICE

I hereby certify that on August 12, 2010, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF which will send electronic notification of such filing to all registered participants.

Additionally, I hereby certify that true and correct copies of the foregoing were caused to be served on August 12, 2010, upon the following individuals in the manner indicated:

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