

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FREEWHEEL MEDIA, INC.
Petitioner,

v.

ALMONDNET, INC.
Patent Owner.

IPR2024-00416

Patent 8,775,249 B2

**DECLARATION OF ROBERT SHERWOOD IN SUPPORT OF PATENT
OWNER'S RESPONSE TO THE PETITION**

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I, Robert Sherwood, hereby declare as follows:

I. Introduction

1. I am over the age of eighteen (18) years and otherwise competent to make this declaration.

2. I have been retained as an expert witness on behalf of Patent Owner for the above-captioned *inter partes* review (“IPR”). I understand that the petition for *inter partes* review involves U.S. Patent No. 8,775,249 (“the ’249 patent”).

3. I make this declaration based on my personal knowledge, educational background and training, consideration of the materials I discuss herein, and my expert opinions.

4. The consulting firm with which I work is being compensated at a rate of \$595 per hour for my time in this matter. My compensation does not depend on the outcome of this proceeding, and I have no financial interest in its outcome.

5. In preparing this Declaration, I have reviewed and considered the ’249 patent, the ’249 patent’s prosecution history, the Petition, the declaration submitted by Dr. Ranka in this proceeding, and each document cited in my declaration.

II. Background and Qualifications

6. My qualifications for forming the opinions given in this declaration are summarized here and are addressed more fully in my curriculum vitae, which is submitted as Exhibit 2002.

7. I currently serve as president of Identimap, Inc. a software developer. The company develops software for personality and culture analysis for talent identification and management.

8. I earned an MS from the University of Kansas and an MBA with a major in operations research from California State College, Hayward. I have taught technology management courses at the University of Kansas, University of Missouri and Stanford University. I have an honorary doctorate from DeVry University.

9. I have been professionally involved with computer and software technology for more than 40 years. My computer science education began when I was assigned a project to develop a financial and engineering computer model that would run on a computer in Mountain View, California. As a part of this project, I hired a computer science professor from Brigham Young University to move to California for two years and assist me by teaching me everything he taught his college students on computer science.

10. I developed my first software program with FORTRAN and later used C++ and HTML. I was the first professional to design a software program that accessed a mainframe computer in Mountain View, California via telephone connection with an acoustic coupler from an office in London, England. This program was a client mainframe computer model that integrated complex

engineering product designs from more than 30 different companies. I designed, directed and approved all the source code development for this computer program that integrated more than 50 products into a single program that used more than 2,700 computer aided design variables.

11. By way of experience, I am an expert on advertising on the Internet, advertising analytics, and the financial economics associated with advertising spending. I was one of the early adopters of website advertising. In 1998, I designed, purchased, placed and analyzed more than 30 million ad impressions for a video mail company based in Saratoga, California.

12. As early as 1990, as Vice President of RasterOps, Inc., I developed and posted ads on the Internet to more than 5,000 retail computer dealers. When browsers were launched in approximately 1995, I developed and posted ads on dozens of websites. When pay-for-view and pay-per-click advertising was launched in 1998, I developed and purchased more than 10 million ad views and click throughs.

13. In 2007 when Yahoo! sued Google and other firms for violation of the pay-per-click advertising patent, which was owned by Yahoo!, Yahoo! engaged me to analyze and report on the success of Internet advertising and testify at trial.

14. The American Management Association engaged me to develop content and conduct a two-day seminar on Internet advertising including fraud

detection. I presented this seminar to more than 2,500 professionals from more than 50 different companies.

15. I designed and developed electronic commerce systems for tracking sales at multiple websites with secure servers for credit card acceptance and a confidential system for secure sales transactions. This includes developing algorithms located on websites for tracking on-line sales.

16. I have been active in developing systems for integrating ads with websites for my own software development and deployment, as well as acting as a consultant to other firms. I have evaluated complex bidding algorithms for the real-time selection and placement of ads for both impressions and pay-per-click ad placement on numerous websites.

17. In one particular engagement, I examined more than 100 different publisher's websites where pay-for-click advertising or cost-per-impression advertising schemes were implemented. In another instance, I examined the matching of more than 300 publishers' website content with a related advertiser's products and/or services for \$20 million of on-line impression and cost-per-click advertising methods. The websites included popular website publishers such as CNN and The Wall Street Journal.

18. I have been engaged by prominent firms, such as Toyota, Lowe's, Harley Davidson, Google, Facebook, Yahoo! and Amazon to testify on online advertising matters including search technologies.

19. I was founder and President of SmartText Corporation. I directed an 18-person programmer development team in the introduction of an on-line software program to process large business document files. The company developed commercial software retail products under such names as LegalPoint, Kiplinger Small Business Attorney and Kiplinger Home Legal Advisor. The products were licensed to prominent firms such as H&R Block and Intuit Corporation. The products sold more than 2 million copies.

20. I have been a board member and consulted with dozens of companies, both startups and Fortune 500 companies. For my work, I was awarded the Entrepreneur of The Year Award, which is sponsored by the Kauffman Foundation, NASDAQ, Ernst and Young and INC magazine.

21. I was president and co-founder of EDC, Inc., a company backed by Kleiner Perkins, a leading San Francisco Bay Area venture capital firm. The company was highlighted in Business Week and Fortune Magazine and was selected as one of the ten most innovative companies in California.

22. I have consulted for both plaintiffs and defendants in litigation matters regarding software development, patents and related technology issues. I have

written more than 50 expert reports and have testified at trial or depositions on approximately 30 occasions. I provide consulting services to private and public corporations, law firms, venture capital firms, and government institutions. A copy of my curriculum vitae is provided in Exhibit 2002.

III. Legal Principles

A. Claim Construction

23. I understand that the first step in performing a validity analysis of the patent claims is to interpret the meaning and scope of the claims by construing the terms and phrases found in those claims. I understand that the appropriate construction of a claim term is its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent and the prosecution history.

24. I understand that standard for claim construction in an *inter partes* review is the same standard as is applied in district court proceedings.

25. I understand that a determination of the meaning and scope of the claims is a matter of law. I have been informed that to determine the meaning of the claims, one should consider the intrinsic evidence, which includes the patent's claims, written description, and prosecution history.

B. Burden of Proof

26. I understand that in an *inter partes* review, the petitioner has the burden of proving unpatentability by a preponderance of the evidence.

C. Anticipation

27. I have been instructed by counsel and understand that a reference is anticipated if a single prior art reference discloses each and every claim element, either explicitly or inherently, as arranged in the same way as in the claim. I understand that where even one claim element is not disclosed in a reference, a contention of anticipation fails.

28. I further understand that when a reference fails to explicitly disclose a claim element, that reference inherently discloses that element only if the reference must necessarily include the undisclosed claim element.

D. Obviousness

29. I have been instructed by counsel and understand that a combination of prior art references may render a claim obvious if, at the time of the invention, a person of ordinary skill in the art would have selected and combined those prior-art elements in the normal course of research and development to yield the claimed invention.

30. I understand that in an obviousness analysis, one should consider the *Graham* factors, including: the scope and content of the prior art; the differences

between the claimed inventions and the prior art; and the level of ordinary skill in the art. I further understand the obviousness analysis is to be performed on a claim-by-claim basis. I understand that a person of ordinary skill in the art is a person of ordinary creativity, not an automaton.

31. I have been instructed by counsel and understand that obviousness requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. I understand obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have been motivated to combine those references in a manner that would include all limitations of the challenged claim, and, in making that combination, a person of ordinary skill in the art would have had a reasonable expectation of success.

32. I also understand that an obviousness analysis must be conducted with awareness of the distortion caused by hindsight bias and with caution of arguments reliant upon *ex post* reasoning. For instance, I understand that when considering obviousness, I should put myself in the position of a person of ordinary skill in the field at the time of the invention, rather than considering new information that is known today, but was not known before the priority date of the challenged patent.

IV. Person of Ordinary Skill in the Art

33. Dr. Ranka alleges that a person of ordinary skill in the art, as of the priority date of the '249 patent “would have had a bachelor’s degree in computer engineering, computer science, or a similar discipline, and two years of relevant industry or research experience, including experience with data communications over the Internet (including Internet advertising) and database management,” but that “a person might also be a POSITA with more education and less industry experience, or vice versa.” Ex. 1002, ¶189.

34. For purposes of this declaration, I adopt Dr. Ranka’s proposed level of skill in the art, including his acknowledgement that education can substitute for industry experience and vice versa. Under this standard, I am a person of ordinary skill in the art, and have been since at least the earliest priority date of the '249 patent (December 13, 1999).

V. Overview of the '249 Patent

35. The challenged claims of the '249 patent (claims 1, 3-11, 13-21, and 23-25) are directed to novel systems and methods for deriving and maintaining descriptive profile data, including the source of the descriptive profile data, for use in displaying advertisements to users on the Internet.

36. My declaration is focused primarily on claims 5, 15, and 25 of the '249 patent. Claim 5, 15, and 25 (and claims 1, 11, and 21 from which they depend) are reproduced below.

1. An automated method of collecting profiles of Internet-using entities, the method comprising:

(a) electronically receiving at a programmed computer system coupled to a global computer network, from at least one server controlled by one of a plurality of unaffiliated third parties, a partial profile of an entity that uses a user computer coupled to the global computer network and accessing a website, which partial profile is available to one of the third parties and contains at least one profile attribute related to the entity;

(b) automatically with the computer system electronically storing the received partial profile by adding the received partial profile to an electronically stored profile, which stored profile is believed to be related to the same entity;

(c) wherein receiving the partial profile is achieved as a result of automatic electronic URL redirection from a portion of a page of the website accessed by the user computer; and

(d) automatically with the computer system generating an electronic record of which of the plurality of unaffiliated third parties contributed to the stored profile particular profile attributes;

(e) wherein the stored profile, including the added partial profile, comprises data used in targeting third-party advertisements to the user computer over the global computer network.

5. The method of claim 1 further comprising automatically with the computer system electronically maintaining an electronic record of which unaffiliated third party contributed, to the stored profile, the profile attributes used in targeting the advertisements.

11. A computer system coupled to a global computer network and programmed to perform an automated method of collecting profiles of Internet-using entities, the computer system having access to a storage device, the method performed by the programmed computer system comprising:

(a) electronically receiving at the computer system, from at least one server controlled by one of a plurality of unaffiliated third parties, a partial profile of an entity that uses a user computer coupled to the global computer network and accessing a website, which partial profile is available to one of the third parties and contains at least one profile attribute related to the entity;

(b) automatically with the computer system electronically storing in the storage device the received partial profile by adding the received partial profile to a profile electronically stored in the storage device, which stored profile is believed to be related to the same entity;

- (c) wherein receiving the partial profile is achieved as a result of automatic electronic URL redirection from a portion of a page of the website accessed by the user computer; and
- (d) automatically with the computer system generating an electronic record of which of the plurality of unaffiliated third parties contributed to the stored profile particular profile attributes;
- (e) wherein the stored profile, including the added partial profile, comprises data used in targeting third-party advertisements to the user computer over the global computer network.

15. The computer system of claim 11 wherein the automatic method performed by the programmed computer system further comprises automatically with the computer system electronically maintaining an electronic record of which unaffiliated third party contributed, to the stored profile, the profile attributes used in targeting the advertisements.

21. A tangible, non-transitory data storage medium comprising indicia of instructions for a computer system to perform an automated method of collecting profiles of Internet-using entities, wherein the computer system is coupled to a global computer network and has access to a storage device, the method performed according to the instructions comprising:

- (a) electronically receiving at the computer system, from at least one server controlled by one of a plurality of unaffiliated third

parties, a partial profile of an entity that uses a user computer coupled to the global computer network and accessing a website, which partial profile is available to one of the third parties and contains at least one profile attribute related to the entity;

(b) automatically with the computer system electronically storing in the storage device the received partial profile by adding the received partial profile to a profile electronically stored in the storage device, which stored profile is believed to be related to the same entity;

(c) wherein receiving the partial profile is achieved as a result of automatic electronic URL redirection from a portion of a page of the website accessed by the user computer; and

(d) automatically with the computer system generating an electronic record of which of the plurality of unaffiliated third parties contributed to the stored profile particular profile attributes;

(e) wherein the stored profile, including the added partial profile, comprises data used in targeting third-party advertisements to the user computer over the global computer network.

25. The data storage medium of claim 21 wherein the automatic method performed according to the instructions further comprises automatically with the computer system electronically maintaining an electronic record of which unaffiliated third party contributed, to the stored profile, the profile attributes used in targeting the advertisements.

Ex. 1001 (the “’249 patent”) at claims 1, 5, 11, 15, 21, and 25.

VI. Claim Construction

37. I am informed that claim construction is an exercise of interpreting disputed terms, to the extent needed to resolve any controversy between the parties. Below I address the meaning of one claim limitation, to the extent helpful to resolve the arguments raised by Dr. Ranka.

38. In my opinion, the reference to “an electronic record of which unaffiliated third party contributed, to the stored profile, **the profile attributes used in targeting the advertisements**” in claims 5, 15, and 25 refers to keeping a record of which third party contributed the profile attributes that are actually *used* in targeting particular advertisements.

39. My opinion in this regard is supported by the fact that claims 1, 11, and 21 *already* recite “generating an electronic record of which of the plurality of unaffiliated third parties contributed to the stored profile particular profile attributes,” without specifying that those “particular profile attributes” are themselves “used in targeting the advertisements.” Thus, for claims 5, 15, and 25 to add any limitation beyond the claims from which they depend (as I understand is required by the principle of claim differentiation, in which dependent claims must

have a narrower claim scope than the independent claims from which they depend), they must require not only recording which unaffiliated third party contributed profile attributes to the stored profile, but must ***additionally*** record which unaffiliated third party contributed which third parties contributed profile attributes ***that were actually used*** to target advertisements.

40. Thus, in my opinion, there must be a record of who contributed profile attributes that are actually ***used*** to target advertisements, not merely who contributed which profile attributes that are merely stored in the stored profile (which may or may not ultimately be used to target advertisements). In other words, the record required by claims 5, 15, and 25 is a record that particular unaffiliated third parties contributed profile attributes that were actually used to target advertisements (not merely that particular unaffiliated third parties contributed profile attributes that may or may not have been used to target advertisements, as the independent claims recite).

41. This understanding is also consistent with the written description of the '249 patent. For example, if a profile attribute is provided by a website, the databank storing the maintained database of profile attributes can “credit the providing web-site with a micro-payment royalty for each use of this attribute ‘purchased’ from the databank by each interested party,” i.e., when the attribute is actually used to target advertisements. Ex. 1001, 11:41-47; *see also id.* at 13:46-

50 (“The pricing structure will include a contract between the user and the system that will include an obligation by the party which utilizes the information flowing to the system’s databank to *pay the other for substantially each use* or transfer of the agreed information transferred between them.”). Only by tracking which parties contributed profile attributes that were *actually used* could the databank possibly provide “a micro-payment royalty for each use of [the] attribute,” or pay the profile contributor (which the patent describes as a “user,” which can include a website that gathers profile information—*see* Ex. 1001 at 2:60-63) “for substantially each use... of the agreed information” as described in the specification.

VII. I disagree with Dr. Ranka’s theory for claims 5, 15, and 25, which seems to arrive at the dependent limitation of those claims through use of hindsight.

42. In authoring this declaration, rather than responding to each theory in the 413 pages of Dr. Ranka’s declaration, I have been asked to focus on Dr. Ranka’s theories with respect to claims 5, 15, and 25. Dr. Ranka allege that those claims would have been obvious first based on (1) Merriman in view of Jaye, (2) Merriman in view of Minor, (3) Roth in view of Jaye, and (4) Roth in view of Minor. I disagree that Dr. Ranka’s theories show that these claims would have been obvious to a POSITA at the time of the invention, and I address each of his four combinations below.

43. I note that in his analysis, Dr. Ranka addresses claim 5, and then incorporates by reference his analysis as applicable to claims 15 and 25. For purposes of the remainder of this declaration, I do the same.

A. I disagree that Merriman in view of Jaye renders claim 5 obvious.

44. Dr. Ranka first alleges that claim 5 would have been obvious based on Merriman in view of Jaye. I disagree with his theory for several reasons.

45. First, paragraphs 277-282 of his analysis incorrectly assume that claim 5 does *not* “require[] a separate record from the record in limitation [1D]”—i.e., it does not require actually tracking which unaffiliated third parties contributes the profile attributes that are ultimately *used* in targeting advertisements, contrary to the plain meaning of claim 5 as discussed above in Section VI. *See* Ex. 1002, ¶283 (only at paragraph 283 analyzing claim 5 “[t]o the extent that claim 5 requires a separate record from the record in limitation [1D]”). His paragraphs 277-282 analysis at most relates to whether there would be a record of which unaffiliated third parties contributed particular profile attributes to the stored profile, *regardless* of whether those profile attributes are actually used to target the advertisements. Thus, in my opinion, Dr. Ranka’s opinions in paragraphs 277-282 of his analysis do not show the obviousness of claim 5; instead, they only at most relate to the alleged obviousness of the requirements of claim 1, including the [1D] limitation.

46. I also disagree with Dr. Ranka’s theories at paragraphs 283-286 of his analysis, which appear to address the correct claim interpretation wherein “claim 5 requires a separate record from the record in limitation [1D]” (Ex. 1002 ¶283), i.e., it requires a record indicating which third parties contributed profile attributes *that were actually used* to target advertisements.

47. At a high level, I understand Dr. Ranka to set forth two different motivations to arrive at the additional limitation of claim 5. For instance, Dr. Ranka states that the record recited by claim 5 “would have been obvious to enable the advertising server 19 to provide reports detailing where profile information and to reward (e.g., financially) websites (like website 12) for providing profile information that is desirable for targeted advertising.” Ex. 1002 ¶283. Dr. Ranka also asserts: “A POSITA would have been motivated to report where the attributes used for matching users with advertisements came from to give advertisers further insights.” *Id.* ¶285.

48. Below, I address in turn these two distinct proposed motivations: (1) the alleged motivation to track where the profile information used in targeting advertisements came from “to reward (e.g., financially) websites (like website 12)

for providing profile information that is [used]¹ for targeted advertising” (Ex. 1002, ¶283) and (2) the alleged motivation “to report where the attributes used for matching users with advertisements came from to give advertisers further insights” (Ex. 1002, ¶285).

49. Regarding Dr. Ranka’s proposed motivation to financially reward websites for providing the profile information used in targeted advertising, I do not agree a POSITA would have been motivated to modify Merriman’s system, in the proposed combination with Jaye, to financially reward websites for providing profile information in the manner Dr. Ranka suggests. A POSITA would have understood that Merriman is related to the “DoubleClick” company, which was by far the largest targeted advertising company prior to 2000, and included a network of websites which would sign up to provide profile information to DoubleClick and allow DoubleClick to provide targeted advertisements on the websites’ ad space. The reason that websites would sign up with DoubleClick in this way was

¹ Dr. Ranka’s original quotation here said “desirable” instead of “used.” I understand Dr. Ranka’s theory here to be that if information is used, that is a proxy for it being desirable for targeted advertising, such that the websites could be financially rewarded for providing such used profile information. If this is not his theory, it would not provide a motivation to arrive at the dependent limitation of claim 5, which recites tracking which third parties provided profile attributes *used* in targeting the advertisements (not merely profile attributes that are theoretically “desirable” for targeted advertising).

because DoubleClick would pay the websites for any advertisements placed on the website, so this allowed websites to effectively monetize their own advertising space. I am not aware of any instances of DoubleClick paying websites for profile information, as opposed to paying the websites for the advertisements that DoubleClick placed on the website, and I do not believe it would have been obvious to modify Merriman such that websites were paid for profile information (as opposed to being paid for advertisements) in the manner that Dr. Ranka suggests.

50. The fact that DoubleClick would not have been motivated to pay websites for their profile data is further established by the DoubleClick founder and CEO Kevin O'Connor, who testified that website owners had an incentive (distinct from **DoubleClick** paying the website) to provide DoubleClick with profile information so that "website owners [could] monetize their profile data." Ex. 2004 at 837:20-838:12. According to the founder and CEO of DoubleClick (Kevin O'Connor), "Boomerang was a unique application... that [allowed] a website to record activity of that user" and provide that profile information to DoubleClick, such that the website could then deliver targeted ads to the user across other websites. Ex. 2004 at 827:1-828:2; *see also id.* at 829:18-830:12 (explaining that websites voluntarily would provide information to DoubleClick through "something called a spotlight tag," and the resulting profile information

“went into [DoubleClick’s] system”). There is no evidence that DoubleClick ever needed to (or even considered) paying websites for this type of profile information, and of course, paying for profile information that DoubleClick was *already* receiving is not something that would be obvious because it would be financially undesirable for DoubleClick to pay more money than it needed to in order to have access to profile information.

51. A POSITA would have understood that DoubleClick’s Boomerang system was described in U.S. Patent No. 8,566,154. *See* Ex. 2004 at 832:21-833:1 (Kevin O’Connor testifying that D-120 in the AlmondNet v. Amazon Trial, U.S. Patent No. 8,566,154, “is the Boomerang patent”). As explained by Mr. O’Connor, DoubleClick would “compile this information [provided by a website] as passed back to DoubleClick servers through what’s called a spotlight tag,” and then DoubleClick “would compile this activity list, and we would store it and associate it with the user.” *Id.* at 833:15-834:9. This is consistent with my understanding of how Boomerang operated. There is no evidence that DoubleClick ever *paid* the websites for this profile attribute information that DoubleClick would then use to target advertisements on other websites, and, of course, if DoubleClick was able to receive profile information from websites *without* paying for it, it would not have been obvious for DoubleClick to pay for that profile information.

52. In my view, it would also not have been obvious to modify Merriman *in view of the* Jaye reference that Dr. Ranka proposes combining with Merriman, such that the ***combined*** system would compensate websites for providing profile information about their users in the manner that Dr. Ranka suggests. A POSITA would have understood that the Jaye reference relates to targeted advertising provided by “Engage, Inc.” (*see* Ex. 1037 at (73) “Assignee: Engage, Inc.”), which was a competitor to DoubleClick in the late 1990s and early 2000s. Like DoubleClick, Engage also provided advertising across a network of websites that signed up with Engage so that those websites could effectively monetize their advertising space. Daniel Jaye, “the founder and... chief technology officer” of Engage also testified at the AlmondNet v. Amazon trial. Ex. 2004 at 858:11-15 (“I’m here to talk about a company I founded called Engage and the Engage advertising system.”), 860:2-24 (providing background of his role at Engage, and acknowledging that DoubleClick was “Engage’s competitor”).

53. Mr. Jaye’s testimony is consistent with my understanding of how Engage operated, and it is with this context that a POSITA would understand the Jaye reference. Specifically, Engage (as described by the Jay reference) would target ads based on profile information collected from websites within the Engage network, which websites agreed to provide Engage with profile information so that they could join the Engage network and monetize advertising space on their

websites. *See* Ex. 2004 at 867:12-686:1 (explaining that Engage would target ads “to people with a sports interest,” which Engage would ascertain “because they visited Sports Illustrated *or another site in our network* that had sports pages”). I am not aware of any evidence that Engage paid for websites within its network for profile information (other than Mr. Jaye’s testimony, discussed below, that Engage would provide a discount for a subscription fee, and there is no evidence that the amount of this discount was variable or in any way based on how often particular profile attributes were actually used), and I do not believe that compensating data contributors based on their data usage would have been an obvious modification to the system described by Jaye.

54. My understanding in this regard is confirmed by the Jaye reference, which indicates that websites have an existing interest (separate from any payment) for providing profile information to the ad network (i.e., Engage). Specifically, Jaye teaches that vendors who run webpages find it useful “to compile sophisticated marketing data that indicates users’ interest in the vendors’ Web pages.” Ex. 1037 at 1:17-20. While this information is useful to individual vendors, it is even more useful if vendors are able to customize content (e.g., advertisements) based on profile information collected as a user “jumps from server to server,” which is very difficult to do “[u]nless different vendors on different servers agree to cooperate.” *Id.* at 1:39-45. There are also significant

“user[] privacy” concerns in sharing information about users between different websites, in addition to other difficulties. *See id.* at 1:47-61.

55. Thus, the Jaye reference describes a system for a “distributed user identification process... that allow[s] individual local servers or domains to control their own user identification scheme and to collaborate with other local servers or domains at the discretion of an enterprise server” (which enterprise server a POSITA would understand to be the equivalent of Engage’s system, which provides advertising services / profile information to the local servers or domains, which a POSITA would understand to be equivalent to websites participating in Engage’s system).

56. A POSITA reviewing the Jaye reference would thus understand that a website would have at least two motivations to signing up with Jaye’s system (i.e., Engage) and thus providing profile information to Jaye’s system, neither of which involve direct compensation for others using particular profile attributes provided by the website.

57. **First**, by participating in the Engage system (and thus sharing profile data that allows Engage / Jaye to better target advertisements), a POSITA would understand that Engage would be better able to target advertisements to visitors to the website sharing the profile information, such that the web page would receive more revenue from more relevant advertisements being delivered on that website.

This is confirmed by another patent relied upon by Dr. Ranka (“Roth,” Ex. 1036), which is also assigned to Engage, Inc. As taught by Roth, the advertising system provides view opportunities or “view-op[s],” characteristics of which “include... the characteristics of the viewer including demographic information about the viewer.” Ex. 1036 at 2:10-19. Advertisers use this information to propose bids “which specify how much the advertiser is willing to pay for displaying a particular advertisement in response to a view-op with certain characteristics.” *Id.* at 2:20-47. Thus, by providing more profile information about visitors to their websites, website owners would ensure that the Engage system has as complete of a visitor profile as possible so that advertisements will be aware of any potentially desirable visitor traits, such that advertisers will bid more for display of the advertisement and the websites will generate more revenue accordingly.

58. ***Second***, by participating in the Engage advertising system (and thus sharing profile data that allows Engage / Jaye to better target advertisements), a POSITA would understand that the website owners would be entitled to reciprocal use of profile attributes from other websites, which “allows the vendor to customize his Web pages on the fly for each user” based even on information derived about the user from different servers. *See* Ex. 1037 at 1:28-47. As Daniel Jaye testified, this was accomplished by providing “discounted access to the profiles” that Engage had collected from other sites. Ex. 2004 at 569:15-19.

59. There is no indication that the discount a website received for the use of Engage's profile information was based on the extent of use of the profile information provided by any particular website, and in my opinion a POSITA would not have found this to be obvious because it would not have been necessary for the website owners to sufficiently incentivized to provide accurate and useful profile information for Engage / Jaye to build a sufficiently reliable database of profile information. This is because when website owners provided profile data to Engage, a POSITA would understand that it is not only *others* that could use that profile information to target advertisements, but also the website owners themselves. *See* Ex. 2004 at 869:20-870:13 (testifying that website owners who collected data about their users and provided that to Engage "would actually use that to target ads on the sites they didn't own based on the profiles from their own website"). Thus, by providing Engage with faulty profile data, website owners would have limited their *own* ability to target ads across the Internet using the Engage / Jaye system, and they would not have needed the *additional* incentive of Engage paying those websites an additional per-use fee for profile attributes, as Dr. Ranka implies.²

² I also don't believe that the majority of sites would have seen any downside to providing helpful anonymized profile information with Engage / Jaye in the manner suggested, such that Engage / Jaye would not have found it obvious to

60. These features of Engage and DoubleClick, as described above, by Mr. Jaye and Mr. O'Connor, and consistent with the Merriman, Roth, and Jaye references, were generally known in the art to POSITAs, and they reflect my recollection of how these targeted advertising systems operated in the relevant timeframe. I rely on the trial testimony Mr. O'Connor and Mr. Jaye as a concise summary of the context in which a POSITA would have understood the prior art related to DoubleClick and Engage, and as consistent with what a POSITA would have understood, but a POSITA would have had that knowledge regardless of their testimony. In other words, I a POSITA would as of the earliest priority date of the '249 patent would have had an understanding of how DoubleClick and Engage operated that is consistent with how Mr. O'Connor and Mr. Jaye testified, because these were popular advertising systems that had an extensive reach, and POSITAs in the field of content targeting based on profile data would have been well aware

provide any further incentives, such as a per-attribute-use royalty, for those website owners to provide the profile information as Dr. Ranka suggests. I also note that paying websites based on the actual usage of their profile data for advertising purposes would have been speculative on the part of the data provider website, because the website would not know how much their data would be used. If websites *did* have concerns about providing profile data about their visitors to a centralized ad system such as Engage / Jaye (or DoubleClick / Merriman), a POSITA would not have found it obvious to provide them with uncertain compensation (e.g., a fee related to the amount that their profile attributes were actually used) for doing so.

of how they operated in relevant respect. A POSITA would have understood that websites participating in the Merriman / DoubleClick and Jaye / Engage systems would derive benefits and compensation from participating in those systems and thus providing the Merriman and Jaye systems with profile information, even without modifying those systems to provide financial rewards to website data contributors on a profile attribute basis as Dr. Ranka suggests. In my opinion, a POSITA aware of Merriman and Jaye, as well as how the advertising industry worked in the relevant timeframe, would certainly not have been motivated to modify either the Merriman or Jaye systems to provide *additional* compensation to website owners for providing the profile information that they were already providing as part of their participation with the Merriman/DoubleClick and/or Jaye/Engage systems.

61. Dr. Ranka's cited evidence in this regard (other than Merriman and Jaye) is limited to Ex. 1039 ("Coleman") and Ex. 1045 ("Bistriceanu"). *See* Ex. 1002 at ¶283 (citing Ex. 1039 ¶¶111, 114; Ex. 1045 at Abstract, 4:60-5:12, 7:23-8:14). But neither of these references provide a motivation to modify Merriman and Jaye in the manner Dr. Ranka alleges. First, Coleman describes payment to individual *users* for profile information, not payment to *websites* for their users' profile information (and does not compensate anyone for particular profile attributes being *used*). *See* Ex. 1039 at ¶114 (explaining that "the registered user

801 may be compensated based on the amount of interaction with the email,” including payment “for replying to the email with a question or expression of interest,” or “based on the level of personal information provided by the registered user 801”). This is obviously a very different scenario than described in the Merriman or Jaye references, and unsurprisingly, Dr. Ranka does not allege that it would have been obvious to combine Merriman and Jaye with Coleman with regard to his claim 5 analysis, presumably because Ex. 1039 is not the same type of ad network as existed in DoubleClick or Engage. Furthermore, Coleman does not describe providing users with additional compensation when their profile attributes are *used*, which is what I understand Dr. Ranka’s proposed modification to Merriman and Jaye to entail.

62. Likewise, Bistriceanu *also* compensates individual users, not website owners, for participating in the system. *See* Ex. 1045 at Abstract (discussing “provid[ing] *web site visitors* with incentive awards... in exchange for providing the demographics information,” and providing the demographics information to “web site proprietors”); *see also id.* at 4:60-5:12, 7:23-8:14 (the other portions of Bistriceanu cited by Dr. Ranka, which also do not contemplate compensating web site users for profile attributes, and certainly not on a per-usage basis for particular attributes as Dr. Ranka suggests would have been obvious). In my opinion, Bistriceanu is not particularly analogous to the Engage and DoubleClick systems

described by Jaye and Merriman (and Dr. Ranka does not allege that a POSITA would have been motivated to combine Bistriceanu with Jaye and Merriman), but in any event Bistriceanu simply does not disclose compensating website owners on a per-attribute usage basis as Dr. Ranka implies it does.

63. Thus, it is my opinion that compensating websites for per-attribute data usage is something that is not taught by any of the art that Dr. Ranka relies on for his claim 5 analysis, and I do not agree that it would have been obvious to modify either Merriman or Jaye to operate in that manner.

64. Dr. Ranka's second alleged motivation is that a "POSITA would have been motivated to report where the attributes used for matching users with advertisements came from to give advertisers further insights." Ex. 1002, ¶285. I disagree. While of course, advertisers care about the quality of the targeting system being employed (including the quality of profile attributes), a POSITA would understand that advertisers would primarily care about success rate (such as click-through rate, conversion rate, revenue generation, etc.) of the targeted advertisements rather than the origin of the profile attributes used to target the advertisement. For example, if an advertiser (say, Nike) learns that Merriman's targeting system results in 5% of the users who see a particular advertisement to purchase a Nike product, Nike can immediately tell that this is a better result than if only 2% of users who see the ad purchase a Nike product. Thus, if Merriman's

system provided a better result in this regard than another competing advertising system, Nike knows that Merriman's system is providing a better result.

65. However, if Merriman provides Nike with the information that some of its ads are targeted based on profile attributes received from Sports Illustrated, other ads are targeted based on profile attributes from ESPN, and other ads are targeted based on profile attributes from Runner's World, Nike can't easily make use of this data to derive relevant insights or take relevant actions. Indeed, it's possible that some of the sources of targeting criteria for Nike may come from unexpected sources (e.g., Good Housekeeping), and it's possible that the profile attributes from those sources perform quite well based on Merriman's targeting algorithm. But the advertiser (again, Nike in this example) doesn't know how to evaluate this profile-attribute-origin information, and ultimately Nike as an advertiser cares about advertising *results*, not the specific origin of specific profile attributes that are used to generate those results. Thus, it would not be beneficial for Nike to know whether profile data used to target Nike ads was coming from ESPN or Good Housekeeping, and it would not have been obvious for the owner of Merriman or Jaye's system to provide advertisers such as Nike with that information because advertisers may become focused on and upset with seemingly unusual sources of profile data, even if those sources of profile data actually generate positive results within the ad targeting system.

66. In my opinion, a POSITA would thus have avoided providing advertisers “report[s of] where the attributes used for matching users with advertisements came from,” as this would not “give advertisers further insights” (Ex. 1002, ¶285), but would rather confuse advertisers and not provide any meaningful insights. Instead, in the context of targeted ad systems like Merriman and Jaye (and the corresponding DoubleClick and Engage systems), a POSITA would have understood that the metrics advertisers *actually* care about are “reports about the success rate of the advertisements and statistics on the users that are viewing and clicking through on various advertisements” as described by Merriman. Ex. 1035 at 4:37-43. The success rate is important to understand whether the advertiser is getting a good return on investment. And the attributes of the users is important so that the advertiser has better insight into the demographics of their target audience. But the *origin* of attributes is simply not something that, separate from success rate, an advertiser would particularly care about (or something that a designer of a system such as Merriman or Jaye would be motivated to provide to advertisers).

67. The only evidence that Dr. Ranka contends supports the idea that “[a]dvertisers would have desired a report of the source of attributes used for matching users with advertisements” are Ex. 1043 (“Gardner”), Ex. 1041 (“Herz Provisional”), and Ex. 1040 (“Herz”). Ex. 1002 ¶285 (citing Ex. 1043, Abstract,

7:48-60, 8:31-45; Ex. 1041, pp. 4, 11, 12, 31, 40-42, 73; Ex. 1040, ¶¶ [0061], [0070], [0116], [0137]-[0140], [0146]). However, these sources do not support this concept. For example, the cited portions of Gardner disclose “relative reliability ratings” for data (e.g., 7:48-60), but does not disclose determining how often particular profile attributes are used for customizing content, and certainly does not disclose a centralized ad network system (such as disclosed by Jaye or Merriman) providing advertisers with the origin of profile attributes used to target particular advertisements. I note that Dr. Ranka does not propose combining Merriman or Jaye with Gardner in his claim 5 analysis, but even if he had proposed such a combination, no references in that combination teach or suggest to a POSITA that advertisers should be provided reports regarding the origin of profile attributes used to target particular ads.

68. While it is not clear how Dr. Ranka’s citations to Herz (or the related Herz provisional) support his assertion that it would have been obvious to provide advertisers with the source of profile attributes used in targeting advertisements because he does not provide any meaningful discussion of the cited portions of these references, I have reviewed Herz and the Herz provisional and disagree with any such implication. Indeed, Herz criticizes the “free-for-all” approach that a POSITA would have understood applied to both DoubleClick and Engage (and Merriman and Jaye) as providing too much information about users “without either

the consent or knowledge of” the users. Ex. 1040 at ¶¶33. I do not believe that a POSITA reading Herz would read this and look to Herz as implying that advertisers should be provided with even *more* information about user profile attributes, such as the origin of those attributes, within the context of a system such as Merriman or Jaye. I further note that Herz teaches that agents that submit information using an “alias” such that the origin of the information would actually be kept anonymous from third parties (Ex. 1040 at ¶¶137-140), which seems to suggest that even if it would have been obvious to modify Merriman and Jaye in view of Herz (something Dr. Ranka doesn’t allege), the resulting combination would *not* have involved disclosing to advertisers the actual identity of the websites that provided particular profile attributes as Dr. Ranka implies.

B. I disagree that Merriman in view of Minor renders claim 5 obvious.

69. For the combination of Merriman in view of Minor, Dr. Jaye largely repeats (in even more abbreviated fashion) his same theories as to why Merriman in view of Jaye supposedly renders claim 5 obvious. *See* Ex. 1002 ¶¶339-372 (providing no new argument as to why Merriman *in view of* *Minor* discloses or renders claim obvious, independent of Dr. Ranka’s theories as to Merriman in view of Jaye). I incorporate by reference my analysis with respect to Merriman in view of Jaye above, and do not believe that Dr. Ranka’s proposed modifications to

Merriman would have been obvious to arrive at the additional requirements of claim 5.

C. I disagree that Roth in view of Jaye renders claim 5 obvious.

70. Dr. Ranka's analysis for the alleged obviousness of claim 5 based on Roth in view of Jaye again largely assumes that claim 5 does not require keeping track of who contributed who provided "attributes provided in profile information from [a particular website] were used for targeted advertising." *See* Ex. 1002 ¶484; Ex. 1002 ¶¶481-483, 486-487 (analysis assuming claim 5 does *not* require this additional record).

71. Dr. Ranka's sole analysis that actually addresses the requirements of claim 5, as a POSITA would have understood them, based on the combination of Roth in view of Jaye are in paragraphs 484-485 of his report. However, Dr. Ranka merely incorporates the same analysis as to why Merriman in view of Jaye would have rendered this limitation obvious, providing no new analysis as to why tracking this information would have been obvious for use in either (1) providing additional compensation to websites when particular profile attributes are used in advertising, or (2) providing reports to advertisers that include the website origins of profile attributes used in targeting advertisements. As explained above in Section VII.A, I disagree that it would have been obvious to modify prior art systems such as Merriman or Jaye in that manner, and Roth is simply a further

description of DoubleClick's systems as described above in Section VII.A.

Accordingly, I incorporate by reference my analysis from Section VII.A above, and believe that Dr. Ranka has failed to show that Roth in view of Jaye renders obvious claim 5 for the same reasons.

D. I disagree that Roth in view of Minor renders claim 5 obvious.

72. Dr. Ranka's analysis of claim 5 based on Roth in view of Minor is an even more abbreviated analysis of his Roth in view of Jaye analysis for claim 5. See Ex. 1002, ¶¶543-546. I incorporate by reference my analysis from Section VII.C above regarding Roth in view of Jaye, and believe that Dr. Ranka has failed to show the obviousness of claim 5 based on Roth in view of Minor for the same reasons.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true.

December 24, 2024

Robert Sherwood
Robert Sherwood