

Declaration of Mark Crovella, Ph.D. in Support of
Petition for *Inter Partes* Review of
U.S. Patent No. 11,416,898 B2

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner

v.

BRODTI INC.,
Patent Owner.

Case IPR2025-00472
U.S. Patent No. 11,416,898 B2
Issue Date: August 16, 2022

Title: METHODS, SYSTEMS, AND APPARATUS FOR
FINANCING PROJECTS

DECLARATION OF MARK CROVELLA, PH.D.

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I, Mark Crovella, Ph.D., declare as follows:

I. INTRODUCTION AND QUALIFICATIONS

A. Qualifications and Experience

1. I received a Ph.D. in Computer Science from the University of Rochester in October 1994. I received a Master of Science degree in Computer Science, also from the University of Rochester, in 1991, as well as a Master of Science degree from State University of New York at Buffalo in 1990. I received a Bachelor of Science Degree from Cornell University in 1982.

2. For the last 18 years, I have been Professor in the Department of Computer Science at Boston University. I served as Department Chair from 2013-2018. I was an Associate Professor between 2000 and 2006 and an Assistant Professor between 1994 and 2000. Starting in 2022, I have been a Professor on the Faculty of Computing & Data Sciences at Boston University, of which I was one of the founding members. I presently serve as Chair of Academic Affairs for the Faculty of Computing & Data Sciences. I was also a Data Science Faculty Fellow between 2019 and 2022. I regularly teach a course in Computer Networks, which is a senior/graduate-level introduction to networking with a focus on the Internet.

3. My career in the area of computing and data analysis began in 1984 when I started work at Calspan Corporation in Buffalo, NY where I was eventually

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a Senior Computer Scientist. Between 2000 and April 2002, I was the Chief Architect for WebManage Technologies of Chelmsford, MA, a company that provided solutions for managing and analyzing Internet sites such as websites and monitoring website traffic. WebManage was later acquired by Network Appliance (NetApp), where I served as Technical Director. Between February 2012 and August 2014, I also served as Chief Scientist at Guavus Inc., a telecom analytics company.

4. I have been awarded several United States patents, including the following examples:

U.S. Pat. No.	Title
10,027,347	Methods for storing and reading digital data on a set of DNA strands
8,869,276	Method and Apparatus for Whole-Network Anomaly Diagnosis and Method to Detect and Classify Network Anomalies Using Traffic Feature Distributions
8,533,167	Compressed Set Representation for Sets as Measures in OLAP Cubes
7,747,741	Method and Apparatus for Dynamic Resource Discovery and Information Distribution in a Data Network
7,346,682	System for Creating and Distributing Prioritized List of Computer Nodes Selected as Participants in a Distribution Job
6,993,587	Method and Apparatus for Election of Group Leaders in a Distributed Network
6,748,447	Method and Apparatus for Scalable Distribution of Information in a Distributed Network

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U.S. Pat. No.	Title
6,718,361	Method and Apparatus for Reliable and Scalable Distribution of Data Files in Distributed Networks
6,370,584	Distributed Routing
6,223,205	Method and Apparatus for Assigning Tasks in a Distributed Server System

5. Based on my above-described over three decades of experience in Computing and Data Sciences and the acceptance of my publications (200+) and professional recognition by societies in my field, I believe that I am qualified to be an expert in the field of the challenged patent.

6. My Curriculum Vitae is attached as **Exhibit A**.

7. I have been retained by counsel for Petitioner to provide my expert opinion in connection with the above-captioned proceeding as set forth herein. I am being compensated for my time working on this matter at my standard hourly rate plus expenses. I do not have any personal or financial stake or interest in the outcome of the present proceeding, and my compensation is not dependent on the outcome of this IPR and in no way affects the substance of my statements in this Declaration.

B. Materials Considered

8. The analysis that I provide in this Declaration is based on my education, research, and experience, as well as the documents I have considered. In forming

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my opinions, I have read and considered U.S. Patent No. 11,416,898 B2 (“’898 patent”) (EX1001) and its prosecution history. I have cited to the following documents in my analysis below:

Exhibit No.	Description of Document
1001	U.S. Patent No. 11,416,898 B2 to John E. DeTitta (filed May 24, 2019, issued Aug. 16, 2022) (“’898” or “’898 patent”)
1003	U.S. Patent Application Pub. No. 2004/0054589 A1 to Frank C. Nicholas et al. (filed September 8, 2003, published March 18, 2004) (“Nicholas”)
1004	U.S. Patent Application Pub. No. 2004/0128547 A1 to Robert Laidlaw et al. (filed December 31, 2002, published July 1, 2004) (“Laidlaw”)
1005	U.S. Patent Application Pub. No. 2001/0039515 A1 to Vijay Mayadas (filed May 2, 2001, published November 8, 2001) (“Mayadas”)
1006	U.S. Patent Application Pub. No. 2005/0027594 A1 to Elliot Yasnovsky et al. (filed November 3, 2003, published February 3, 2005) (“Yasnovsky”)
1007	U.S. Patent No. 8,156,216 B1 to Brent Error (filed January 10, 2003, issued April 10, 2012) (“Error”)
1008	U.S. Patent No. 6,138,142 to Steven J. Linsk (filed December 20, 1996, issued October 24, 2000) (“Linsk”)
1009	Excerpts from Robbin Zeff et al., <i>Advertising on the Internet</i> (2d ed. 1999)
1010	Excerpts from <i>Microsoft Computer Dictionary</i> (5th ed. 2002)
1011	Excerpts from <i>Dictionary of Computer and Internet Terms</i> (8th ed. 2003)
1012	U.S. Provisional Patent Application No. 60/298,329
1013	U.S. Provisional Patent Application No. 60/362,297

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Exhibit No.	Description of Document
1014	Excerpts from Bob Baxley, <i>Making the Web Work: Designing Effective Web Applications</i> (2002) (“Baxley”)
1015	WO 01/59653 A1 to Neal J. Manowitz (filed January 31, 2001, published August 16, 2001) (“Manowitz”)
1016	Excerpts from James F. Korsh, <i>Data Structures, Algorithms, and Program Style</i> (1986) (“Korsh”)

II. PERSON OF ORDINARY SKILL IN THE ART

9. I understand that, under the patent laws in effect before the America Invents Act (“AIA”) of 2011, an assessment of claims of a patent filed before the AIA took effect should be undertaken from the perspective of a person of ordinary skill in the art as of the earliest claimed priority date (i.e., the “time the invention was made”). I have preliminarily for purposes of my Declaration only assumed that date to be November 12, 2004, the filing date of the earliest application to which the ’898 patent claims priority (provisional application no. 60/626,933).¹

10. I have also been advised that to determine the appropriate level of a person having ordinary skill in the art, the following factors may be considered: (1)

¹ I express no opinion on whether the ’898 patent is actually entitled to the benefit of the November 12, 2004 provisional application to which it claims priority (60/626,933). This issue is not relevant here because all of the prior art references relied upon predate that date. In the event entitlement to the provisional filing date may later become relevant, for example based on arguments later presented by Patent Owner, I reserve my right to provide opinions on that issue at that time.

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the types of problems encountered by those working in the field and prior art solutions thereto; (2) the sophistication of the technology in question, and the rapidity with which innovations occur in the field; (3) the educational level of active workers in the field; and (4) the educational level of the inventor.

11. The '898 patent relates generally to advertising on the Internet. Each independent claim recites, among other things, receiving “over an Internet-based communication link” “advertising material to populate on one or more websites.” ('898, 10:30-35 (claim 1), 11:56-61 (claim 10), 13:17-22 (claim 19).)

12. In my opinion, a person of ordinary skill in the art would have possessed a bachelor's degree in electrical engineering, computer science, or similar field, with at least two years of experience in developing and implementing network-based computer systems, such as systems for sending and receiving information over the Internet and/or the Web. A person could also have qualified as a person of ordinary skill in the art with some combination of (1) more formal education (such as a master's of science degree) and less technical experience, or (2) less formal education and more technical or professional experience.

13. My opinions regarding the level of ordinary skill in the art are based on, among other things, my more than 30 years of experience in the field of computer science, my understanding of the basic qualifications that would be relevant to an

engineer or scientist tasked with investigating methods and systems in the relevant area, and my familiarity with the backgrounds of colleagues, co-workers, and employees, both past and present.

14. Although my qualifications and experience exceed those of the hypothetical person having ordinary skill in the art defined above, my analysis and opinions regarding the '898 patent have been based on the perspective of a person of ordinary skill in the art as of November 2004.

III. STATEMENT OF LEGAL PRINCIPLES

A. Claim Construction

15. I understand that a purpose of claim construction is to determine what a person of ordinary skill in the art would have understood the claim terms to mean. Claim terms are generally given their ordinary and customary meaning, which is the meaning that the term would have to a person of ordinary skill in the art in question as of the effective filing date.

16. I understand that the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification. I understand that the patent specification, under the legal principles, has been described as the single best guide to the meaning of a claim term, and is thus highly

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relevant to the interpretation of claim terms. And I understand for terms that do not have a customary meaning within the art, the specification usually supplies the best context for understanding the meaning of those terms.

17. I further understand that other claims of the patent in question, both asserted and unasserted, can be valuable sources of information as to the meaning of a claim term. Because the claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.

18. I understand that the prosecution history can further inform the meaning of the claim language by demonstrating how the inventors understood the invention and whether the inventors limited the invention in the course of prosecution, making the claim scope narrower than it otherwise would be. Extrinsic evidence, such as dictionaries, may also be consulted in construing the claim terms.

19. I understand that, in *Inter Partes* Review (IPR) proceedings, a claim of a patent shall be construed using the same claim construction standard that would be used to construe the claim in a civil action filed in a U.S. district court (which I understand is called the “*Phillips*” claim construction standard), including construing the claim in accordance with the ordinary and customary meaning of such

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claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

20. I have been instructed by counsel to apply the “*Phillips*” claim construction standard for purposes of interpreting the claims in this proceeding, to the extent they require an explicit construction. The description of the legal principles set forth above thus provides my understanding of the “*Phillips*” standard as provided to me by counsel.

21. For purposes of my analysis here, I do not believe express claim constructions are necessary because the prior art renders the claims obvious under any reasonable construction. In some instances below, I have referred to embodiments in the written description of the ’898 patent to provide background or explanation regarding certain limitations in the claims, and/or to confirm that the prior art discloses those claim limitations by disclosing the same techniques used in the embodiments of the ’898 patent. These references to the ’898 patent written description are not intended to suggest the need for any express claim construction, or any particular construction, but are merely intended to demonstrate that a person of ordinary skill in the art would have found that the prior art discloses and renders obvious the claim limitations, under any reasonable construction.

B. Obviousness (§ 103)

22. I understand that a patent claim is obvious if, as of the effective filing date, it would have been obvious to a person having ordinary skill in the field of the technology (the “art”) to which the claimed subject matter belongs.

23. I understand that the following factors should be considered in analyzing obviousness: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims; and (3) the level of ordinary skill in the pertinent art. I also understand that certain other facts known as “secondary considerations” such as commercial success, unexplained results, long felt but unsolved need, industry acclaim, simultaneous invention, copying by others, skepticism by experts in the field, and failure of others may be utilized as indicia of nonobviousness. I understand, however, that secondary considerations should be connected, or have a “nexus,” with the invention claimed in the patent at issue.

24. I understand that a reference qualifies as prior art for obviousness purposes when it is analogous to the claimed invention. The test for determining what art is analogous is: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

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25. I understand that a person of ordinary skill in the art is assumed to have knowledge of all prior art. I understand that one skilled in the art can combine various prior art references based on the teachings of those prior art references, the general knowledge present in the art, or common sense. I understand that a motivation to combine references may be implicit in the prior art, and there is no requirement that there be an actual or explicit teaching to combine two references. Thus, one may take into account the inferences and creative steps that a person of ordinary skill in the art would employ to combine the known elements in the prior art in the manner claimed by the patent at issue. I understand that one should avoid “hindsight bias” and *ex post* reasoning in performing an obviousness analysis. But this does not mean that a person of ordinary skill in the art for purposes of the obviousness inquiry does not have recourse to common sense.

26. I understand that when determining whether a patent claim is obvious in light of the prior art, neither the particular motivation for the patent nor the stated purpose of the patentee is controlling. The primary inquiry has to do with the objective reach of the claims, and that if those claims extend to something that is obvious, then the entire patent claim is invalid.

27. I understand one way that a patent can be found obvious is if there existed at the time of the invention a known problem for which there was an obvious

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solution encompassed by the patent's claims. I understand that a motivation to combine various prior art references to solve a particular problem may come from a variety of sources, including market demand or scientific literature. I understand that a need or problem known in the field at the time of the invention can also provide a reason to combine prior art references and render a patent claim invalid for obviousness. I understand that familiar items may have obvious uses beyond their primary purpose, and that a person of ordinary skill in the art will be able to fit the teachings of multiple prior art references together like the pieces of a puzzle. I understand that a person of ordinary skill is also a person of at least ordinary creativity. I understand when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this finite number of predictable solutions leads to the anticipated success, I understand that the invention is likely the product of ordinary skill and common sense, and not of any sort of innovation. I understand that the fact that a combination was obvious to try might also show that it was obvious, and hence invalid, under the patent laws. I understand that if a patent claims a combination of familiar elements according to known methods, the combination is likely to be obvious when it does no more than yield predictable results. Thus, if a person of

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ordinary skill in the art can implement a predictable variation, an invention is likely obvious. I understand that combining embodiments disclosed near each other in a prior art reference would not ordinarily require a leap of inventiveness.

28. I understand that obviousness may be shown by demonstrating that it would have been obvious to modify what is taught in a single piece of prior art to create the patented invention. Obviousness may also be shown by demonstrating that it would have been obvious to combine the teachings of more than one item of prior art. I understand that a claimed invention may be obvious if some teaching, suggestion, or motivation exists that would have led a person of ordinary skill in the art to combine the invalidating references. I also understand that this suggestion or motivation may come from the knowledge of a person having ordinary skill in the art, or from sources such as explicit statements in the prior art. I understand that when there is a design need or market pressure, and there are a finite number of predictable solutions, a person of ordinary skill may be motivated to apply common sense and his skill to combine the known options in order to solve the problem.

29. I understand the following are examples of approaches and rationales that may be considered in determining whether a piece of prior art could have been combined with other prior art or with other information within the knowledge of a person having ordinary skill in the art:

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- (1) Some teaching, motivation, or suggestion in the prior art that would have led a person of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention;
- (2) Known work in one field of endeavor may prompt variations of it for use in the same field or a different field based on design incentives or other market forces if the variations would have been predictable to a person of ordinary skill in the art;
- (3) Combining prior art elements according to known methods to yield predictable results;
- (4) Applying a known technique to a known device, method, or product ready for improvement to yield predictable results;
- (5) Applying a technique or approach that would have been “obvious to try” (choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success);
- (6) Simple substitution of one known element for another to obtain predictable results; or
- (7) Use of a known technique to improve similar products, devices, or methods in the same way.

30. I understand that, when determining whether a claimed combination is

obvious, the correct analysis is not whether one of ordinary skill in the art, writing on a blank slate, would have chosen the particular combination of elements described in the claim. Instead, I understand the correct analysis considers whether one of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to selecting the combination claimed.

31. I understand that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. The test for obviousness, in other words, is not whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.

IV. THE '898 PATENT

A. Overview of the Specification

32. The '898 patent, entitled "Methods, Systems, and Apparatus for Financing Projects," states that it "relates generally to media financing and more specifically it relates to such a process that allows advertisers to finance media productions through advertising media buys while eliminating the risk of normal event financing speculative investment." ('898, 1:22-26.)

33. The '898 patent acknowledges existing fund raising methodologies, "such as 'crowd funding', for example, which allows projects to be listed on a crowd

funding internet site such as ‘Kickstarter.com’.” (’898, 1:48-52.) The ’898 patent asserts that, due to limitations of existing methodologies—such as potential legal controls as well as requiring people to donate their own money—“there remains a need for an improved method, system and apparatus for raising funds for projects.” (’898, 2:16-28.)

34. Figure 1, reproduced below, depicts an embodiment in which a user, using client system **10** comprising browser **12**, accesses server system **18**:

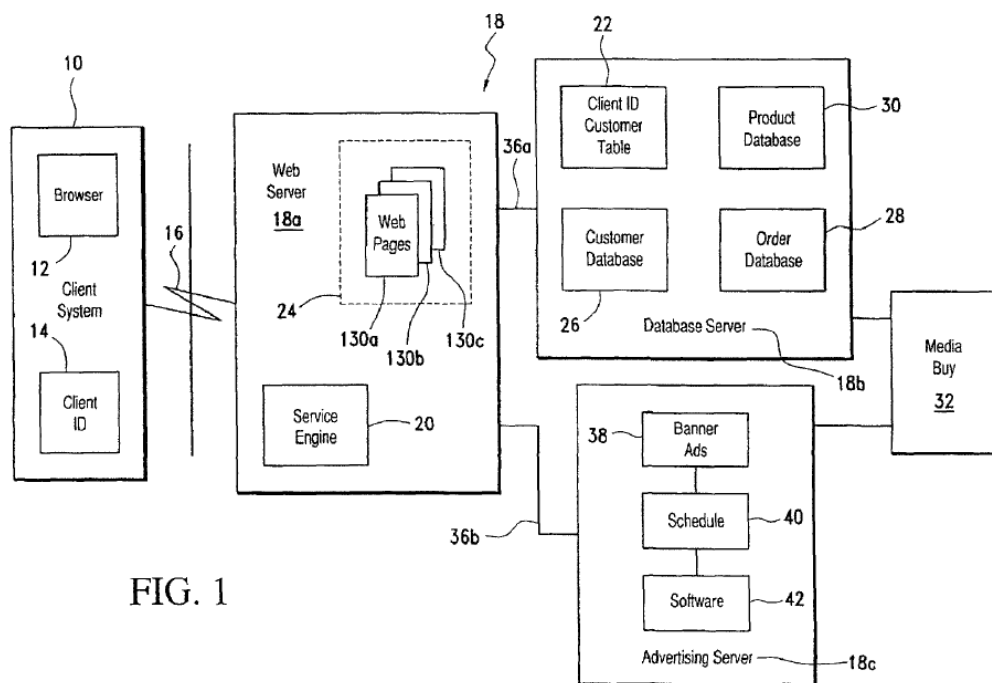


FIG. 1

(’898, 3:26-31, Fig. 1.) As shown in the figure above, server system **18** includes an advertising server **18c** that is programmed to regulate advertisements to be seen by users. (’898, 3:51-53.) Advertising server **18c** does this by storing advertisement materials in the form of banner ads, pop-ups, text ads, and so on, and running the

ads “based on predetermined impressions, length of contract with the advertiser.”
(’898, 3:53-58.) The data is input to the server system **18** via a media buy block **32**.
(’898, 3:58-60.)

35. The ’898 patent states that a “web property is marketed to a target audience who visits the web property to view the content provided.” (’898, 4:31-33.) The visits to the web property—called “impressions”—“create a commodity in the advertising community” and can be packaged and sold to an advertiser. (’898, 5:17-21.) An advertiser that desires to market itself to the targeted audience purchases the targeted impressions at a predetermined media buy in order to place advertising materials on a screen of the property. (’898, 5:22-28.) Once the media buy is fulfilled, the advertiser is invoiced for the cost of the media buy. (’898, 5:38-41.) The advertiser pays the invoice, and the revenue generated is placed into a fund, such as a bank account. (’898, 5:41-45.) The ’898 patent asserts that “[s]ince the advertiser has received dollar for dollar advertising, there has been adequate consideration given for the money that funds the project and hence the funding model requires no dependence on the success of the project itself” and that “[a]s such, the risk associated with traditional investment models is eliminated.” (’898, 6:61-67.)

36. I discuss additional aspects of the ’898 patent in my analysis of the

claims below.

B. The Challenged Claims

37. This Declaration addresses all claims (*i.e.*, 1-20) of the '898 patent.

Independent claim 1 is representative and recites:

1. A computer-implemented method comprising:
 - [a] receiving, by one or more processors, from a given client, over an Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data, the data comprising advertising material to populate on one or more websites;
 - [b] identifying, by the one or more processors, the given client, based on receiving the message, an identifier, wherein the message comprises the identifier;
 - [c] based on a message provided by a given client, generating, by the one or more processors, a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client accessing said webpage;
 - [d] obtaining, by the one or more processors, via an input in the graphical user interface, a selection of one or more of the advertising buy options, wherein the selected one or more advertising buy options comprise at least one website of the respective websites and a predetermined

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number of impressions of the advertising material for users visiting the at least one website;

- [e] generating, by the one or more processors, on a database accessible to the one or more processors, a repository for advertising revenue based on the selection;
- [f] based on obtaining the selection, populating, by the one or more processors, the advertising material on the at least one website, wherein the populating comprises placing the advertising material within web property content of the at least one website;
- [g] monitoring, by the one or more processors, a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website;
- [h] determining, by the one or more processors, whether an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system;
- [i] determining, by the one or more processors, that the number of valid impressions is greater than or equal to the predetermined number of impressions;
- [j] upon determining a number of valid impressions are met, ceasing, by the one or more processors, the populating of the advertising material on the at least one website; and
- [k] based on determining a number of valid impressions are met,

electronically collecting, by the one or more processors, a share of the advertising revenue to be transmitted to the web property content owner.

('898, 10:29-11:12 (Claim 1; bracketed notation (*e.g.*, [a]) added).)

38. I address the claims further in my detailed analysis in **Part V** below.

V. APPLICATION OF THE PRIOR ART TO CHALLENGED CLAIMS

39. I have reviewed and analyzed the prior art references and materials listed in **Part I.B** above. In my opinion the claims of the '898 patent would have been obvious to a person of ordinary skill in the art based on the following:

Ground	Claims	Basis for Challenge Under § 103
1	1-6, 9-15, 18-19	Nicholas (EX1003) in view of Laidlaw (EX1004), Mayadas (EX1005), and Error (EX1007)
2	7-8, 16-17, 20	Ground 1 Prior Art + Yasnovsky (EX1006)
3	1-6, 9-15, 18-19	Ground 1 Prior Art + Manowitz (EX1015)
4	7-8, 16-17, 20	Ground 2 Prior Art + Manowitz (EX1015)

40. I am informed by counsel that each of the references cited in the grounds above qualifies as prior art to the challenged claims because each reference was filed and/or published before the earliest filing date to which the '898 patent can claim priority (November 12, 2004). Although **Ground 1** above cites to four prior art references, many of these references are cited for features that would have fallen

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within the basic knowledge of a person of ordinary skill in the art. For example, my Declaration cites to the Background section in Laidlaw (**EX1004**), which describes the use of cookies to identify and track website users – a well-known technology developed in the 1990s and used by millions of websites by November 2004 for providing targeted advertising and optimizing user experience. My Declaration also cites to the Background section of Error (**EX1007**) for its description of another known web technology commonly known as “web beacons,” in which single-pixel (or transparent) image files can be embedded in website content to record when users have viewed the website content. Both of these techniques were standard tools for web developers as of November 2004. My Declaration also cites to Mayadas (**EX1005**), for its disclosure of accounting techniques for collecting monies from advertisers and distributing funds to website owners who display advertisements on their websites. These techniques were also well-known in the field of targeted Internet-based advertising. **Ground 2** cites to Yasnovsky (**EX1006**) to account for a limitation in dependent claims 7-8, 16-17, and 20. **Grounds 3-4** cite to Manowitz (**EX1015**), solely to account for a potentially narrow claim construction position by Patent Owner, and because it describes known techniques for allowing website owners and publishers to share advertising revenue with third party content providers.

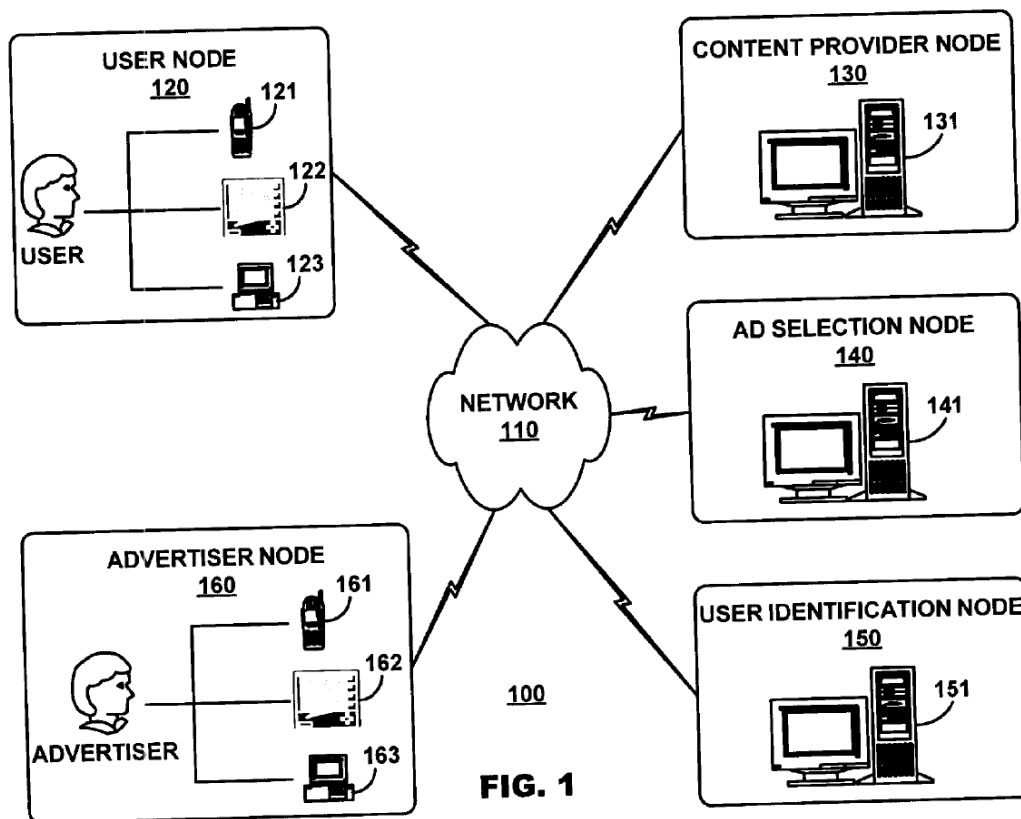
A. Brief Summary and Overview of Prior Art

1. Nicholas (EX1003)

41. **Nicholas**, U.S. Patent Application Publication No. 2004/0054589 A1, is entitled “Method and System for Providing Network Based Target Advertising and Encapsulation.” I am informed that Nicholas qualifies as prior art because it was filed before the earliest priority date of the challenged claims. Nicholas also incorporates by reference two earlier-filed provisional applications (Application Nos. 60/328,329 (**EX1012**), 60/362,297 (**EX1013**)). (Nicholas, ¶0001.) I have referred to these provisional applications in part of my analysis below.

42. Nicholas states that it “generally relates to the advertising of goods and services,” and more specifically, “to the targeted distribution of advertisements over a network.” (Nicholas, ¶0002.) The Background in Nicholas explains that the Internet and the Web have “provided numerous new opportunities, formats and mediums for the advertisement of product and services.” (*Id.*, ¶0003.) “Over the past several years, there has been a movement to target advertising toward viewers and listeners based on their geographic location and demographic profile.” (*Id.*) Nicholas purports to disclose “an advancement to this movement.” (*Id.*)

43. Nicholas discloses an Internet and web-based advertising system that has multiple components. Figure 1 shows some of the components of the system:



(Nicholas, Fig. 1.)

44. Figure 1 above shows user node **120**, which is used to establish communications over network **110** with other nodes. (Nicholas, ¶¶0043-0044.) User node **120** can be a conventional computing device such as personal computer **123** shown in Figure 1. (Nicholas, ¶0044.) In one embodiment, personal computer **123** can include a web browser for accessing websites over the Internet, “such as Microsoft’s Internet Explorer, or Netscape Navigator.” (Nicholas, ¶0102.) Network **110** may include the Internet. (Nicholas, ¶0043.)

45. Advertiser node **160**, as its name implies, is used by an advertiser.

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Advertiser node **160** operates “to facilitate communications of advertisements in audio form and/or visual form between an advertiser and the ad selection node **140**.” (Nicholas, ¶0052.) “The advertiser may be the end advertiser of a product or service, a marketer, a publicist, a politician, any other similar party, or any party acting as an agent of the advertiser such as a media company, public relations company, advertising agency, or traditional publication.” (Nicholas, ¶0053.) Similar to user node **120** discussed above, advertiser node **160** may also be a conventional personal computer **163** as shown in Figure 1. (Nicholas, ¶0052.)

46. Content provider node **130** “includes one or more servers **131** for conventionally communicating with the other nodes of telecommunication system **100**.” (Nicholas, ¶0045.) Content provider node **130** can provide information in a number of forms, “such as, for example, a static or dynamic web page” and “other forms of network information known in the art.” (*Id.*) Content provider node **130** “can include suitable hardware platforms and software modules to operate as a web site server,” for example. (*Id.*) For example, content provider node **130** can provide “a consumer web site,” which “can be a standard web site made up of HTML pages accessible on the Internet by web browsers such as those commercially available by Netscape, Microsoft, and Opera.” (Nicholas, ¶0106.)

47. This brings us to ad selection node **140** – the key component of

Nicholas for purposes of my analysis. One of the functions of ad selection node **140** (as its name implies) is to select advertisements, which will be communicated to user node **120** through the content provider node. (Nicholas, ¶0047.)

48. Another key function of ad selection node **140** is to allow an advertiser to create and define an advertisement that can be presented to users. (Nicholas, ¶¶0056-0057.) In one example, Figure 6 shows a web page provided by ad selection node **140** that allows the advertiser to define an advertisement:

The screenshot shows a web browser window with the title "Dizpersion". The address bar shows "http://www.dizpersion.com/". The page has a navigation bar with links: "accounts", "advertiser", "website", and "newspaper". Below the navigation bar is a section titled "Broadcast Ad" with sub-sections: "Ad Upload", "Coupon", "Quantity", "Channels", "Geographic", "Demographic", and "Summary". The main content area is titled "Steps" and contains a list of instructions: 1. Select an Advertiser. (Advertiser 1, Create a New Advertiser Account), 2. Retrieve Advertisement. (File: [text box], Browse...), 3. Define Ad Type. (Ad Type: Banner), 4. Press Submit. (Submit). The footer contains "2001 Dizpersion Corporation" and links: "Contact Us", "Privacy", and "Terms of Use".

201

202

Dizpersion

log off threshold

accounts advertiser website newspaper

Broadcast Ad Ad Upload Coupon Quantity Channels Geographic Demographic Summary

Company Name
User Name
Street Address
City, State Zip
Home

Steps

1. Select an Advertiser. Advertiser 1
Create a New Advertiser Account

2. Retrieve Advertisement. File: [text box] Browse...

3. Define Ad Type. Ad Type: Banner

4. Press Submit. Submit

2001 Dizpersion Corporation Contact Us Privacy Terms of Use

FIG. 6

(Nicholas, Fig. 6.) "FIG. 6 illustrates one embodiment of a web browser-based

interface **200** for beginning the process of defining an advertisement.” (Nicholas, ¶0058.) As shown, Figure 6 includes input fields for selecting the advertiser **203**, an advertisement file **205**, and the type of advertisement **206**. (Nicholas, ¶0059.) An advertisement file **205** may include many different types of information, including among others, GIF and JPEG image files, an HTML web page, or “any other file format that may be served over a network.” (*Id.*)

49. Nicholas discloses several other pages that an advertiser can access to further define its advertisement. (Nicholas, ¶0057, Figs. 6-11.) For example, Figure 8 below allows the advertiser to specify further options for its advertisement, including the number of advertising impressions **221** and the time period **222**, **223**, **224**, **225** during which the advertisement should be presented:

The screenshot shows a web browser window with the title "Dizpersion". The interface includes a navigation bar with links for "log off" and "threshold", and a menu with "accounts", "advertiser", "website", and "newspaper". Below this is a "Broadcast Ad" section with tabs for "Ad Upload", "Coupon", "Quantity", "Channels", "Geographic", "Demographic", and "Summary". The main content area contains a form for creating a broadcast advertisement. On the left, there are input fields for "Company Name", "User Name", "Street Address", "City, State Zip", and a "Home" button. In the center, there is a "Steps" section with a numbered list of instructions: 1. Enter the Number of Impressions Purchased. 2. Select the Broadcast Start Date. 3. Select the Broadcast Start Time and Time Zone. 4. Select the Broadcast End Date. 5. Select the Broadcast End Time and Time Zone. 6. Press Submit. To the right of the steps, there are input fields for "Impressions", "Start Date" (Month, Day, Year), "Start Time" (Hour, AM/PM), "Start Zone" (Time Zone), "End Date" (Month, Day, Year), "End Time" (Hour, AM/PM), and "Time Zone" (Time Zone). A "Submit" button is located at the bottom right of the form. The footer of the page includes "2001 Dizpersion Corporation" and links for "Contact Us", "Privacy", and "Terms of Use".

220
FIG. 8

(Nicholas, Fig. 8; *see also id.*, ¶0061.)

50. Nicholas describes various other screens providing further options for refining an advertisement. Figure 7, for example, allows the advertiser to specify the destination or type of the advertisement, such as the URL of a web page on the advertiser's site or specify that the advertisement is a coupon. (Nicholas, ¶0060, Fig. 7.) Figure 12 allows the advertiser to specify demographics of the target audience for the advertisement. (Nicholas, ¶0065, Fig. 12.) I will provide more detail about Nicholas in my discussion of the claim limitations, below.

2. Laidlaw (EX1004)

51. **Laidlaw**, U.S. Patent Application Pub. No. 2004/0128547 A1, is entitled “Method and System for Modular Authentication and Session Management.” Laidlaw describes various session management and authentication techniques for allowing a client to access computing resources. (Laidlaw, Abstract.) I am informed that Laidlaw qualifies as prior art because it was filed and published before the earliest priority date of the challenged claims.

52. My Declaration cites Laidlaw in connection with claim limitation 1**[b]**, which recites a processor receiving an “**identifier**” from a message, the identifier being used to identify a given client. I have cited Laidlaw because it discloses a well-known technique known as “cookies” that discloses this claimed feature.

53. The term “cookie” generally refers to a technique created in the mid-1990s by Netscape Communications (the maker of the once-popular Netscape Navigator web browser) that allows a web server to send a piece of information (a “cookie”) to a user’s web browser for storage. The web browser then stores that information and, for each subsequent request to the website, sends that information back to the web server. One of the primary use cases of a cookie is to convey user identification information to the web server so it can identify the user when it communicates with the website. As applied to Nicholas as explained in **Part V.B**

below, it would have been obvious that each message sent from advertising node **160** (“**a given client**”) to ad selection node **140** (“**one or more processors**”) would have included a cookie (“**identifier**”), which ad selection node **140** would have used to identify advertising node **160** used by the advertiser.

54. This is confirmed by Laidlaw, which explains as part of its Background that web cookies were a known technique to identify client computers in web-based systems. As Laidlaw explains, “[a] cookie is a sequence of binary information that a web server may send to a client system, and which the client system sends back to the web server with each subsequent request, assuming the user employs a web browser client with cookie support present and enabled.” (Laidlaw, ¶0006; *see also id.* (“...web applications may use cookies... to identify a user.”).)

55. As Laidlaw explains, cookies are designed to address the “inherently stateless” nature of the Hypertext Transport Protocol (HTTP), the protocol used to transmit requests and information between browsers and web servers. (Laidlaw, ¶0006.) HTTP is “stateless” in the sense that each HTTP request received by a web server from a browser is independent of the prior requests; in other words, the web server is not required to maintain knowledge of prior requests. The cookie technique addresses this issue by including the cookie information, such as an identifier, with each HTTP request sent from the web browser to the server. This information can

be used by the web server to identify the client computer associated with the request, and to keep track of actions previously taken by the user on the site. As noted, cookies were originally created by Netscape in the mid-1990s and are widely used on websites today.

56. I note that the '898 patent itself expressly identifies a “cookie” as an example of the claimed “**identifier**,” referring to the same prior art technique described in Laidlaw and known to persons of ordinary skill in the art. ('898, 3:31-46 (“The client system **10** comprises of a browser **12** and its assigned client identifier, which is known as a ‘cookie’. The client identifier is stored in a file **14**... [T]he client system **10** includes its client identifier with all messages sent to the server system **18** so that the server system **18** can identify the particular client system **10** from which the message was sent.”).) I will provide more information about Laidlaw in my discussion of the claim limitations below.

3. **Mayadas (EX1005)**

57. **Mayadas**, U.S. Patent Application Pub. No. 2001/0039515 A1, is entitled “System and Method for Payment for Targeted Messaging Over a Network.” Mayadas discloses a targeted advertising system, similar to Nicholas, in which an advertiser can access an advertising system over the Internet and define parameters for an advertising campaign. (Mayadas, Abstract, ¶¶0015, 0029.) I am informed

that Mayadas qualifies as prior art to the '898 patent because it was filed and published before the earliest priority date of the challenged claims.

58. My Declaration cites Mayadas primarily for limitation 1[e], which recites the step of generating a “**repository for advertising revenue based on the selection.**” Mayadas describes a targeted advertising system similar to Nicholas that allows an advertiser to create advertising campaigns for delivering advertisements to users via websites on the Internet. But Mayadas provides more detail than Nicholas about collection of money from the advertiser and paying website owners when advertisement impressions are delivered on their websites. Figure 2 of Mayadas outlines the process of creating an advertising campaign:

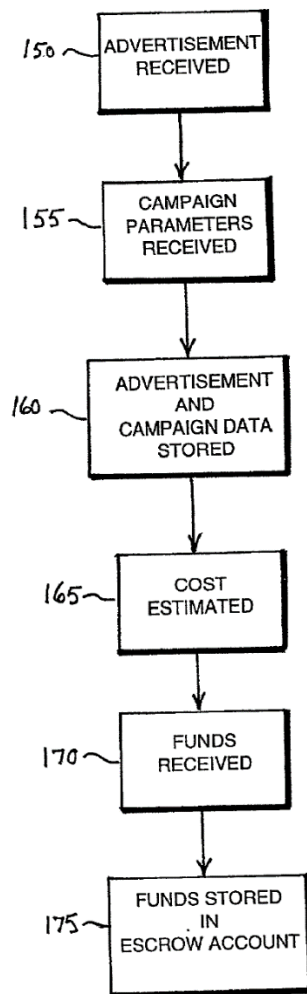


FIG. 2

(Mayadas, Fig. 2.) Figure 2 shows the method of operation of “a targeted message sponsor,” such as an advertiser, “submitting a targeted message to the system using, as an example, an advertising campaign on the World Wide Web.” (Mayadas, ¶0028.) Block **150** shows the system receiving an advertisement submitted by the advertiser, and in block **155**, receiving parameters for the advertising campaign. (Mayadas, ¶0029.) These parameters include “length of time, publishers or type of

publisher, number of hits, group of users, etc.” (Mayadas, ¶0029 (emphasis added).)

These parameters are similar to the selections received by advertisers in Nicholas (e.g., identity of websites and the number of impressions). The term “publisher” in Mayadas includes a website. (Mayadas, e.g., ¶0034 (“The publisher is a web site and the targeted message is an advertisement.”).)

59. Next, at block **160**, the cost of publishing the advertising campaign is estimated based on the parameters received from the advertiser. (Mayadas, ¶0029.) “The system receives a block of funds from the advertiser based on the estimated cost of the advertisement campaign to the system, block **170**. The block of funds from the advertiser is placed in an escrow account ready for distribution in conjunction with serving the advertisement through the web sites, block **175**.” (*Id.*) Mayadas further explains that the funds in the escrow account are distributed to publishers when the advertiser’s advertisements are displayed on the publishers’ websites. (Mayadas, ¶¶0038 (“Advertisers place funds in an escrow account. An amount from the escrow account is paid out each time an advertisement is served.”), 0015 (“When a user interacts with a targeted message... the publisher... [is] compensated from the escrow account.”), 0034-0037.)

60. I will provide more information about Mayadas in my discussion of the claim limitations below.

4. Error (EX1007)

61. **Error**, U.S. Patent No. 8,156,216 B1, is entitled “Distributed Data Collection and Aggregation.” Error describes a technique for collecting and aggregating website usage information from users in a variety of geographic locations. (Error, Abstract.) I am informed that Error qualifies as prior art because it was filed before the earliest priority date of the challenged claims.

62. My Declaration cites Error primarily in connection with claim limitation 1[h], which recites the step of determining whether “**an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system.**” This limitation is obvious in view of Error, which describes a known tracking system used to determine whether or not a webpage was in fact delivered and displayed to a user.

63. The Background in Error discloses a well-known technique, known as the “single-pixel” image technique, for determining that an impression is valid. The technique is straightforward; a URL link for a single pixel (or transparent) image file is embedded onto a webpage that is transmitted to a web browser. This single-pixel image is not intended to be viewed by the user and will likely go unnoticed. After the browser receives the webpage, it uses the embedded URL link to request the single-pixel image from the server. The receipt of that request by the server provides

an indication that the web browser *actually* received and presented the web page to the user. This is described in Error as follows:

One commonly used technique for third-party collection of usage data is to include, in each web page to be tracked, a small image, such as a single-pixel image that is not intended to be noticed by the user. Normally, images in web pages are served from the content provider's server, along with other content. The single-pixel image, however, which is specifically included in web pages for tracking purposes and normally does not contain any meaningful content, is served from a tracking server operated by the third-party traffic statistics service. In most cases, the single-pixel image is transparent, so as to be as unobtrusive as possible.

When a user navigates to a web page, the web page's HTML code causes the user's browser to send a request for the single-pixel image. The tracking server receives the request and logs the request as a user visit to the web page. It is known in the art to embed identifier codes within the image requests, so that the tracking server can detect individual users and discern additional identifying information about each user.

(Error, 1:36-54 (emphasis added); *see also id.*, 2:6-21 (explaining that when the tracking server receives a request for the single-pixel image, “tracking server 106 records the occurrence of a ‘hit’ to the web page.”).)

64. Error thus discloses “**a predetermined tracking system**” for determining that a web page was properly delivered to the browser. This is because, when the browser receives a web page with a single-pixel image tag, and sends back

a request for the single-pixel image to a tracking server, that tells the tracking server that the web page was in fact properly delivered to the user's web browser.

65. I note that the '898 specification does not expressly define what constitutes a “**valid**” impression. But in describing the claimed “**predetermined tracking system**,” the patent relies on the exact same technique earlier described in Error in which a single-pixel (1x1) image is used as a “tracking asset” and used to determine if an advertising impression was valid. ('898, 9:49-61 (“In the above example, a valid impression may only be counted when an ad counter receives and responds to an HTTP request for a tracking asset from a client... The response by the ad counter includes but is not limited to: Delivery of a ‘beacon’, which may be defined as any piece of content designation as a tracking asset. Beacons commonly are in the form of 1×1 pixel image.”) (emphasis added).)

66. I will provide more information about Error in my discussion of the claim limitations below.

5. Yasnovsky (EX1006)

67. Yasnovsky, U.S. Patent Application Pub. No. 2005/0027594 A1, is entitled “Self-Service Platform for Selling Advertising.” Yasnovsky discloses an Internet-based advertising system, similar to Nicholas and Mayadas, that allows an advertiser to access an advertising system to make selections to launch an Internet

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advertising campaign. (Yasnovsky, Abstract, ¶¶0043-0044, 0055.) I am informed that Yasnovsky qualifies as prior art because it was filed before the earliest priority date of the challenged claims. My Declaration relies on Yasnovsky for limitations in dependent claims 7-8, 16-17, and 20.

68. Yasnovsky describes “[a] self-service platform [that] allows advertisers to create and manage their own ad campaigns to be run on a computer network, such as the Internet.” (Yasnovsky, Abstract.) In one embodiment, Yasnovsky describes placing advertisements on websites owned by Yahoo! such as Yahoo! Finance or the Yahoo! Front Page. (Yasnovsky, ¶0035.) “Alternatively, the self-service platform can sell ads for many different platforms, not just Yahoo! sites.” (Yasnovsky, ¶0043.) My Declaration cites Yasnovsky primarily for disclosures relating to the handling of payments for placement of advertisements.

69. Yasnovsky explains that, in one example, “the advertiser can create and manage ads, create and manage campaigns using those ads, receive and view reports on the campaigns and maintain his account balance for his campaigns.” (Yasnovsky, ¶0044.) More specifically, when defining an advertising campaign, the advertiser specifies a campaign budget representing “the maximum amount to be spent on this campaign.” (Yasnovsky, ¶0046; *see also id.*, Fig 3A-1 (showing user specifying budget of \$500).) The advertising campaign will not commence until the

advertiser's account is funded. (Yasnovsky, ¶¶0046, 0048.) The advertiser can also specify the days the campaign will run, the advertisements to run in the campaign, and provide a name for the campaign. (Yasnovsky, ¶¶0046-0048.)

70. Yasnovsky is similar to Mayadas in that “[t]he advertiser prepays a certain amount in his account. As ads run, debits are generated against the prepayment, drawing down the prepayment.” (Yasnovsky, ¶0044.) After this initial prepayment or deposit, the advertiser has three options for subsequent funding: (1) the advertiser can manually refill its account each time, (2) the advertiser can be reminded to refill their account when the account falls below a specified threshold level, or (3) the account can be automatically refilled if it falls below a specified threshold level. (Yasnovsky, ¶0054.)

71. Yasnovsky further discloses tools to monitor the status of a particular advertising campaign. Figure 4A shows an exemplary screen display allowing the advertiser to monitor the current status of its current campaigns:

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YAHOO! Ad Central Frontpage Marketplace - Yahoo! - Help

Welcome, **elliott5** Sign Out

Yahoo! Marketplace Ad Manager

[Manage Campaigns](#) | [Create Campaign](#) | [Manage Ads](#) | [Create Ad](#) | [Pricing](#) | [Reports](#) | [Alerts](#) | [My Account](#)

Manage Campaigns **Manage Your Account**
Name: **Weima Raner**
Account Balance: **\$1,000.00** [Add Money](#)

Last Updated: *Jul 03, 2003 4:14pm PDT*

Campaigns	Ads												
All Campaigns Active Campaigns (1) Weimaraners 411 →	413A 413B 412 413C Campaign Name: <u>Weimaraners</u> rename 413A Campaign Status: Active suspend cancel 413B Campaign Run Dates edit dates 412 Month Days Year 413C July 6,7,8,9,10,11,12,24,25 2003 415 August 21,24,26,30 2003 Campaign Number: 500000327 414 Budget: \$500 edit budget Total Days: 13 Days Current Campaign Ads Include another ad <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Ad Name</th> <th style="width: 15%;">Total Clicks</th> <th style="width: 15%;">Total Cost</th> <th style="width: 30%;">Status</th> </tr> </thead> <tbody> <tr> <td>Weimaraners, Greyhounds</td> <td>tbd</td> <td>\$0.00</td> <td>Approved</td> </tr> <tr> <td>Campaign Summary</td> <td>0</td> <td>\$0.00</td> <td></td> </tr> </tbody> </table> edit ad detach ad 416	Ad Name	Total Clicks	Total Cost	Status	Weimaraners, Greyhounds	tbd	\$0.00	Approved	Campaign Summary	0	\$0.00	
Ad Name	Total Clicks	Total Cost	Status										
Weimaraners, Greyhounds	tbd	\$0.00	Approved										
Campaign Summary	0	\$0.00											

FIG. 4A

(Yasnovsky, Fig. 4A (highlighting added).) Figure 4A “shows a summary of all campaigns.” (Yasnovsky, ¶0049.) In this example, the advertiser has only one active campaign called “Weimaraners” 411. (*Id.*) Figure 4A shows various information about this campaign including, among other things, the campaign budget 414 (in this case \$500), the run dates 415, and information 416 about the advertisements that shows, among other things, the current total cost. (*Id.*) A similar screen is shown in Figure 4E:

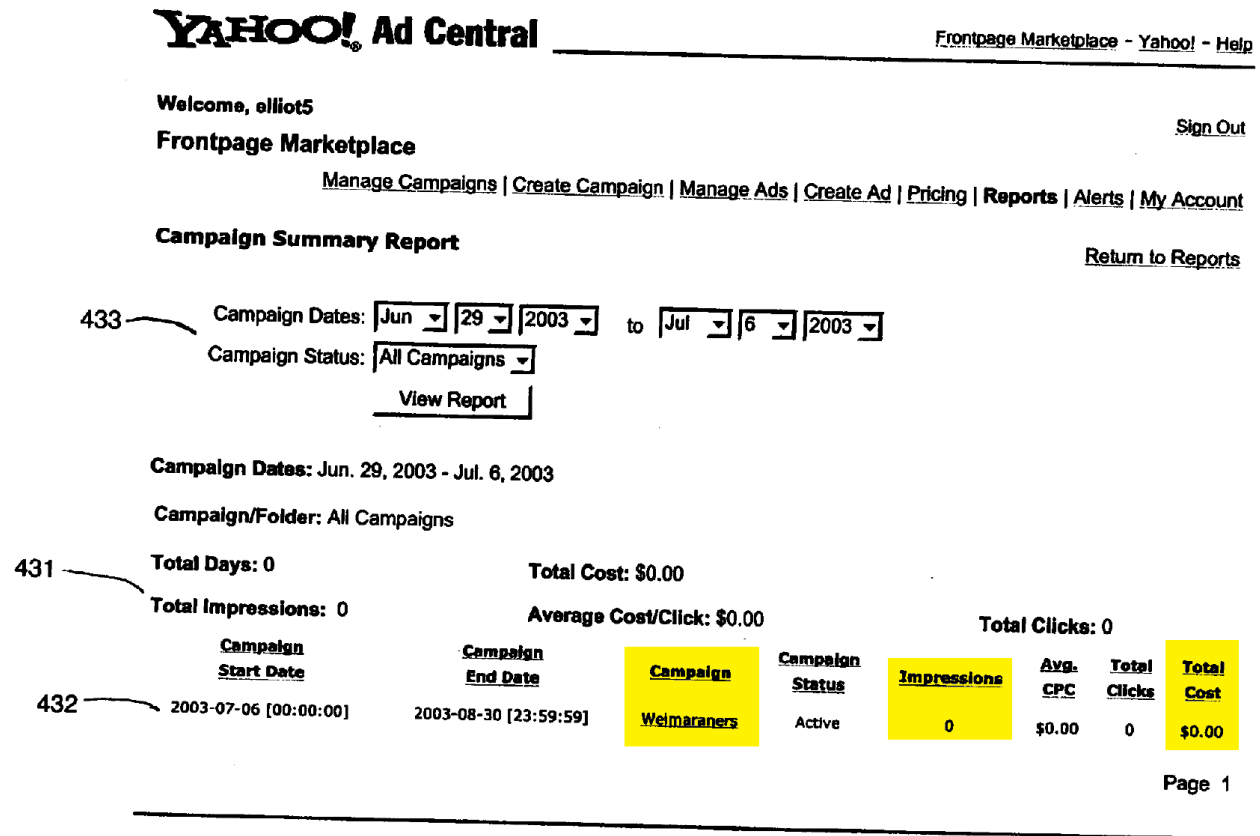


FIG. 4E

(Yasnovsky, Fig. 4E (highlighting added).) Figure 4E “shows a page with [a] summary report for an advertiser’s campaigns.” (Yasnovsky, ¶0052.) The information in Figure 4E is similar to Figure 4A and “includes 431 total days run, total cost, total impressions,” as well as “432 campaign start date, campaign end date, campaign (name), campaign status, number of impressions,” and other information. (*Id.*) As shown in Figure 4E in highlighting, this display shows the campaign Weimariners, which in this particular case had zero impressions and a total cost of \$0.00. (Yasnovsky, Fig. 4E.)

72. Yasnovsky further discloses the ability to manage an existing advertising campaign, including the ability to edit a number of aspects of the campaign, including its budget. (Yasnovsky, ¶0049 (“The advertiser can also edit any of the following: the campaign budget **414**, the run dates **415** of the campaign, and which ads **416** are used in the campaign.”) (emphasis added), Fig. 4A.) “[T]he advertiser can make these edits at any time via the self-service platform.” (Yasnovsky, ¶0049.)

73. I will provide more information about Yasnovsky in my discussion of the claim limitations below.

6. Manowitz (EX1015)

74. **Manowitz**, WO 01/59653 A1, is entitled “System and Method for Network Revenue Sharing.” Manowitz describes a technique “for revenue sharing between an author of content and publisher across electronic media such as the Internet.” (Manowitz, Abstract.) I am informed that Manowitz qualifies as prior art because it was published more than one year before the earliest priority date of the challenged claims.

75. My Declaration cites Manowitz solely for **Grounds 3-4**, and in particular, to account for a narrow claim construction position that Patent Owner may advance in the pending litigation. I am informed by counsel that, in connection

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with patent eligibility arguments under 35 U.S.C. § 101, Patent Owner has filed a First Amended Complaint in the district court litigation against Google suggesting that the claimed “**web property content owner**” in the challenged claims may be different from the owner or publisher of the website on which the content appears. I am further informed that Patent Owner has not yet adopted a formal claim construction position to this effect. In my opinion, the language of the challenged claims does not support such a distinction, as it does not require that the “web property content owner” refer to an entity other than the entity that owns and operates the website on which web property content is displayed. The written description of the ’898 patent, to the contrary, suggests that the term “web property content” simply refers to content of a website that can be visited by a user resulting in an impression, without regard to who owns it. (’898, 4:31-34 (“The web property is marketed to a target audience who visits the web property to view the content provided. Every time an individual visits the web property, he/she creates an impression.”).) The claimed “web property content owner,” therefore, appears to simply refer to the owner of that content. I have nevertheless been asked to assess what impact, if any, Patent Owner’s apparent interpretation would have on the patentability of the challenged claims based on the prior art.

76. As I will explain below, to the extent Patent Owner later adopts a claim

construction position that the web property content owner must be distinct from the website owner or website publisher, this would not present a meaningful distinction from a prior art standpoint. As of November 2004, there were countless examples on the Web in which content was provided by persons or entities other than the website owner or publisher. For example, several well-known websites featured content that was generated by third party users and authors (such as Yahoo! and GeoCities), and websites were commonly created by website creators but published on the Internet by third party web hosting companies (such as GoDaddy) that had no involvement in the creation of the underlying website content.

77. The fact that a website owner or publisher could be distinct from the creator or owner of the content presented on the website was also expressly confirmed by Manowitz, which discloses “a model for sharing revenue between a publisher of content and an author who provides the content.” (Manowitz, p.1.) “In one embodiment, the author produces at least a portion of the content and provides it to the publisher. The publisher then publishes the content, for example, on a web site, for access by a consumer. If the consumer accesses the content, the publisher provides at least a portion of the revenue derived from the access to the author.” (Manowitz, pp.1-2.) Manowitz explains that, in one embodiment, “[t]he publisher may be an entity that provides a server or other network interconnect capability to

enable the consumer 20 and the author 15 to access information at the publisher 10.” (Manowitz, p.3.) In one embodiment, the publisher can be part of or coupled to an Internet Service Provider (ISP) that provides content over the Internet. (Manowitz, p.3.) Manowitz further discloses an embodiment for generating advertising revenue in which the publisher “tracks the number of hits to the author’s content,” “charges the advertiser based on the publisher’s tracking,” and then [t]he author is compensated based on the advertising revenue generated[.]” (Manowitz, p.5; Fig. 3b.) Manowitz further discloses a number of compensation structures, including based on “the number of access or hits to the site containing the author’s content,” among other techniques. (Manowitz, p.5.)

78. As I will explain in my discussion of **Grounds 3-4** below, to the extent Patent Owner’s suggested distinction between web property content owner and website owner/publisher were adopted, the claims would still be obvious based on the prior art described in this Declaration.

B. Ground 1: Claims 1-6, 9-15, and 18-19 Are Obvious Over Nicholas in view of Laidlaw, Mayadas, and Error.

1. Independent Claim 1

79. For reference, claim 1 recites:

1. A computer-implemented method comprising:

[a] receiving, by one or more processors, from a given client, over an

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Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data, the data comprising advertising material to populate on one or more websites;

- [b] identifying, by the one or more processors, the given client, based on receiving the message, an identifier, wherein the message comprises the identifier;
- [c] based on a message provided by a given client, generating, by the one or more processors, a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client accessing said webpage;
- [d] obtaining, by the one or more processors, via an input in the graphical user interface, a selection of one or more of the advertising buy options, wherein the selected one or more advertising buy options comprise at least one website of the respective websites and a predetermined number of impressions of the advertising material for users visiting the at least one website;
- [e] generating, by the one or more processors, on a database accessible to the one or more processors, a repository for advertising revenue based on the selection;
- [f] based on obtaining the selection, populating, by the one or more processors, the advertising material on the at least one website, wherein

the populating comprises placing the advertising material within web property content of the at least one website;

- [g] monitoring, by the one or more processors, a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website;
- [h] determining, by the one or more processors, whether an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system;
- [i] determining, by the one or more processors, that the number of valid impressions is greater than or equal to the predetermined number of impressions;
- [j] upon determining a number of valid impressions are met, ceasing, by the one or more processors, the populating of the advertising material on the at least one website; and
- [k] based on determining a number of valid impressions are met, electronically collecting, by the one or more processors, a share of the advertising revenue to be transmitted to the web property content owner.

('898, 10:29-11:12 (Claim 1; bracketed notation (e.g., [a]) added).)

80. The preamble of claim 1 recites “[a] **computer-implemented method.**” As I will explain below, the proposed combination discloses and renders

obvious a computer-implemented method for specifying and delivering advertisements over the Internet.

- (a) **“receiving, by one or more processors, from a given client, over an Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data, the data comprising advertising material to populate on one or more websites;” (Claim 1[a])**

81. For purposes of limitation 1[a], the **“one or more processors”** corresponds in Nicholas to ad selection node **140**, which “includes one or more servers **141** for conventionally communicating with the other nodes of telecommunication system **10**.” (Nicholas, ¶0047.) It would have been obvious and apparent to a person of ordinary skill in the art that the one or more servers **141** of ad selection node **140** would have included at least one processor. Nicholas explains, for example, that a server “includes conventional hardware platforms” (*id.*), which a skilled artisan would have understood to have included, at a minimum, at least one processor for executing the software instructions used to carry out functions of ad selection node **140** described in Nicholas. This is also confirmed by Nicholas’s incorporated ’329 provisional application (*see* Nicholas, ¶0001 (incorporating provisional applications by reference)), which includes a block diagram of an ad selection node computer 60, which as shown below, includes among other things,

CPU 62:

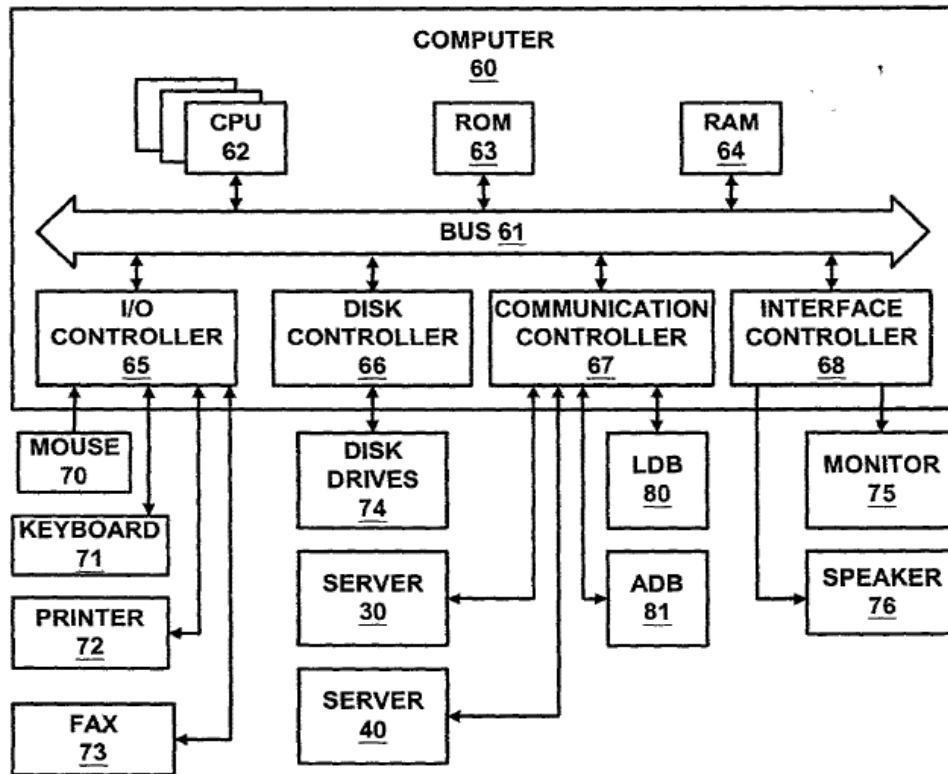


FIG. 2

(EX1012, Fig. 2; *see also id.*, 006:5-7 (“FIG. 2 is a block diagram of one embodiment in accordance with the present invention of computer hardware employed in an advertisement selection node of the FIG. 1 telecommunications system”), 008:16-25 (“Each CPU 62 is preferably one of the Intel families of microprocessors....”).)

82. The claimed “**a given client**” in Nicholas corresponds to advertiser node **160**, such as personal computer or other conventional computing device used by an advertiser. Nicholas explains that “advertiser node **160** of telecommunication

system **100** operates to facilitate communications of advertisements in audio form and/or visual form between an advertiser and the ad selection node **140**.” (Nicholas, ¶0052.) Advertiser node **160** can include “a cell phone **161**, a personal digital assistant **162**, and a personal computer **163** as illustrated [in Figure 1], [that] can be utilized within advertiser node **160** to establish such communications.” (*Id.*)

83. Turning to the step of “receiving, by one or more processors, from a given client, over an Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data,” this occurs in Nicholas when ad selection node 140 (“one or more processors”) receives a message from advertiser node 160 (“a given client”) that contains data defining an advertisement. I will describe the claimed “message” in further detail below. That message is received “over an Internet-based communication link,” because communications between nodes in Nicholas takes place over network 110 which may include the Internet. (Nicholas, ¶0043.) The message is also received “from a browsing application,” because the message comes from advertiser node 160 through a web browser that communicates with ad selection node 140. (Nicholas, ¶¶0056 (“Ad selection node 140... may include various interfaces for facilitating a communication of an advertisement to ad selection node 140 by an advertiser (FIG. 1) or its agent.”), 0057 (“The following

FIGS. 6-11 illustrate various interfaces for creating a network-based advertisement... Advertisements may be... may be entered via web interface, or any other means known in the art.”), 0058 (“FIG. 6 illustrates one embodiment of a web browser-based interface 200 for beginning the process of defining an advertisement.”) (emphasis added).)

84. The claimed “**a message**” received by ad selection node **140** takes the form of one or more messages sent by advertiser node **160** that include advertising material (such as an image or web page) that will be used for the advertisement populated on one or more websites. (Nicholas, ¶¶0056 (“Ad selection node **140** (FIG. 1), in particular targeted ad server **141a** (FIG. 3) may include various interfaces for facilitating a communication of an advertisement to ad selection node **140** by an advertiser (FIG. 1) or its agent.”), 0052 (“An advertiser node **160** of telecommunication system **100** operates to facilitate communications of advertisements in audio form and/or visual form between an advertiser and the ad selection node **140**.”) (emphasis added).) In one example, Figure 6 shows a web page for allowing the advertiser to specify information about the advertisement:

The screenshot shows a web browser interface for 'Dizpersion'. At the top, there is a navigation bar with links for 'log off' and 'threshold'. Below this is a menu with 'accounts', 'advertiser', 'website', and 'newspaper'. A secondary menu includes 'Broadcast Ad', 'Ad Upload', 'Coupon', 'Quantity', 'Channels', 'Geographic', 'Demographic', and 'Summary'. The main content area contains a form for user registration with fields for 'Company Name', 'User Name', 'Street Address', 'City, State Zip', and a 'Home' button. A 'Steps' section lists four instructions: 1. Select an Advertiser (with a dropdown menu showing 'Advertiser 1' and a link to 'Create a New Advertiser Account'), 2. Retrieve Advertisement (with a 'File' input field and a 'Browse...' button), 3. Define Ad Type (with an 'Ad Type' dropdown menu showing 'Banner'), and 4. Press Submit (with a 'Submit' button). The footer includes '2001 Dizpersion Corporation', 'Contact Us', 'Privacy', and 'Terms of Use'. Reference numerals 201, 202, 203, 204, 205, and 206 point to specific elements in the interface.

FIG. 6

(Nicholas, Fig. 6.) “FIG. 6 illustrates one embodiment of a web browser-based interface **200** for beginning the process of defining an advertisement.” (Nicholas, ¶0058.) Figure 6 depicts input fields for allowing selection of advertiser **203**, advertisement file **205**, and type of advertisement **206**. (Nicholas, ¶0059.) An advertisement file **205** may include many different types of information, including among others, GIF and JPEG image files, an HTML web page, or “any other file format that may be served over a network.” (*Id.*) “Advertisement types may include banner, tower, pop-up, pop-under, SMS message, or any other type of advertisement

known in the art.” (*Id.*) Nicholas discloses other user interface screens, discussed in more detail below, that allow further optional refinement to the advertisement such as by allowing the advertiser to specify demographics of the target audience for the advertisement. (Nicholas, ¶0065, Fig. 12.)

85. Nicholas thus confirms that the advertiser through a web-based interface can provide the content of an advertisement (*e.g.*, graphics file, web page) and other information (“**advertising material to populate on one or more websites**”). This information transmitted by advertiser node **160** to ad selection node **140** discloses “**a message**,” as claimed.

86. It would have been apparent and obvious that the information provided by advertiser node **160** to ad selection node **140** as discussed above would have taken the form of at least one “**message**.” For example, it was well-known that the Hypertext Transfer Protocol (HTTP) was used to convey information from web browsers to web servers over the Internet, in the form of requests or messages. (*See Microsoft Computer Dictionary* (5th ed. 2002) (**EX1010**), p.259 (005) (“**HTTP** *n.* Acronym for **Hypertext Transfer Protocol**. The protocol used to carry requests from a browser to a Web server and to transport pages from Web servers back to the requesting browser.”) (bold and italics in original; underlining added).) It therefore would have been obvious that, when advertiser node **160** provides information using

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a web browser, such as through the web interfaces in Nicholas, information would have been received by ad selection node **140** in the form of one or more messages transmitted over the Internet. For example, a person of ordinary skill in the art would have understood that when an advertiser presses the “Submit” button shown in Figure 6 above, that would have generated an HTTP message conveying the advertiser’s selections to ad selection node **140**. For instance, Nicholas describes using an HTML form for an advertiser to input advertisement information, which was a conventional and well-known way to enter information into a web browser and to transmit via HTTP to a web server upon actuating a submit button. (Nicholas, ¶0059 (“[A]n HTML form may present the user with options for defining an advertisement.”); *see also id.*, ¶0068 (describing using form elements to submit information to a web server); EX1011, pp.201-203 (004-006) (entry for “form, HTML” describing how “form has a submit button for the user to click when reading to send the information”).)

87. This is consistent with the ’898 patent, which does not describe the claimed message in any detail; it merely states that the browser accesses a server “by exchanging messages over a communication link **16**,” which in one embodiment, “it may take the form of the Internet.” (’898, 3:26-31.) The ’898 patent does not impose any restrictions on the format or composition of the claimed message, but instead

refers to the same mechanism of the server receiving, and responding to, HTTP messages that I discussed above. ('898, 4:4-24.)

(b) “**identifying, by the one or more processors, the given client, based on receiving the message, an identifier, wherein the message comprises the identifier;**” (Claim 1[b])

88. The proposed combination discloses and renders obvious limitation 1[b] in two separate and independent ways. First, as shown in the user interface of Figure 6 above, the interface allows the user to provide an identifier of the advertiser associated with the advertisement being created. (Nicholas, ¶0059 (“Form input **203** [in Figure 6] may allow the user to select an advertiser for the advertisement being created.”) (emphasis added).) It therefore would have been obvious that the message received from the advertiser through Figure 6 not only includes the “**advertising material**” as discussed for limitation 1[a], but also an identifier associated with the advertising material. The identification of the advertiser, in turn, identifies advertising node **160** (“**the given client**”) because the advertiser uses advertising node **160** to communicate with ad selection node **140**. (Nicholas, ¶0052 (“An advertiser node **160** of telecommunication system **100** operates to facilitate communications of advertisements in audio form and/or visual form between an advertiser and the ad selection node **140**.”).)

89. As a second independent way of disclosing this step, under the

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combination of Nicholas with **Laidlaw**, the claimed “**identifier**” comprises a cookie that is created after the advertiser logs in. As explained below, under the proposed combination, advertiser node **160** would have transmitted this cookie to ad selection node **140** with each message, using well-known cookie techniques.

90. Starting with Nicholas, it discloses that, in one embodiment, the user interface of Figure 6 is “accessible only when an appropriate user name and password combination is supplied.” (Nicholas, ¶0068.) Nicholas further discloses a web-based interface (Figure 14) for allowing the user to sign on by entering their user name and password. (Nicholas, Fig. 14, ¶0068.)

The screenshot shows a web browser window with a black header bar containing a white circular logo. Below the header, the word "Dizpersion" is displayed in a large, bold, black font. Underneath, a horizontal navigation bar contains links: "home", "contact us", "site map", "support", "terms of use", and "privacy". The main content area is titled "RunningTen Login". It features a login form with two input fields: "User Name:" and "Password:". Below these fields is a "Sign On" button. To the right of the "Sign On" button, there is a link that says "Forgot your User Name or Password?". Below the link, there is a checkbox labeled "Save my User Name and Password". At the bottom of the page, there is a footer with the text: "Contact Us | Site Map | Support", "2001 Dizpersion Corporation. All Rights Reserved.", and "Terms of Use | Privacy".

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FIG. 14
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(Nicholas, Fig. 14.) Figure 14 shows a familiar login screen that allows the user to input a user name and password, and further allows the user to choose to “Save my User Name and Password” through form element **273**. (*Id.*, see also *id.*, ¶0068.)

91. It would have been obvious to implement the login and user name / password mechanism in Nicholas by using a “cookie” stored on advertiser node **160**, as explained in more detail below. The term “cookie” generally refers to a technique created in the mid-1990s by Netscape Communications that allows a web server to send a piece of information to a user’s web browser for storage. The web browser then stores that information as a cookie and, for each subsequent request to the website, sends that information back to the web server. One of the primary use cases of cookies is to convey user identification information so the web server can identify the user when it issues requests to the website. As applied to Nicholas as explained below, therefore, it would have been obvious that each message sent from advertising node **160** (“**the given client**”) to ad selection node **140** (“**one or more processors**”) would have included a cookie (“**identifier**”), which ad selection node **140** would have used to identify advertising node **160** used by the advertiser.

92. This is confirmed by **Laidlaw**, which explains as part of its Background that web cookies were a known technique to identify client computers in web-based systems. As Laidlaw explains, “[a] cookie is a sequence of binary information that

a web server may send to a client system, and which the client system sends back to the web server with each subsequent request, assuming the user employs a web browser client with cookie support present and enabled.” (Laidlaw, ¶0006 *see also id.* (“...web applications may use cookies... to identify a user.”).)

93. As Laidlaw explains, cookies are designed to address the “inherently stateless” nature of the Hypertext Transport Protocol (HTTP), the protocol used to transmit requests and information between browsers and web servers. (Laidlaw, ¶0006.) HTTP is “stateless” in the sense that each HTTP request received by a web server from a browser is independent of the prior requests; in other words, the web server is not required to maintain knowledge of prior requests. The cookie technique addresses this issue by including the cookie information, such as an identifier, with each HTTP request sent from the web browser to the server. This information can be used by the web server to identify the client computer associated with the request, and to keep track of actions previously taken by the user on the site, among other purposes. As noted, cookies were originally created by Netscape in the mid-1990s and were widely used on websites as of November 2004 and continue to be widely used today.

94. ***Rationale and Motivation to Combine (Nicholas with Laidlaw):*** It would have been obvious to a person of ordinary skill in the art to combine Nicholas

with Laidlaw. The combination would have the predictable result that, after the advertiser in Nicholas logs into the ad selection node **140** by entering a username and password, a cookie would be stored on advertiser node **160** that included an identifier associated with the advertiser. Under the proposed combination, therefore, all subsequent requests and messages sent from the browser on advertiser node **160** to ad selection node **140** would have included the cookie (“**an identifier**”), which would have been used by ad selection node **140** to identify advertiser node **160**. Accordingly, when the advertiser submits its advertisement information via the user interface of Nicholas in Figure 6, the “**message**” received by ad selection node **140** would have included the cookie that identifies advertiser node **160** used by the advertiser to define the advertisement.

95. This combination would have been exceptionally straightforward, as it was basic knowledge to persons of ordinary skill in the art that cookies were commonly used to store (among other information) identification information associated with the client device after the user logs into a website. This is confirmed by Linsk, U.S. Patent No. 6,138,142 to Steven J. Linsk filed on December 20, 1996 (**EX1008**), which I have cited to confirm basic knowledge of a person of ordinary skill in the art. Linsk explains that “[s]ome web servers provide a ‘cookie’ to the client’s web browser upon the first interaction between the web server and the

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client's web browser. A cookie is a unique nugget of information that the web server provides to the web browser. The cookie is stored on the hard disk of the client PC and can then be used to share information upon each return visit to the web site.” (Linsk, 2:11-17.) Linsk further explains, as was well-known, that “[f]or web sites that require registration, for example, a cookie may hold a user name and password.” (*Id.*, 2:25-27 (emphasis added).) This is also confirmed by Robbin Zeff et al., *Advertising on the Internet* (2d ed. 1999) (**EX1009**), also cited to confirm basic knowledge of a skilled artisan, which explains that “cookies can also retain other information about users that might be useful. For example, when a user registers at a Web site, the cookie can retain the user name and password so that registration is required only once. When the user returns to that site, the server will automatically check the cookie it gave to that user to determine his or her name and password.” (Zeff, p.110 (0020) (emphasis added).) The fact that cookies were well-known for storing user name and password information would have made implementation of the proposed combination particularly straightforward because, as noted, Nicholas expressly requires an advertiser to provide a user name and password through advertiser node **160** to access ad selection node **140**. (Nicholas, ¶0068, Fig. 14.) A cookie would have been a plainly obvious (and exceedingly well-known) way to implement this functionality. As I will explain below, the use of cookies to allow a

website to remember a user name and password was a textbook use case for cookies.

96. My mapping of the prior art is entirely consistent with the '898 patent, which expressly identifies a “cookie” as an example of the claimed identifier, and refers to the same prior art technique described in Laidlaw. ('898, 3:31-46 (“The client system **10** comprises of a browser **12** and its assigned client identifier, which is known as a ‘cookie’. The client identifier is stored in a file **14**... [T]he client system **10** includes its client identifier with all messages sent to the server system **18** so that the server system **18** can identify the particular client system **10** from which the message was sent.”).) As noted, the technique described in the '898 was well-known in the prior art.

97. Nicholas and Laidlaw are analogous references to the '898 patent. Nicholas is an analogous reference in the same field of Internet-based targeted advertising and would have been reasonably pertinent to a number of problems facing the inventor including how to present a web-based interface allowing an advertiser to define an advertisement and specify a number of buy options for the advertisement (further discussed below). Laidlaw is an analogous reference in the field of Internet-based communications and would have been reasonably pertinent to problems facing the inventor, including how to identify client computers communicating with a remote server using cookies. As noted, in fact, the '898 patent

discloses the same prior art cookie technique described in Laidlaw, making it reasonably pertinent in understanding and implementing this feature.

98. An ordinarily skilled artisan would have been motivated to combine Nicholas with Laidlaw because, as noted, cookies were a well-known technique since the 1990s for identifying clients and for conveying identification information in messages from clients to web servers. By the time the '898 patent was filed, cookies were in use by hundreds of millions of websites worldwide and basic knowledge of web developers. An ordinarily skilled artisan would have been motivated to use cookies because they were an industry standard technique of maintaining session identification information for websites. Cookies were also widely used for advertising purposes because they allow a server to identify a user and track their activities on a site, enabling selection and delivery of targeted advertisements to the user based on their demographics and/or prior activities. (Zeff, *e.g.*, p.109 (0019) (“There are clear benefits to advertisers and publishers to using cookies.”).) Cookies were also the most popular technique among a limited number of known and predictable alternatives for maintaining state information.

99. For example, Laidlaw identifies two other alternative techniques to cookies, specifically “mangled URLs” and “hidden form fields,” but these techniques would have been viewed as inferior by ordinarily skilled artisans.

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(Laidlaw, ¶0006.) The “mangled URLs” technique involves encoding identification or other session information into the Uniform Resource Locator (URL) itself, but this technique has a key drawback of requiring that the information be encoded into the URLs themselves. The URL information would be exposed and visible to the user (for example in the web browser address bar), allowing it to be more easily logged, recorded or shared with other users. With respect to “hidden form fields,” this technique involves encoding the identifier into a hidden field of an HTML form that is sent to the server when the user submits the form. This only functions in the circumstance where a user is responding to an HTML form, which may be applicable only to a limited number of pages on the site. Cookies are, therefore, not only one of a finite number of ways of maintaining session and conveying user identification information to a server, but superior to known alternatives.

100. Linsk, which I have cited to confirm the knowledge of a skilled artisan and motivations to combine, provides an express motivation by explaining that “[c]ookies can be used to store a variety of information,” and “[f]or web sites that require registration, for example, a cookie may hold a user name and password.” (Linsk, EX1008, 2:23-27 (emphasis added).) This provides a direct motivation to combine with Nicholas, which requires an advertiser to provide user name and password information through advertiser node **160** to access ad selection node **140**.

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(Nicholas, ¶0068, Fig. 14.) Nicholas itself provides an express motivation to use cookies by discloses a feature in which the user can “Save my User Name and Password” through form element **273** (Fig. 14), which allows “the user to specify that the system automatically log them in on following occasions[.]” (Nicholas, ¶0068.) The ability to remember the user name and password was widely recognized as a textbook use case for cookies that was employed on numerous websites. (*See also* Robbin Zeff et al., *Advertising on the Internet* (2d ed. 1999) (**EX1009**), p.110 (0020) (“For example, when a user registers at a Web site, the cookie can retain the user name and password so that registration is required only once. When the user returns to that site, the server will automatically check the cookie it gave to that user to determine his or her name and password.”).) It therefore would have been obvious to use a cookie to convey a user name and password from the advertiser node **160** to ad selection node **140** in Nicholas with each request, after the advertiser has logged-in, using the techniques described in Laidlaw.

101. An ordinarily skilled artisan would have also had a reasonable expectation of success. The techniques described in Nicholas and Laidlaw on which I rely disclose standard Web technologies that date back to the 1990s that would have been part of the background knowledge of ordinarily skilled artisans, such as creating web-based user interfaces HTML and using cookies to identify and keep

track of users accessing a website. An ordinarily skilled artisan would have found the disclosures in Nicholas and Laidlaw sufficiently detailed to implement the techniques that I cite in my Declaration, without undue experimentation.

(c) “based on a message provided by a given client, generating, by the one or more processors, a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client accessing said webpage;” (Claim 1[c])

102. Nicholas discloses generating a number of web pages providing a user interface for allowing the advertiser to specify buy options for the advertisement. One example is Figure 8, which shows buy options include the number of web pages impressions to purchase and the start and end dates/times for the advertisement to be broadcast:

The screenshot shows a web interface titled "Dizpersion". At the top right are links for "log off" and "threshold". Below these are tabs for "accounts", "advertiser", "website", and "newspaper". A navigation bar contains "Broadcast Ad", "Ad Upload", "Coupon", "Quantity", "Channels", "Geographic", "Demographic", and "Summary". The main content area includes a "Company Name" section with fields for "User Name", "Street Address", "City, State Zip", and a "Home" button. To the right of this is a "Steps" list with six numbered instructions. Further right are input fields for "Impressions" (labeled 221), "Start Date" (with dropdowns for Month, Day, and Year 2001, labeled 222), "Start Time" (1:00, AM, labeled 223), "Start Zone" (Eastern, labeled 224), "End Date" (with dropdowns for Month, Day, and Year 2001, labeled 225), "End Time" (1:00, AM), and "Time Zone" (Eastern). A "Submit" button is at the bottom right of the form. The footer contains "2001 Dizpersion Corporation" and links for "Contact Us", "Privacy", and "Terms of Use".

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FIG. 8

(Nicholas, Fig. 8.) “FIG. 8 illustrates one embodiment of a web-interface 220 for defining the quantity and/or duration that an ad should be displayed on ad selection node 140.” (Nicholas, ¶0061.) For example, form input 221 in Figure 8 allows the advertiser to “specify a number of impressions, or the number of times the advertisement will be delivered.” (*Id.*) Other input fields in Figure 8 allow the advertiser to specify a time period for disseminating the advertisement. (*Id.*)

103. Figure 9 shows another exemplary web page specifying further advertising purchasing options, including by allowing the advertiser to specify particular websites where the advertisement will be presented:

FIG. 9

(Nicholas, Fig. 9.) “FIG. 9 illustrates one embodiment of a web-interface **230** for defining the web sites or other network channels over which the advertisement may be displayed. In one embodiment the user may select any combination of sites and network channels available to ad selection node **140**.” (Nicholas, ¶0062.) “For example, the user may specify that their advertisement be displayed on all sports sites, or all sites relating to women, or all news sites. In one embodiment, selecting category form element **231** may cause individual web site and network channel form elements **232** to be selected.” (*Id.*)

104. Figure 8 and Figure 9 both provide examples of “generating, by the one

or more processors [*i.e.* ad selection node 140] a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client [*i.e.*, advertiser node 160] accessing said webpage.” For example, Figure 8 shows a web page generated by ad selection node 140 that provides a graphical user interface for selecting, among other things, the number of impressions and the time period for the advertisement. (Nicholas, ¶0061.) Figure 9 shows a web page generated by ad selection node 140 that provides a graphical user interface for selecting, among other things, the websites and network channels for presenting the advertisement. (Nicholas, ¶0062.) Each webpage therefore provides “a plurality of advertising buy options for selection” by the advertiser through advertiser node 160.

105. Limitation 1[c] further requires that the generating of the claimed webpage be “**based on a message provided by a given client.**” I note that the claim only requires that the generating be based on “**a message,**” and thus does not require it be based on any particular message or the message previously recited in the claim. In any case, it would have been obvious to a person of ordinary skill in the art that one or more messages would have been provided to ad selection node **140** by the advertiser node **160** when the advertiser logs into the ad selection node **140** and then make selections for defining the advertising campaign, as discussed above.

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(Nicholas, ¶0068.) That identification, as explained, is the basis for all of the pages in Figures 6-9 above, as it would have been used to keep track of the advertiser as it progresses through the advertisement creation process. Alternatively, Figures 8 and 9 were displayed based on having received a message from advertiser node **160** indicating the advertiser's selections upon completing Figure 7. (Nicholas, ¶0060 (“After the destination has been specified [in Figure 7], the user may proceed to the next step of the advertisement definition process.”).) In any case, it would have been obvious that in any web-based system, a webpage delivered to the browser would have been generated and displayed for the based on one or more messages from a client computer, *e.g.*, HTTP requests from the browser. The '898 patent itself confirms that this was standard behavior of HTML web pages. ('898, 4:19-24 (“When a user indicates to the browser **12** to display a Web page, the browser sends a request to the server computer system an HTML document that defines the Web page. When the requested HTML Document is received by the client computer system, the browser **12** displays the Web page or screen.”).)

106. Finally, I note that limitation 1[d] below specifies in more detail that the advertising buy options comprise “**at least one website**” and a “**predetermined number of impressions,**” which are provided through the two webpages shown in Figures 8 and 9 of Nicholas, as noted above and explained in more detail below. The

present limitation 1[c] recites “**generating, by the one or more processors, a webpage,**” but in my opinion, this does not present a patentable distinction over the prior art. First, I understand from counsel that under the patent laws, the claimed “**a webpage**” would ordinarily be understood as encompassing one or more webpages and thus should not exclude a method that generates multiple webpages for providing the claimed advertising buy options. Second, even if the claim were interpreted to require the advertising options be provided via a single webpage, it would have been obvious to have included the buy options of Figures 8 and 9 on a single webpage. Nicholas itself explains that “[t]he illustrated interfaces [of Figures 6-11] may be omitted, rearranged, or added in a system of the present invention without straying from the intent of defining the properties necessary or useful for distributing an advertisement online.” (Nicholas, ¶0057 (emphasis added).) It would have been obvious to rearrange the interfaces in Nicholas such that a single webpage provided the advertising buy options for the “**at least one website**” and a “**predetermined number of impressions,**” for example, rearranging the options from the webpage of Figure 8 so they appear on the webpage of Figure 9, or vice versa. An ordinarily skilled artisan would have been motivated to present these two selections on a single webpage to streamline the user interface and allow the advertiser to select the websites and number impressions in the same page. This

would have been beneficial because “**the predetermined number of impressions**” for an advertisement may have been influenced by the identity of “**the at least one website**” where the advertisement will be presented, thus motivating a skilled artisan to present both options on the same page. For example, if an advertiser selects websites for its advertisement that are highly relevant to its desired target market, the advertiser may wish to increase the number of impressions.

107. The advertiser’s ability to engage in this kind of trade-off would have been enhanced by presenting both of these buy options on the same webpage, so the advertiser could see and adjust both of its selections simultaneously. I further note that presenting options to a user on one page, or across multiple pages, was a trivial user interface design decision routinely confronted by persons of ordinary skill in the art creating web-based forms, and presenting multiple options on a single webpage had known advantages. As explained in Bob Baxley, *Making the Web Work: Designing Effective Web Applications* (2002) (**EX1014**), which I have cited to confirm the knowledge of persons of ordinary skill in the art:

[D]etermining the optimal length and density of information are two immediate concerns affecting the design of the overall form. “We need to collect 67 fields of data. Should we create six really short forms, four medium-length forms, or one honkin’ long form?” The answer is, of course, one of balance.

[* * *]

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Long forms so, however, have two important advantages: efficiency and ease of error reporting. They are efficient in that they allow users to view the full set of options without additional navigation. They also enable errors to be detected, reported, and corrected in a single page.

(Baxley, pp. 238-239 (0021-0022).) A person of ordinary skill in the art would thus have fully understood that one or more options presented on multiple webpages in Nicholas could have been combined into a single page, and would have understood the benefits of doing so including streamlining the user interface and reducing user navigation. Allowing an advertiser to see a wider range of options on a single page (instead of multiple pages) would also have allowed the advertiser to view and weigh the various options defining its campaign simultaneously, allowing easier adjustment. This benefit extends not just to the two recited buy options, but any other advertiser options of Nicholas including selecting a target audience, coupon types, among others. (Nicholas, ¶¶0060, 0062, 0065.) An ordinarily skilled artisan would not have found presentation of multiple options from multiple web pages in Nicholas, on a single webpage, to the extent required by limitation 1[c], to be a meaningful distinction over the prior art.

- (d) **“obtaining, by the one or more processors, via an input in the graphical user interface, a selection of one or more of the advertising buy options, wherein the selected one or more advertising buy options comprise at least one website of the respective websites and a predetermined number of impressions of the advertising material for users visiting the at least one website;” (Claim 1[d])**

108. This limitation was largely covered in my discussion of limitation 1[c] above. As noted, ad selection module **140** obtains the advertiser’s selection through a web interface that presents the advertising buy options. The buy options comprise **“at least one website of the respective websites,”** as claimed, as noted above. (Nicholas, ¶0062 (“FIG. 9 illustrates one embodiment of a web interface **230** for defining the web sites or other network channels over which the advertisement may be displayed. In one embodiment the user may select any combination of sites and network channels available to ad selection node **140.**”) (emphasis added).)

109. The advertising buy options also comprise **“a predetermined number of impressions of the advertising material for users visiting the at least one website,”** as claimed, as noted above. (Nicholas, ¶0061 (“FIG. 8 illustrates one embodiment of a web-interface **220** for defining the quantity and/or duration that an ad should be displayed on ad selection node **140.** A standard method for defining the quantity and/or duration of a network advertisement is to specify a number of impressions, or the number of times the advertisement will be delivered.”) (emphasis

added).) Nicholas further explains that the specified number of impressions provides a maximum number such that, “should the advertisement be served up to the number of impressions prior to the end time, it may automatically stop being served.” (*Id.*) The number of impressions is “**predetermined**,” as claimed, because the number of impressions was determined by the advertiser by specifying the number through the graphical interface of Figure 8, which occurred before ad selection node **140** obtained the advertiser’s selection. As noted, the number of impressions also represents the maximum number of impressions, which the advertiser would obviously have determined before providing that information to ad selection node **140** through the interface of Figure 8.

110. Nicholas also discloses “**obtaining**” the advertising buy options “**by the one or more processors, via an input in the graphical user interface**,” as claimed. This is because, as explained, ad selection node **140** obtains the advertiser’s selection of buy options through the graphical user interface of the webpage displayed on the web browser of advertiser node **160**. As noted for limitation 1[c] above, to the extent the claim requires that both of the claimed buy options be presented on a single webpage, this would have been obvious.

- (e) “generating, by the one or more processors, on a database accessible to the one or more processors, a repository for advertising revenue based on the selection;” (Claim 1[e])

111. Nicholas discloses that ad selection node **140** (“the one or more processors”) includes at least one database accessible to ad selection node **140** (e.g., DB4, DB5) for storing information about advertisers and their advertisements. (Nicholas, ¶¶0047-0048, Fig. 2.) Nicholas further discloses that databases are used to track revenue and billing relating to advertisements. (Nicholas, ¶0150 (“The database and software solution may automatically generate billing statements for advertisers, publications and media companies registered with ad selection node **140**.”).) But Nicholas does not appear to expressly disclose that ad selection node **140** generates a repository on the database for advertising revenue based on the selection, as Nicholas does not disclose specific details about accounting of funds provided by advertisers and paid to website owners. But these details would have been trivial and well-known to ordinarily skilled artisans.

112. These details are disclosed by Mayadas, which like Nicholas, describes a system for allowing an advertiser to create advertising campaigns for delivering advertisements to users on websites via the Internet. My declaration cites Mayadas because it provides more detail than Nicholas about collection of funds of advertisers and distributing payment from those funds when advertisements are delivered.

Figure 2 of Mayadas outlines the process of creating an advertising campaign:

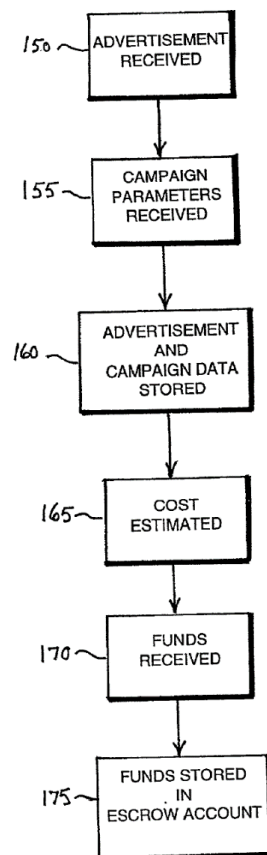


FIG. 2

(Mayadas, Fig. 2.) Figure 2 shows the method of operation of “a targeted message sponsor,” such as an advertiser, “submitting a targeted message to the system using, as an example, an advertising campaign on the World Wide Web.” (Mayadas, ¶0028.) Block **150** shows the system receiving from the advertiser an advertisement, and in block **155**, receiving parameters for the advertising campaign. (Mayadas, ¶0029.) These parameters include “length of time, publishers or type of publisher, number of hits, group of users, etc.” (Mayadas, ¶0029 (emphasis added).) These

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parameters are similar to the selections received by advertisers in Nicholas as described for limitation 1[d] (e.g., websites and number of impressions). The term “publisher” in Mayadas includes a website. (Mayadas, e.g., ¶0034 (“The publisher is a web site and the targeted message is an advertisement.”).)

113. Next, at block **160**, the cost of publishing the advertising campaign is estimated based on the received parameters. (Mayadas, ¶0029.) “The system receives a block of funds from the advertiser based on the estimated cost of the advertisement campaign to the system, block **170**. The block of funds from the advertiser is placed in an escrow account ready for distribution in conjunction with serving the advertisement through the web sites, block **175**.” (*Id.*; see also *id.*, ¶0041 (“The advertiser must then put funds into an escrow account to support the maximum size of campaign selected.”).)

114. But advertisers are not the only parties in Mayadas that have accounts for receiving money. With respect to the publishers (website operators) whose websites display the advertisements, “[i]n order to receive payment from the central system... target message publishers grant access to an account of some type. This could be a regular bank account,” among other examples. (Mayadas, ¶0041.) “Each time the advertisement is served and the specified action is taken by the consumer, the advertiser’s escrow account is debited for the one action.” (Mayadas, ¶0043; see

also id., ¶0037 (“... the publisher is remitted payment for successfully serving the advertisement to a member of the target audience, block **330** [Fig. 4].”).)

115. Mayadas therefore discloses a “**repository**” in two separate and independent ways. In a first example, the claimed “**repository**” corresponds to an *advertiser* account fund, which is formed when the money received from the advertiser is placed in the advertiser escrow account at block **175** above. (Mayadas, ¶¶0029, 0041.) As a second example, the claimed “**repository**” takes the form of a *publisher* (website operator) account fund, which is formed when money is received by the publisher’s account for display of advertisements on its site. (Mayadas, ¶¶0037, 0041, 0043.) Both of these examples disclose a repository “**for advertising revenue**,” as claimed, because both funds hold money that provides revenue for the display of advertisements. (Mayadas, ¶¶0038 (“Advertisers place funds in an escrow account. An amount from the escrow account is paid out each time an advertisement is served.”), 0015 (“When a user interacts with a targeted message... the publisher... [is] compensated from the escrow account.”), 0034-0037, 0043.) The claimed generation of the repository in Mayadas also occurs “**based on the selection**” in both examples, as claimed, at least because the act of receiving money into each account, and the amount of money received, are based on the options for the advertisement (*e.g.*, number of impressions, selected websites) specified by the advertiser.

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(Mayadas, ¶¶0029 (“The advertiser establishes parameters for the advertising campaign, such as... publishers or type of publisher[.]”), 0041 (“When an advertiser sets up an advertisement campaign, the advertiser gives it a maximum size: days, number of impressions, etc. The advertiser must then put funds into an escrow account to support the maximum size of campaign selected.”).)

116. I note that this mapping of the claimed “**repository**” is consistent with the ’898 patent. The term “**repository**” does not appear anywhere outside the claims, but claim 3 depends from claim 1 and further specifies that “**the repository comprises a fund.**” The ’898 patent further explains that, in one embodiment, the fund can comprise a bank account for holding advertising revenue. (’898, 5:41-44 (“The advertiser in step **82** now pays the invoice and the company takes the revenue generated and places it into the media production fund. The production fund in one illustrative embodiment is a bank account managed by the company.”).) The ’898 patent thus confirms that the claimed repository can include a fund that is generated upon the placement of money into an account – the same process described in Mayadas. (Mayadas, ¶0038 (“Advertisers place funds in an escrow account. An amount from the escrow account is paid out each time an advertisement is served.”).)

117. With respect to the step of “**generating... a repository for advertising revenue,**” in the example above in which the repository corresponds to the

advertiser's account fund, the generating step occurs when the money is received from the advertiser and then placed into the escrow account. In the second example in which the repository corresponds to the *publisher's* account fund, the generating step occurs when money is received in response to advertisements being displayed on the publisher's site. In either case, this qualifies as “**generating**” the claimed repository because the fund came into existence when funds were placed into the respective account. (Mayadas, ¶¶0029, 0038, 0041, 0043.) In simpler terms, an account holding no money is not a fund, and as such, no “**repository**” exists until monies are received and placed into the account.

118. *Rationale and Motivation to Combine (Nicholas with Mayadas)*: It would have been obvious to a person of ordinary skill in the art to combine Nicholas with Mayadas, predictably resulting in ad selection node **140** of Nicholas obtaining a payment from the advertiser and then generating, on a database accessible to ad selection node **140**, the claimed repository. Under the proposed combination, the claimed repository corresponds to either the advertiser's escrow account fund or the publisher's account fund, which, in both cases, receive money that represents revenue for presentation of advertising impressions.

119. The proposed combination would have been implemented in any number of straightforward ways. In one example that would have been trivially

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simple to implement, ad selection node **140** in Nicholas would have created an advertiser escrow account or publisher account in one or more of its databases (DB4, DB5, or DB6) when the funds needed be placed into these accounts. Nicholas itself confirms that databases are used to track revenue and billing relating to advertisements. (Nicholas, ¶0150.) In a concrete implementation, for example, ad selection node **140** in Nicholas would have generated database records for the advertiser and publisher accounts at the point in time when money needed to be placed into those accounts. This is a well-known technique of “dynamic” storage management, which would have been known to even beginning computer programmers, in which computer records are created, and memory for them is allocated, only when the computer needs to store data in them. (See James F. Korsh, *Data Structures, Algorithms, and Program Style* (**EX1016**), § 3.7, p.111 (0015) (1986) (“Keeping track of and allocating storage that is needed during the execution of a program is called *dynamic storage management*.”) (emphasis in original).) This is often distinguished from “static” storage in which empty records are created in advance to serve as placeholders for storage when the computer later needs to store information in them. The choice between “static versus dynamic” resource management was (and remains today) a classic dichotomy in computer science that extends to many types of computing resources including computer memory and

storage, network bandwidth, CPU processing time, among others. The decision of whether to use dynamic resource management would have presented little more than a routine implementation detail well-known to persons of ordinary skill in the art. In the context of storage resources, dynamic management often presented (and continues to present) known advantages over static management, such as greater storage efficiency by not allocating memory until the time when it is needed, and allocating only the amount of memory needed at that time.

120. Under the proposed combination, therefore, it would have been obvious to “**generat[e], by the one or more processors** [*i.e.*, ad selection node **104**], **on a database accessible to the one or more processors** [*i.e.*, a database accessible to ad selection node **104**], **a repository for advertising revenue** [*i.e.*, advertiser or publisher account fund containing received money].” Generation of the repository would also have been “**based on the selection**,” as claimed, because it would have been based on the advertising buy options in Nicholas (*e.g.*, number of impressions, selected websites) selected by the advertiser in limitation 1 [**d**], and these would have been used in the proposed combination to estimate the money needed for the fund and the websites on which advertising impressions will be presented, as discussed previously. (Mayadas, ¶¶0029, 0041.)

121. Mayadas, like Nicholas discussed above, is an analogous reference to

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the '898 patent in the same field of Internet-based advertising, and would have been reasonably pertinent to a number of problems facing the inventor. These problems include, among others, how to keep track of payments and distribute revenue from advertisements presented on content provider websites.

122. An ordinarily skilled artisan would have been motivated to combine Nicholas with Mayadas in order to provide a means of keeping track of the revenue provided to websites that display advertisements. Nicholas in multiple places makes clear that its system is designed to provide advertising revenue to website operators when advertisements are displayed on their websites, but Nicholas does not disclose the detailed mechanics of how the accounting process works – which is likely because such techniques would have been known to a skilled artisan. For example, Nicholas states that one embodiment of the invention “provides a method for dividing the revenue earned through advertisement delivery,” explaining that “the revenue earned may vary based on,” among other things, the “publication or media company that sold the advertisement.” (Nicholas, ¶0150 (emphasis added).) Figure 18 in Nicholas shows a screen display relating to revenue provided to various publishers (e.g. websites) that display advertisements:

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The screenshot shows the Dizpersion website interface. At the top, there is a header bar with the logo 'Dizpersion' and navigation links for 'log off' and 'threshold'. Below the header, there are tabs for 'accounts', 'advertiser', 'website', and 'newspaper'. A secondary set of tabs includes 'Broadcast Ad', 'Ad Upload', 'Coupon', 'Quantity', 'Channels', 'Geographic', 'Demographic', and 'Summary'. The main content area is divided into two sections. On the left, there is a form for user registration with fields for 'Company Name', 'User Name', 'Street Address', 'City, State Zip', and a 'Home' button. On the right, there is a 'Publication Administration' box with a 'Create New Publication' link. Below these, there is a table showing publication details and revenue split. The table has columns for 'Publication Name', 'Publication Revenue %', 'Banner CPM', 'Tower CPM', 'Pop-up CPM', 'Contract Begin Date', and 'Contract End Date'. The data rows are for 'Independent-Register' and 'Dizpersion'. The 'Independent-Register' row shows a 50.0% revenue split, while the 'Dizpersion' row shows a 100.0% revenue split. At the bottom of the page, there is a footer with '2001 Dizpersion Corporation', 'Contact Us', 'Privacy', and 'Terms of Use'.

Publication Name	Publication Revenue %	Banner CPM	Tower CPM	Pop-up CPM	Contract Begin Date	Contract End Date
Independent-Register	50.0	\$35.00	\$45.00	\$60.00	11/01/01	05/01/01
Dizpersion	100.0	\$1.00	\$1.00	\$1.00	11/01/01	12/30/05

320

FIG. 18

(Nicholas, Fig. 18 (highlighting added).) Figure 18 above shows a publication details page 320, which includes “information relating to the advertisers, publications or media companies having access to ad selection node 140.” (Nicholas, ¶0087.) “This information may include contract information such as the determined revenue split, cost per thousand impressions (CPM), and beginning and end dates.” (*Id.* (emphasis added).) In the example above from Figure 18, for example, the “Independent-Register” would receive 50% of revenue from the publications of advertisements on that site, which is computed as \$35 for Banner CPM, \$45 for Tower CPM, or \$60 for Pop-Up CPM. (*Id.*)

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123. Nicholas therefore fully contemplates that website operators will receive revenue when advertisements are displayed on their websites. It would have been obvious to consult Mayadas, which provides critical details about how to obtain funding from the advertiser and then use it to provide revenue to website operators when the advertisement impressions occur. It would have been obvious that, in order for ad selection node **140** of Nicholas to provide revenue to website operators, it would have obtained funds from the advertiser from which to pay website operators. An ordinarily skilled artisan would have been motivated to combine Nicholas with Mayadas in order to facilitate the revenue-sharing techniques disclosed in Nicholas, and to ensure that ad selection node **140** has adequate funds to compensate website operators for advertising impressions.

124. An ordinarily skilled artisan would have also had a reasonable expectation of success. The techniques described in Nicholas and Mayadas on which I rely are based on standard technologies that predate the '898 patent, such as standard web and database techniques, and would have been among the basic knowledge possessed by ordinarily skilled artisans. An ordinarily skilled artisan would have found the disclosures in Nicholas and Mayadas sufficiently detailed to implement the techniques that I cite in my Declaration, without undue experimentation.

(f) **“based on obtaining the selection, populating, by the one or more processors, the advertising material on the at least one website, wherein the populating comprises placing the advertising material within web property content of the at least one website;” (Claim 1[f])**

125. Nicholas discloses an advertisement delivery technique in which an advertisement is delivered to a user when the user accesses a website (*e.g.* content provider node **130**). In this technique, HTML tags are embedded into the web page served by the content site, that cause the web browser via a URL to request the advertisement from the ad selection node 140 (at ads.dizperson.com):

FIG. 25 illustrates a flowchart **410** representative of a method in accordance with the present invention for serving an ad when the content is requested from content provider node **130** (FIG. 1). One example of such a process would include accessing a web page over the Internet. User accesses a website on the Internet by making a network request to content provider node **130** during a stage **S412** of the flowchart **410**. This may be achieved using a personal computer 123 (FIG. 1) and entering a universal resource locator (URL) in a standard browser such as Microsoft's Internet Explorer, or Netscape Navigator. In the content received from content provider node **130** is code that represents a request for a banner ad during a stage **S414** of the flowchart **410**, such as:

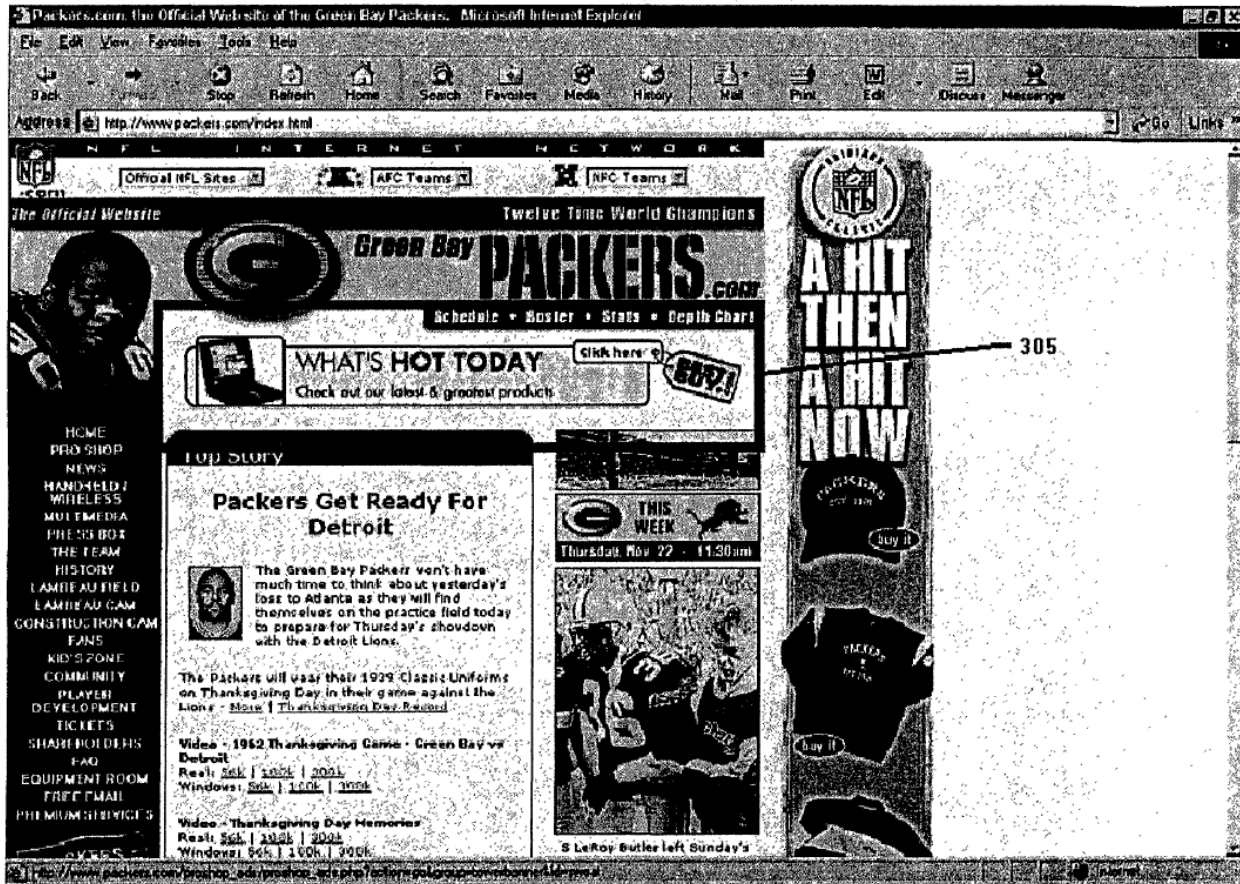
```
<iframe height=60 src="http://ads.dizperson.com/adservice.aspx?sid=9&at=9"
width=468 frameborder=0 marginwidth=0 marginheight=0 hspace=0 vspace=0
scrolling="no" bordercolor="#000000"></iframe>
```

This code requests an ad from an ad selection node **140** found at the network address represented by http://ads.dizperson.com.

(Nicholas, ¶¶0102-0103 (emphasis added).)

126. In plain English, the passage above states that content provider node **130** (the “**at least one website**” where advertisements will be shown) provides HTML code that causes the browser to issue a request for advertising material from the ad selection node **140** (“**the one or more processors**”), which in this case, is located at ads.dizpersion.com. The advertising material will then be populated within the web property (*e.g.*, banner advertisement location on the webpage) by being presented to the user when the website is displayed. This is illustrated in Figure 3 of Nicholas’s incorporated ’297 provisional application (*see* Nicholas, ¶0001 (incorporating provisional applications by reference)), which shows an example website page populated with advertising material (305, an ad for Best Buy) within the site’s web property content:

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(EX1013, Fig. 3; *see also id.*, 004:11-12 (“FIG. 3 illustrates one embodiment of an advertising being served into the consumer web site of the FIG. 2 advertisement selection node.”).)

127. Populating the advertising material in Nicholas is “**based on obtaining the selection**” because ad selection node **140** selected an advertisement for content node **130** based on the selections made by and received from the advertiser. (Nicholas, ¶¶0103, 0062.) For example, as explained, “**the selection**” by the advertiser, as described in limitation 1[d] above, includes “the web sites or other

network channels over which the advertisement may be displayed.” (Nicholas, ¶0062.) It therefore would have been obvious that the ad selection node **140** would have selected an advertisement for delivery to the user based, at least in part, on the advertiser’s selection of the particular website(s) where the advertisement may be displayed. For example, if the user is currently visiting a particular website that was specified by the advertiser in limitation 1[d], which resulted in ad selection node **140** selecting the advertiser’s advertisement for that website, the populating of that advertisement on the website would have been “**based on obtaining the selection.**” As also noted for limitation 1[d], “**the selection**” also includes “a number of impressions, or the number of times the advertisement will be delivered.” (Nicholas, ¶0061.) It would have been obvious that ad selection node **140** would have selected the advertisement based at least in part on whether the advertiser had specified a positive (and non-zero) number of impressions for the advertisement in limitation 1[d], and whether such impressions remain available for displaying the advertisement on the website. Nicholas explains, as noted, that the specified number of impressions provides a maximum number such that, “should the advertisement be served up to the number of impressions prior to the end time, it may automatically stop being served.” (*Id.*)

128. I note that the claim recites populating the advertising material “**based**

on obtaining the selection,” which does not exclude a system that uses the claimed selection – along with other information – in populating advertising material on one or more websites. The specification of the ’898 patent, for example, describes an embodiment in which a target audience for an advertisement can be determined based on user demographics, such as age, sex, and interests of the audience. (’898, 4:54-5:8, 8:29-52.) Nicholas similarly discloses using demographic and/or geographic information to select the advertisement for delivery to a user. (Nicholas, ¶0062.) It would have been obvious that this information would have been used in addition to **“the selection”** made by the advertiser, including the particular website(s) where the advertisement will be displayed as explained. In other words, this claim limitation does not preclude other factors, in addition to **“the selection,”** from being used to identify the advertisement to be delivered.

(g) **“monitoring, by the one or more processors, a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website;” (Claim 1[g])**

129. Nicholas also discloses the claimed monitoring step. As fully explained for limitation 1[d], the advertiser can specify the “number of impressions, or the number of times the advertisement will be delivered.” (Nicholas, ¶0061.) After the advertisement has been presented on a content provider site, ad selection node **140** stores a record indicating the number of impressions that occurred during the time

period specified by the advertiser:

During a stage S **438** of routine **430**, module **142** transmits an advertiser record AR_X to DB6 that includes geographical data GD_1 and an advertising package of the advertiser to be displayed in telecommunication system **430**. In one embodiment of stage S**438**, advertiser record AR_X further includes a unique identifier for the advertiser, a pointer to the appropriate advertising package, the date and time of the last impression, the number of impressions made in this timeframe, the minimum number of impressions that should be made in each recognized timeframe, and the maximum number of impressions that may be made in each recognized timeframe.

(Nicholas, ¶0114; *see also id.*, ¶0124 (“a number of impressions occurring”).)

Additionally, monitoring the number of impressions for an advertisement was (and remains today) a basic and fundamental aspect of Internet-based advertising.

130. Nicholas therefore discloses “monitoring... a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website,” as claimed. Nicholas also makes clear that the monitoring is done “by the one or more processors,” *i.e.*, ad selection node 140. This is because the “module 142” in the paragraph above, which transmits the advertiser record with the number of impressions, is part of ad selection node 140. (Nicholas, ¶0112 (“An advertiser indexing module 142 is a unique software package of server 141 for implementing several stages of an advertiser indexing routine 430 of shown in FIG. 27.”), 0047 (“Referring again to FIG. 1, ad selection node 140

includes one or more servers 141 for conventionally communicating with the other nodes of telecommunication system.”.)

131. Additionally, Nicholas discloses a mechanism for ceasing the delivery of advertising impressions once the specified number has been reached. For example, “should the advertisement be served up to the number of impressions prior to the end time, it may automatically stop being served.” (Nicholas, ¶0062.) It would have been obvious to an ordinarily skilled artisan that, in order for ad selection node 140 to stop delivering advertisements once the number of impressions has reached the number specified by the advertiser, ad selection node 140 would in fact have monitored the number of impressions.

(h) “determining, by the one or more processors, whether an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system;” (Claim 1[h])

132. Nicholas does not expressly disclose the step of determining whether an impression is valid, but this step was well-known and disclosed by Error.

133. Error discloses a well-known technique, known as the “single-pixel” image technique, for determining that an impression is valid. The idea is straightforward; a URL link for a single pixel (or transparent) image file is embedded onto a webpage that is delivered to a web browser. The image is not meant to be

viewed and will likely not be visible to the user. After the user's browser receives the webpage, it uses the embedded URL link to request the single-pixel image from a server. The receipt of that request by the server provides an indication that the user's web browser *actually* received and presented the web page to the user. I have cited to Error, whose Background section describes this technique:

One commonly used technique for third-party collection of usage data is to include, in each web page to be tracked, a small image, such as a single-pixel image that is not intended to be noticed by the user. Normally, images in web pages are served from the content provider's server, along with other content. The single-pixel image, however, which is specifically included in web pages for tracking purposes and normally does not contain any meaningful content, is served from a tracking server operated by the third-party traffic statistics service. In most cases, the single-pixel image is transparent, so as to be as unobtrusive as possible.

When a user navigates to a web page, the web page's HTML code causes the user's browser to send a request for the single-pixel image. The tracking server receives the request and logs the request as a user visit to the web page. It is known in the art to embed identifier codes within the image requests, so that the tracking server can detect individual users and discern additional identifying information about each user.

(Error, 1:36-54 (emphasis added); *see also id.*, 2:6-21 (explaining that when the tracking server receives a request for the single-pixel image, “tracking server **106** records the occurrence of a ‘hit’ to the web page.”).)

134. Error thus discloses “a **predetermined tracking system**” for determining that a web page was properly delivered to the browser. This is because it discloses a system in which, when the browser receives a web page with a single-pixel image tag and sends back a request for the single-pixel image to a tracking server, the tracking server uses that as an indication that the web page was in fact properly delivered to the user’s web browser – and was thus a valid impression.

135. The ’898 specification does not expressly define what constitutes a “**valid**” impression. But in describing the claimed “**predetermined tracking system**,” it relies on the exact same technique earlier described in Error in which a single-pixel (1x1) image is used as a “tracking asset” and used to determine if an advertising impression was valid. (’898, 9:49-61 (“In the above example, a valid impression may only be counted when an ad counter receives and responds to an HTTP request for a tracking asset from a client... The response by the ad counter includes but is not limited to: Delivery of a ‘beacon’, which may be defined as any piece of content designation as a tracking asset. Beacons commonly are in the form of 1×1 pixel image.”) (emphasis added).) The ’898 patent thus confirms that limitation 1[h] is nothing more than a technique “commonly” used as a tracking asset, and known to persons of ordinary skill in the art and disclosed in Error.

136. ***Rationale and Motivation to Combine (Nicholas with Error):*** It would

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have been obvious to combine Nicholas, Laidlaw and Mayadas with Error, predictably resulting in ad selection node **140** of Nicholas (which performs the function of the “tracking server” in Error) determining whether an impression was valid by using the single-pixel technique (“**a predetermined tracking system**”) described in Error. Under this combination, an advertisement delivered by ad selection node **140** would have included a single-pixel image, under the techniques described in Error, directing the user’s web browser to contact ad selection node **140** to confirm that the advertisement had in fact been delivered to the end user’s web browser, *i.e.*, that the impression was “**valid**” as claimed. The proposed combination would have been exceedingly straightforward, as the advertising content served by ad selection node **140** may be an HTML webpage or portion of such a page. (Nicholas, ¶0109.) It would therefore have been trivially easy to include, in the HTML for the advertising material provided by ad selection node **140**, a URL link for a single-pixel image as described in Error.

137. Error is an analogous reference to the ’898 patent in the field of monitoring Internet traffic, and would have been reasonably pertinent to a number of problems facing the inventor in determining whether or not an advertising impression is valid. The analogousness of Error is further confirmed by the fact that, as explained above, it discloses the exact same single-pixel technique for

determining whether an impression is valid. ('898, 9:49-61.)

138. A skilled artisan would have been motivated to combine. Error itself states that the use of single-pixel image (the technique described in the '898 patent) was a “commonly used technique,” for tracking end user usage of a web page. (Error, 1:36-54.) A skilled artisan would have been motivated to use this technique to enable ad selection node **140** to confirm that an advertisement had, in fact, been delivered to the end user’s web browser. Because the advertiser in Nicholas under the proposed combination is paying for ad impressions, the technique in Error would have improved the system by ensuring that advertisers only pay for ads that are actually delivered to end users. For example, if ad selection node **140** sent an advertisement to an end user but the browser did not return a request back to ad selection node **140** for the single-pixel image, pursuant to the technique in Error, that would have indicated to ad selection node **140** that the advertisement delivery likely failed. This would have beneficially enabled the system of Nicholas to either attempt to redeliver the advertising impression, or failing that, not bill the advertiser for that attempted (but failed) advertising impression.

139. An ordinarily skilled artisan would have also had a reasonable expectation of success. The techniques described in Error on which I rely are based on standard single-pixel tracking techniques that predate the '898 patent, and as

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noted, are acknowledged in the '898 patent and Error as prior art. An ordinarily skilled artisan would have found the disclosures in Error sufficiently detailed to implement the techniques that I cite in my Declaration, without undue experimentation.

- (i) **“determining, by the one or more processors, that the number of valid impressions is greater than or equal to the predetermined number of impressions;” (Claim 1[i])**

140. As explained for limitation 1[g], after the advertisement has been presented on the website, a record is maintained to indicate the number of impressions for the advertisement that occurred in the specified timeframe, and the maximum number of impressions that may be made. (Nicholas, ¶0114 (“In one embodiment of stage S438, advertiser record AR_x further includes... the number of impressions made in this timeframe... and the maximum number of impressions that may be made in each recognized timeframe.”) (emphasis added).) Nicholas further explains that delivery of an advertisement may be ceased once the number of impressions specified by the advertiser (**“the predetermined number of impressions”**) has been reached:

In one embodiment, the user may specify only the number of impressions. In one embodiment the user may specify only a start and end time during which an ad will be broadcast. In one embodiment the user may select both the number of impressions and the start and end times. In this

embodiment, should the advertisement be served up to the number of impressions prior to the end time, it may automatically stop being served.”

(Nicholas, ¶0061 (emphasis added).)

141. It therefore would have been obvious based on Nicholas that ad selection node **140** (“**the one or more processors**”) would have determined that the number of impressions is greater than or equal to the predetermined number of impressions specified by the advertiser, and if so, cease populating the advertising material on the websites selected by the advertiser.

142. And under the combination of Nicholas with Error, it would have been obvious to apply this technique only to “**valid**” advertising impressions, such that limitations 1[i] and 1[j] occur in Nicholas only with respect to valid impressions, *i.e.*, in which ad selection node **140** received a request from user web browsers for a single-pixel image confirming that the advertising impression had, in fact, been correctly delivered to the browser. As explained for limitation 1[h] above, a skilled artisan would have been motivated to apply this step only to “**valid**” impressions so the advertiser is charged only for impressions actually delivered to a user.

(j) “**upon determining a number of valid impressions are met, ceasing, by the one or more processors, the populating of the advertising material on the at least one website; and**” (Claim 1[j])

143. As fully explained for limitation 1[g], upon determining that a

predetermined number of valid impressions has occurred – such as the predetermined number selected by the advertiser – delivery of the advertisement to the websites selected by the advertisement (“**the populating of the advertising material on the at least one website**”) may be ceased. (Nicholas, ¶0061.) And under the combination with Error, it would have been obvious to apply this step only to “**valid**” impressions for the reasons noted.

(k) **“based on determining a number of valid impressions are met, electronically collecting, by the one or more processors, a share of the advertising revenue to be transmitted to the web property content owner.”**
(Claim 1[k])

144. Under the proposed combination of Nicholas and Mayadas, a share of the advertising revenue is transmitted to the web property content owner:

The targeted message is published on one or more publishers, according to the parameters set by the message sponsor. Also, the message is published to selected users when they interact with one of the selected publishers. When a user interacts with a targeted message, such as clicking on the targeted message display, the publisher, the user, and any data aggregator involved in targeting the message are compensated from the escrow account.

(Mayadas, ¶0015 (emphasis added).) As noted, the “publisher” in Mayadas corresponds to the owner of the website where the targeted advertisement is delivered. (Mayadas, ¶0034 (“The publisher is a web site and the targeted message is an advertisement.”).) The proposed combination of Nicholas and Mayadas

therefore renders obvious “**electronically collecting, by the one or more processors,**” *i.e.*, by ad selection node **140** in Nicholas, “**a share of the advertising revenue to be transmitted to the web property content owner,**” *i.e.*, a share of the escrow fund established by the advertiser. As noted, Nicholas itself discloses that, in one embodiment, it “provides a method for dividing the revenue earned through advertisement delivery,” explaining that “the revenue earned may vary based on,” among other things, the “publication or media company that sold the advertisement.” (Nicholas, ¶0150 (emphasis added).) The step of electronically collecting can occur, for example, when money is obtained from the advertiser escrow account for transmission into the publisher’s account. (Mayadas, ¶¶0043 (“Each time the advertisement is served and the specified action is taken by the consumer, the advertiser’s escrow account is debited for the one action.”), 0037 (“... the publisher is remitted payment for successfully serving the advertisement to a member of the target audience, block **330** [Fig. 4].”).) Alternatively, with respect to the publisher, it would have been obvious to perform the step of electronically collecting when the publisher accesses the advertising system in Nicholas to arrange for transfer of money in its publisher account into another account (*e.g.*, the publisher’s general bank account held outside the advertising system).

145. The proposed combination also renders obvious that the step of

electronically collecting a share of the advertising revenue occurs “**based on determining a number of valid impressions are met,**” as claimed. I note that this limitation, like the preceding one, merely recites “**a number**” of valid impressions and does not appear to require a particular number of impressions. Nor does it appear to require that “**a number**” of valid impressions be the same as “**the predetermined number of impressions**” received by ad selection node **140** as part of the advertising buy options recited in limitation 1[d]. Nevertheless, it would have been obvious to carry out this claim limitation in several straightforward ways.

146. First, it would have been obvious under the proposed combination to perform the step of electronically collecting after each advertising impression is delivered to the user, which is directly suggested by Mayadas. (Mayadas, *e.g.*, ¶¶0038 (“Advertisers place funds in an escrow account. An amount from the escrow account is paid out each time an advertisement is served.”), 0043 (“Each time the advertisement is served and the specified action is taken by the consumer, the advertiser’s escrow account is debited for the one action.”) (emphasis added).) Under this implementation, “**a number of valid impressions**” would correspond to a single valid impression and would trigger the claimed electronic collection.

147. Second, it would also have been obvious to perform the step of electronically collecting after a larger number of valid impressions had completed,

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such as after each group of 1,000 advertising impressions or after all advertising impressions were delivered. Nicholas discloses, as was well-known in the art, that advertisements were commonly priced based on the cost per one thousand impressions, commonly known as “CPM.” (Nicholas, ¶0087.) This is shown in Figure 18, which shows a screen display relating to revenue provided to various publishers (e.g. websites) that display advertisements:

201

202

Dizpersion

log offthreshold

accountsadvertiserwebsite

newspaper

Broadcast Ad

Ad Upload

Coupon

Quantity

Channels

Geographic

Demographic

Summary

Company Name
User Name
Street Address
City, State Zip

Publication Administration
[Create New Publication](#)

Publication Name	Publication Revenue %	Banner CPM	Tower CPM	Pop-up CPM	Contract Begin Date	Contract End Date
Independent-Register	50.0	\$35.00	\$45.00	\$60.00	11/01/01	05/01/01
Dizpersion	100.0	\$1.00	\$1.00	\$1.00	11/01/01	12/30/05

2001 Dizpersion Corporation
Contact Us
Privacy
Terms of Use

320

FIG. 18

(Nicholas, Fig. 18 (highlighting added).) Figure 18 above shows a publication details page 320, which includes “information relating to the advertisers,

publications or media companies having access to ad selection node **140.**” (Nicholas, ¶0087.) “This information may include contract information such as the determined revenue split, cost per thousand impressions (CPM), and beginning and end dates.” (*Id.* (emphasis added).) In the example in Figure 18, the “Independent-Register” has prices of \$35.00, \$45.00, and \$60.00, respectively, for 1,000 Banner, Tower, or Pop-up advertising impressions.

148. It therefore would have been obvious to perform the step of electronically collecting after 1,000 valid impressions were delivered via a website, or after the total number of impressions selected by the advertiser in limitation 1[d] have been delivered (in either case after “**a number of**” valid impressions). For example, if an advertiser purchased a certain number of CPM packages, it would have been obvious to have performed the electronically collecting step after delivery of each, or all, CPM packages. These two intervals would have been among a small number of potential times when the electronic collection from the advertiser would naturally have been expected to occur, and would have beneficially reduced the multiple billing and collection steps required to collect revenue after delivery of each impression.

149. These collection frequencies are directly suggested by CPM-based pricing disclosed in Nicholas, which is based on packages of 1,000 impressions. An

ordinarily skilled artisan would have been motivated to perform the step of electronically collecting after each CPM package of impressions was delivered, or after all CPM packages of impressions were delivered, in order to improve the performance and simplify the system. For example, performing the electronically collecting step after 1,000 impressions or at the end of the advertising campaign – instead of after each individual impression – would have conserved resources by reducing the number of times the collection step must be performed. Relatedly, performing the step at less frequent intervals would have avoided certain complexities associated with collecting on a more granular basis. For example, using the \$35.00 Banner CPM example in Figure 18 above, this results in a per-impression price of three and a half cents – making it unclear as to whether such an amount should be rounded up or rounded down if collected on an impression-by-impression basis or for an odd number of impressions. By performing the step based on CPM-based intervals, this potential complexity is avoided.

150. Under any of these approaches, based on the combination of Nicholas with Error, it would have been obvious to perform the step of electronically collecting only based on “**valid**” impressions, so the advertiser is charged and the web property content owner is compensated only upon actual delivery of advertising impressions to the user’s web browser, as fully explained for limitation 1[i].

2. Claim 2: “The computer-implemented method of claim 1, wherein the advertising materials are selected from the group consisting of: a banner ad, a pop-up, a text advertisement, and a rich media advertisement.”

151. Nicholas discloses that the advertising material can be a banner ad, a pop-up, text, rich media, among others. (Nicholas, ¶¶0059 (“Advertisement types may include banner, tower, pop-up, pop-under, SMS message, or any other type of advertisement known in the art.”), 0109 (“The content served by ad selection node **140** may be in the form of a portion of or a complete hypertext markup language (HTML) web page, a portion of or a complete web page containing dynamic content as might be provided by a technology such as Flash... or any other form of advertising on a consumer networked site or service known in the art.”) (emphasis added).) The reference to “Flash” in Nicholas refers to Macromedia Flash (and later known as Adobe Flash), a well-known technology for providing rich media content to the user such as videos or animations. (Zeff, pp.39-40 (0015-0016) (explaining that Flash “allow[s] a user to view streaming content,” and that an advertisement “that utilizes Flash will have more animation than an animated GIF that is the same file size.”).)

3. Claim 3: “The computer-implemented method of claim 1, wherein the repository comprises a fund.”

152. As explained for limitation 1[e], the repository comprises a fund either

for the advertiser held in the advertiser escrow account, or for the publisher (website operator) held in the advertiser account.

4. Claim 4: “The computer-implemented method of claim 1, wherein the electronically collecting comprises applying the electronic revenue from the selected one or more advertising buy options, to the repository.”

153. As explained for claim 1, under the combination of Nicholas and Mayadas, electronic revenue from the advertising impressions is obtained from the repository and provided to website owners. (Mayadas, ¶¶0038 (“Advertisers place funds in an escrow account. An amount from the escrow account is paid out each time an advertisement is served.”), 0015 (“When a user interacts with a targeted message... the publisher... [is] compensated from the escrow account.”), 0034-0037.) This discloses that the step of electronically collecting in limitation 1[k] comprises “**applying the electronic revenue... to the repository,**” because the repository is used to pay out or receive the electronic revenue. As explained for limitation 1[e] and noted again for claim 3 above, the claimed repository can be mapped to either the *advertiser* or *publisher* account fund. In the case of the advertiser account fund, the amount in the advertiser escrow account is reduced when an advertising impression is delivered. (Mayadas, ¶0043 (“Each time the advertisement is served and the specified action is taken by the consumer, the advertiser’s escrow account is debited for the one action.”).) Conversely, in the case

of the publisher (website operator) account fund, the amount in the publisher's account is increased in response to the advertising impression. (Mayadas, ¶0015 (“When a user interacts with a targeted message... the publisher... [is] compensated from the escrow account.”), 0037 (“... the publisher is remitted payment for successfully serving the advertisement to a member of the target audience, block 330 [Fig. 4].”).) In either case, the step of electronically collecting in limitation 1[k] would have comprised applying the electronic revenue to the claimed repository.

154. This is consistent with the plain and ordinary meaning of the word “**apply**” in the context of databases, which is the appropriate context here considering that claim 1[e] requires “**generating**” the repository “**on a database.**” The word “**apply**” in the database context is commonly understood as an act of modifying a value from a database and storing the modified value. For example, if a value in a database is modified and then stored in the database, this is commonly referred to as “**applying**” the change to the database. Under the proposed combination, therefore, when the electronically collecting step is performed, electronic revenue is provided to a website owner as revenue in response to an impression, resulting in a reduction in the balance available in the advertiser's escrow account, and an increase in the amount available in the publisher account. In either case, the electronic revenue is “**appl[ied]**” to the repository when the

repository is updated to reflect the current amount of money in the account.

155. The electronic revenue is also “**from the selected one or more advertising buy options**,” because as explained for limitation 1[d], the advertising impressions that generated the revenue are based on the advertising buy options (*e.g.* number of impressions, target websites) selected by the advertiser. These two options, as explained, directly affect the revenue to be paid out of the escrow account because they determine the number of impressions (and hence how much will be spent), as well as the identity of the website owners who will be paid.

5. Claim 5: “The computer-implemented method of claim 1, wherein the data comprises a project type.”

156. Nicholas also discloses that “**the data**” of claim 1 (*i.e.*, “**the data comprising advertising material to populate on one or more websites**”) can comprise a project type. For example, the claimed project type can take the form of a coupon advertisement designed to promote a particular business. (Nicholas, ¶0060.) For example, the advertiser can specify through the user interface of Figure 7 that the data will comprise a coupon:

The screenshot shows the Dizpersion website interface. At the top, there is a header bar with the logo 'Dizpersion' (labeled 201) and navigation links 'log off' and 'threshold'. Below this is a secondary navigation bar with links 'accounts', 'advertiser', 'website', and 'newspaper'. A third navigation bar contains tabs: 'Broadcast Ad', 'Ad Upload', 'Coupon' (highlighted), 'Quantity', 'Channels', 'Geographic', 'Demographic', and 'Summary'. The main content area (labeled 202) contains a form for creating a coupon. It includes input fields for 'Company Name', 'User Name', 'Street Address', and 'City, State Zip'. Below these is a 'Home' link with a house icon. A 'Steps' section lists: '1. Define Outcome of Click-through.' with radio buttons for 'Coupon' (labeled 211) and 'URL Destination'; '2. Retrieve Coupon.' with a 'File' input field and a 'Browse...' button (labeled 212); and '4. Press Submit.' (labeled 213) with a 'Submit' button. The footer contains '2001 Dizpersion Corporation', 'Contact Us', 'Privacy', and 'Terms of Use'.

210
FIG. 7

(Nicholas, Fig. 7 (highlighting added).) “If the user selects a coupon destination, the user may specify an image, or any other file type known in the art, for use in creating the coupon using form element **213**.” (Nicholas, ¶0060.)

157. Figure 13 in Nicholas shows an exemplary advertising coupon **260** used to promote a particular business:

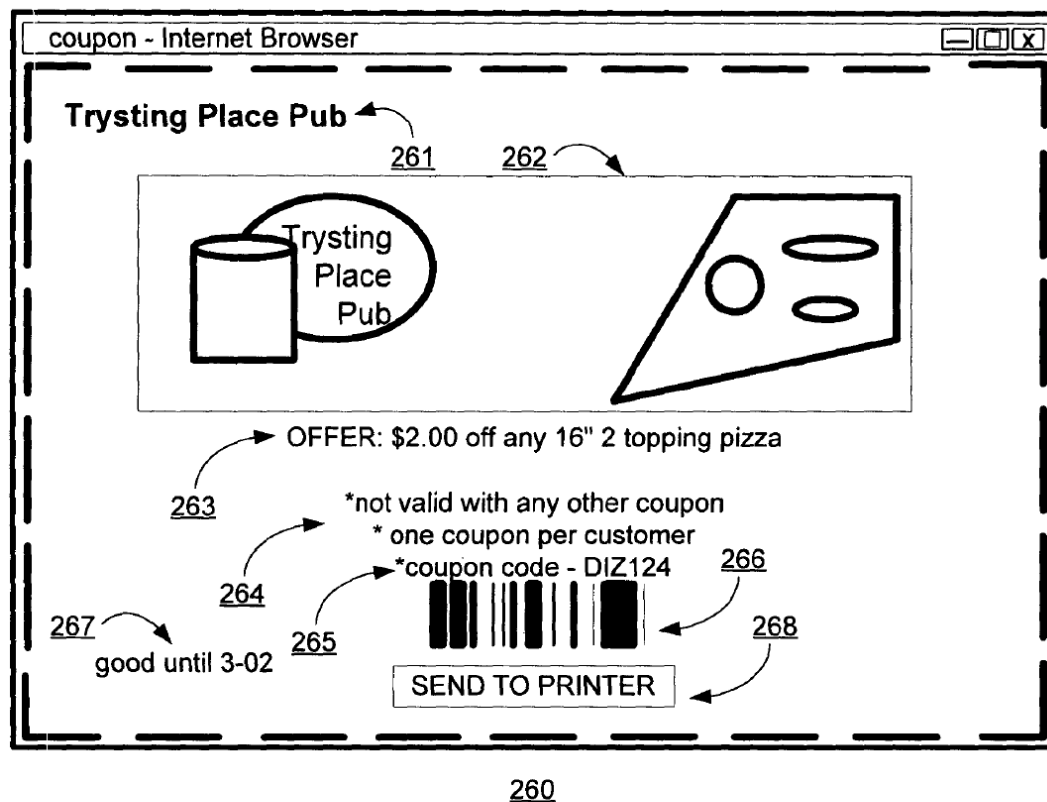


FIG. 13

(Nicholas, Fig. 13.) Nicolas explains that, as shown in Figure 13, a coupon can contain a number of elements including company name **261**, a specific offer from the advertiser **263**, restrictions **264** such as one coupon per customer, coupon code **265** or bar code **266**, a valid or expiration date **267**, a link or print image **268** that allows the coupon to be printed, among other elements. (Nicholas, ¶0067.)

158. I note that the term “**project type**” does not appear outside the claims. Nevertheless, dependent claim 6 addressed below further specifies that the claimed project type can be, for example, “**a business project.**” As applied to Nicholas,

therefore, it would have been obvious that “**the data**” of claim 1 (*i.e.*, “**the data comprising advertising material to populate on one or more websites**”) would have comprised a project type, such as a business project in the form of a coupon advertisement for a particular business. (Nicholas, ¶¶0060, 0067.) In the example of Figure 13 above, the coupon reflects a business project in which the advertiser is attempting to promote a particular business establishment by offering financial incentives to website visitors encouraging them to visit (and spend money at) the advertised business. Nicholas explains that coupons contain unique elements that other types of advertisements do not include, such as a specific offer from the advertiser (with an expiration date and possible restrictions), a coupon code or bar code, and link allowing a coupon to be printed, among other elements. (Nicholas, Fig. 13, ¶0067.) It therefore would have been obvious for a coupon in Nicholas to have been used for a particular type of project such as a business project.

159. Moreover, to the extent the claim were interpreted to require that the project type be received via the same user interface that obtains the “**data**” and “**advertising material**” of limitation 1[a], it would have been obvious to allow the advertiser to specify the project type on the same webpage (*e.g.*, Figure 6) where other advertising material is provided, for the same reasons explained for limitations 1[c] and 1[d]. Nicholas itself explains that “[t]he illustrated interfaces [of Figures

6-11] may be omitted, [or] rearranged... without straying from the intent of defining the properties necessary or useful for distributing an advertisement online.” (Nicholas, ¶0057 (emphasis added).) It therefore would have been obvious to rearrange user interface features in Nicholas such project type selection takes place using the same page as other advertising material. As explained previously, placing multiple options in a single page was a trivial user interface design decision that had known advantages. (Baxley, EX1014, pp.238-239 (0021-0022).) The benefits would have included, as explained, streamlining the user interface and allowing the advertiser to view and weigh the various options defining its campaign simultaneously, facilitating easier adjustment of advertiser selections.

6. **Claim 6: “The computer-implemented method of claim 5, wherein the project type is selected from the group consisting of: a non-profit project, a business project, a real estate project, and an art project.”**

160. As noted for claim 5, the project type can be a business project.

7. **Claim 9: “The computer-implemented method of claim 1, wherein the data comprises a predetermined target audience, and wherein the at least one website comprises one or more websites frequented by the pre-determined target audience.”**

161. Nicholas also discloses that “**the data**” of claim 1 (*i.e.*, “**the data comprising advertising material to populate on one or more websites**”) can comprise a predetermined target audience, such as a particular user demographic.

For example, Nicholas explains in connection with Figure 9, discussed in detail for limitations 1[c] and 1[d], that the advertiser may select through ads selection node **140** “may be organized into categories based upon subject matter, user demographic, or some other method of categorization.” (Nicholas, ¶0062 (emphasis added).) Nicholas also discloses a web-based interface allowing the advertiser to “defin[e] the end user demographics over which the advertisement may be displayed.” (Nicholas, ¶0065; *see also id.*, Fig. 12.) In one embodiment, ad selection node **140** may hold demographic information, such as the USCB census data, and may make it available to the user. This data may be used during the definition of an advertisement to specify the demographics over which the advertisement may be displayed.” (Nicholas, ¶0065.) It therefore would have been obvious that the data in Nicholas could have included at least “**a predetermined target audience,**” such as a predetermined demographic category such as gender.

162. It would also have been obvious that “**the at least one website comprises one or more websites frequented by the pre-determined target audience,**” as claimed. Nicholas provides an example in which, if an advertiser specifies a predetermined target audience of women, and websites can include websites frequented by that audience:

For example, a political candidate may be more familiar
with the demographics of the audience she wishes to

reach, and the geographic area of her constituency, rather than the sites on which she wishes to have her message displayed. For the purpose of this example we will say the message relates to “a woman's right to choose” and is geared toward a female audience. In this embodiment, the candidate may specify the geographic area of her constituency, and specify that the ad should be targeted towards women. Ad selection node **140** may then specify that this ad should be served on sites such as iParenting.com, as iParenting.com has collected demographic information relating to their audience that suggests that 98% of their audience is female.

(Nicholas, ¶0073 (emphasis added).) It therefore would have been obvious that “**the one or websites**” that an advertiser could have selected, and to which an advertisement could have been provided, would have comprised websites frequented by a desired target audience. This would have beneficially allowed the system of Nicholas to focus advertising delivery on websites more likely to be relevant to the advertisement’s desired target audience. Moreover, as explained for claim 5 above, to the extent the claim were interpreted to require that the predetermined target audience be received via the same user interface that obtains the “**data**” and “**advertising material**” of limitation 1[a], it would have been obvious to allow the advertiser to specify the target audience on the same webpage (*e.g.*, Figure 6) where that information is provided for the same reasons explained for limitations 1[c] and 1[d]. Nicholas itself explains that “[t]he illustrated interfaces [of Figures 6-11] may be omitted, [or] rearranged... without straying from the intent of defining the

properties necessary or useful for distributing an advertisement online.” (Nicholas, ¶0057 (emphasis added).) It therefore would have been obvious to rearrange user interface features in Nicholas such target audience selection takes place using the same page as other advertising material. As explained previously, placing multiple options in a single page was a trivial user interface design decision that had known advantages. (Baxley, EX1014, pp.238-239 (0021-0022).) The benefits would have included, as explained, streamlining the user interface and allowing the advertiser to view and weigh the various options defining its campaign simultaneously, facilitating easier adjustment of advertiser selections.

8. Independent Claim 10

163. Independent claim 10 is substantially the same as claim 1 but written in the form of a computer program product. The following side-by-side table shows the two claims (with differing language shown in underlining):

Claim 1	Claim 10
1. A computer- <u>implemented</u> method comprising:	10. A computer <u>program product</u> comprising: <u>a computer readable storage medium</u> <u>readable by one or more processors and</u> <u>storing instructions for execution by the</u> <u>processor for performing a method</u> comprising:

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Claim 1	Claim 10
[a] receiving, by one or more processors, from a given client, over an Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data, the data comprising advertising material to populate on one or more websites;	[a] receiving, by <u>the</u> one or more processors, from a given client, over an Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data, the data comprising advertising material to populate on one or more websites;
[b] identifying, by the one or more processors, the given client, based on receiving the message, an identifier, wherein the message comprises the identifier;	[b] identifying, by the one or more processors, the given client, based on receiving the message, an identifier, wherein the message comprises the identifier;
[c] based on a message provided by a given client, generating, by the one or more processors, a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client accessing said webpage;	[c] based on a message provided by a given client, generating, by the one or more processors, a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client accessing said webpage;
[d] obtaining, by the one or more processors, via an input in the graphical user interface, a selection of one or more of the advertising buy options, wherein the selected one or more advertising buy options comprise at least one website of the respective websites and a predetermined number of impressions of the advertising material	[d] obtaining, by the one or more processors, via an input in the graphical user interface, a selection of one or more of the advertising buy options, wherein the selected one or more advertising buy options comprise at least one website of the respective websites and a predetermined number of impressions of the advertising material

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Claim 1	Claim 10
for users visiting the at least one website;	for users visiting the at least one website;
[e] generating, by the one or more processors, on a database accessible to the one or more processors, a repository for advertising revenue based on the selection;	[e] generating, by the one or more processors, on a database accessible to the one or more processors, a repository for advertising revenue based on the selection;
[f] based on obtaining the selection, populating, by the one or more processors, the advertising material on the at least one website, wherein the populating comprises placing the advertising material within web property content of the at least one website;	[f] based on obtaining the selection, populating, by the one or more processors, the advertising material on the at least one website, wherein the populating comprises placing the advertising material within web property content of the at least one website;
[g] monitoring, by the one or more processors, a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website;	[g] monitoring, by the one or more processors, a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website;
[h] determining, by the one or more processors, whether an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system;	[h] determining, by the one or more processors, whether an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system;
[i] determining, by the one or more processors, that the number of valid	[i] determining, by the one or more processors, that the number of valid

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Claim 1	Claim 10
impressions is greater than or equal to the predetermined number of impressions;	impressions is greater than or equal to the predetermined number of impressions;
[j] upon determining a number of valid impressions are met, ceasing, by the one or more processors, the populating of the advertising material on the at least one website; and	[j] upon determining a number of valid impressions are met, ceasing, by the one or more processors, the populating of the advertising material on the at least one website; and
[k] based on determining a number of valid impressions are met, electronically collecting, by the one or more processors, a share of the advertising revenue to be transmitted to the web property content owner.	[k] based on determining a number of valid impressions are met, electronically collecting, by the one or more processors, a share of the advertising revenue to be transmitted to the web property content owner.

164. As shown claim 10 is substantially identical to claim 1, the sole difference being that claim 10 recites a “computer program product” that comprises “a computer readable storage medium readable by one or more processors and storing instructions for execution by the processor,” for performing the same steps recited in claim 1. For purposes of claim 10, the computer program product in Nicholas corresponds to storage on ad selection node 140 (“one or more processors”), as discussed for limitation 1[a].

165. It would have been obvious that ad selection node **140** would have included at least a computer readable storage medium (such as a hard disk or other

storage) for storing the instructions for execution by a processor. This is also confirmed by Nicholas's incorporated '329 provisional application (*see* Nicholas, ¶0001 (incorporating provisional applications by reference)), which includes a block diagram of an ad selection node computer 60, which as shown below, includes among other things, disk drives 74:

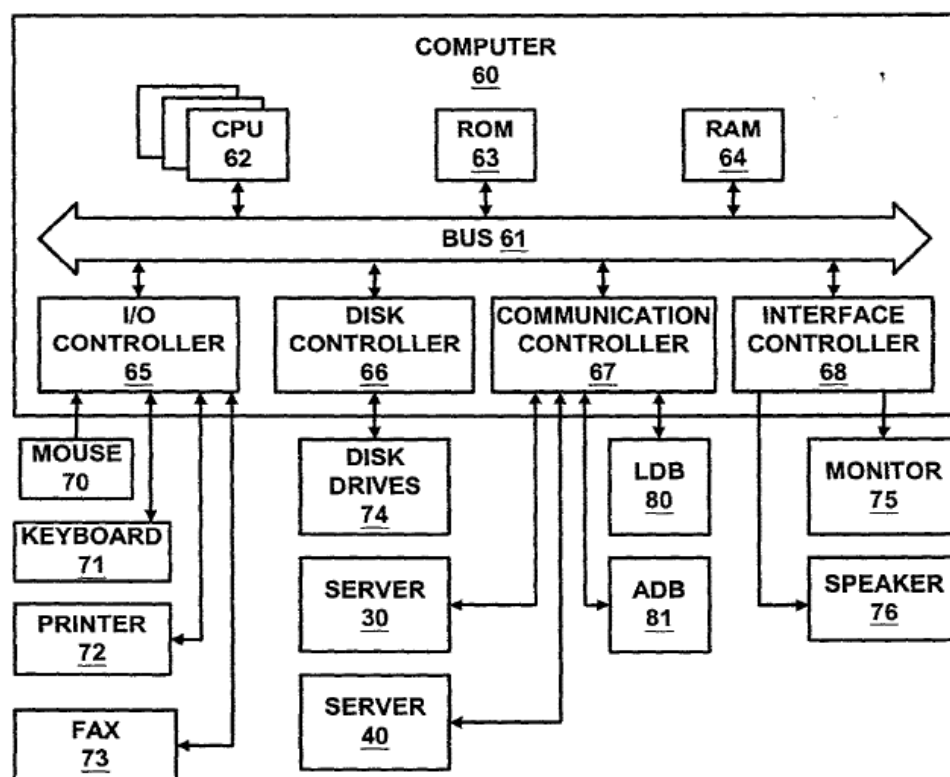


FIG. 2

(EX1012, Fig. 2; *see also id.*, 006:5-7 (“FIG. 2 is a block diagram of one embodiment in accordance with the present invention of computer hardware employed in an advertisement selection node of the FIG. 1 telecommunications system”), 009:4-9 (“Controller 66 conventionally facilitates an interaction between

CPU 62 and data storage devices such as disks drives 74 in the form of a hard drive, a floppy drive, and a compact-disc drive that are locally or remotely situated. The hard drive stores a conventional operating system, such as, for example, IBM's AIX operating system or Microsoft's Windows, and application programs.”.) Moreover, the recited storage medium and processor were standard features of any conventional computer system. (E.g., Laidlaw, ¶0037 (“The system may include a host server or other computing systems including a processor for processing digital data, a memory coupled to Said processor for storing digital data... [and] an application program stored in said memory and accessible by said processor for directing processing of digital data by said processor[.]”) (emphasis added).)

9. Claims 11-15, 18

166. Claims 11-15 and 18 are substantially the same as claims 2-6 and 9, respectively, except that they depend from different independent claims. The following side-by-side table compares the two sets of claims (with differing language shown in underlining):

Claim 2	Claim 11
2. The computer-implemented method of claim 1, wherein the advertising materials are selected from the group consisting of: a banner ad, a pop-up, a	11. The computer program product of claim 10, wherein the advertising materials are selected from the group consisting of: a banner ad, a pop-up, a

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text advertisement, and a rich media advertisement.	text advertisement, and a rich media advertisement.
Claim 3	Claim 12
3. The computer- <u>implemented method</u> of claim <u>1</u> , wherein the repository comprises a fund.	12. The computer <u>program product</u> of claim <u>10</u> , wherein the repository comprises a fund.
Claim 4	Claim 13
4. The computer- <u>implemented method</u> of claim <u>1</u> , wherein the electronically collecting comprises applying the electronic revenue from the selected one or more advertising buy options, to the repository.	13. The computer <u>program product</u> of claim <u>10</u> , wherein the electronically collecting comprises applying the electronic revenue from the selected one or more advertising buy options, to the repository.
Claim 5	Claim 14
5. The computer- <u>implemented method</u> of claim <u>1</u> , wherein the data comprises a project type.	14. The computer <u>program product</u> of claim <u>10</u> , wherein the data comprises a project type.
Claim 6	Claim 15
6. The computer- <u>implemented method</u> of claim <u>5</u> , wherein the project type is selected from the group consisting of: a non-profit project, a business project, a real estate project, and an art project.	15. The computer <u>program product</u> of claim <u>14</u> , wherein the project type is selected from the group consisting of: a non-profit project, a business project, a real estate project, and an art project.
Claim 9	Claim 18

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9. The computer- <u>implemented method</u> of claim 1,	18. The computer <u>program product</u> of claim <u>10</u> ,
wherein the data comprises a predetermined target audience, and	wherein the data comprises a predetermined target audience, and
wherein the at least one website comprises one or more websites frequented by the pre-determined target audience.	wherein the at least one website comprises one or more websites frequented by the pre-determined target audience.

167. As shown, the only differences between claims 2-7 and 9 and 11-16 and 18 are that the latter claims recite a “computer program product,” which I addressed in my discussion of claim 10 above.

10. Independent Claim 19

168. Independent claim 19 is substantially the same as claims 1 and 10, except that claim 19 is written as a system claim. The following side-by-side table shows the two claims (with differing language shown in underlining):

Claim 1	Claim 19
1. A <u>computer-implemented</u> method comprising:	19. A <u>system comprising</u> : <u>a memory;</u> <u>one or more processors in</u> <u>communication with the memory; and</u> <u>program instructions executable by the</u> <u>processor via the memory to perform a</u> <u>method,</u>

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Claim 1	Claim 19
	<u>the</u> method comprising:
receiving, by one or more processors, from a given client, over an Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data, the data comprising advertising material to populate on one or more websites;	receiving, by <u>the</u> one or more processors, from a given client, over an Internet-based communication link from a browsing application executed on the given client processor to the one or more processors, a message comprising data, the data comprising advertising material to populate on one or more websites;
identifying, by the one or more processors, the given client, based on receiving the message, an identifier, wherein the message comprises the identifier;	identifying, by the one or more processors, the given client, based on receiving the message, an identifier, wherein the message comprises the identifier;
based on a message provided by a given client, generating, by the one or more processors, a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client accessing said webpage;	based on a message provided by a given client, generating, by the one or more processors, a webpage, wherein the generating comprises providing, via a graphical user interface of the webpage, a plurality of advertising buy options for selection by a given client accessing said webpage;
obtaining, by the one or more processors, via an input in the graphical user interface, a selection of one or more of the advertising buy options, wherein the selected one or more advertising buy options comprise at least one website of the respective	obtaining, by the one or more processors, via an input in the graphical user interface, a selection of one or more of the advertising buy options, wherein the selected one or more advertising buy options comprise at least one website of the respective

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Claim 1	Claim 19
websites and a predetermined number of impressions of the advertising material for users visiting the at least one website;	websites and a predetermined number of impressions of the advertising material for users visiting the at least one website;
generating, by the one or more processors, on a database accessible to the one or more processors, a repository for advertising revenue based on the selection;	generating, by the one or more processors, on a database accessible to the one or more processors, a repository for advertising revenue based on the selection;
based on obtaining the selection, populating, by the one or more processors, the advertising material on the at least one website, wherein the populating comprises placing the advertising material within web property content of the at least one website;	based on obtaining the selection, populating, by the one or more processors, the advertising material on the at least one website, wherein the populating comprises placing the advertising material within web property content of the at least one website;
monitoring, by the one or more processors, a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website;	monitoring, by the one or more processors, a number of impressions of the advertising material provided to users accessing the web property content displayed on the at least one website;
determining, by the one or more processors, whether an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system;	determining, by the one or more processors, whether an impression of the advertising material is valid, wherein the impression is valid based on a predetermined impression tracking system;

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Claim 1	Claim 19
determining, by the one or more processors, that the number of valid impressions is greater than or equal to the predetermined number of impressions;	determining, by the one or more processors, that the number of valid impressions is greater than or equal to the predetermined number of impressions;
upon determining a number of valid impressions are met, ceasing, by the one or more processors, the populating of the advertising material on the at least one website; and	upon determining a number of valid impressions are met, ceasing, by the one or more processors, the populating of the advertising material on the at least one website; and
based on determining a number of valid impressions are met, electronically collecting, by the one or more processors, a share of the advertising revenue to be transmitted to the web property content owner.	based on determining a number valid impressions are met, electronically collecting, by the one or more processors, a share of the advertising revenue to be transmitted to the web property content owner.

169. As fully explained for claim 10, above, it would have been obvious that Nicholas renders obvious a “**system**” that includes a memory, one or more processors, and program instructions, which would have been included as part of ad selection node **140** as discussed above.

C. Ground 2: Claims 7-8, 16-17, and 20 Are Obvious Over Ground 1 Prior Art In Further View of Yasnovsky.

- 1. Claim 7: “The computer-implemented method of claim 1, further comprising: receiving, by the one or more processors, from the given client, in the message, a target fund amount for the content.”**

170. Claim 7 is obvious over the prior art for **Ground 1**, in further view of **Yasnovsky** which describes “[a] self-service platform [that] allows advertisers to create and manage their own ad campaigns to be run on a computer network, such as the Internet.” (Yasnovsky, Abstract.) The self-service platform in Yasnovsky is similar in many respects to Nicholas and Mayadas. Yasnovsky explains that, in one embodiment, “the advertiser can create and manage ads, create and manage campaigns using those ads, receive and view reports on the campaigns and maintain his account balance for his campaigns.” (Yasnovsky, ¶0044.) When defining an advertising campaign, the advertiser specifies a campaign budget representing “the maximum amount to be spent on this campaign.” (Yasnovsky, ¶0046; *see also id.*, Fig 3A-1 (showing user specifying budget of \$500).) The advertiser can also specify the days the campaign will run and the advertisements to run in the campaign. (Yasnovsky, ¶¶0046-0048.) Yasnovsky therefore discloses receiving “**a target fund amount for the content**,” *i.e.*, an amount provided by the advertiser as the budget for placing advertising content on websites.

171. *Rationale and Motivation to Combine (Ground 1 Prior Art with Yasnovsky)*: It would have been obvious to combine the prior art for **Ground 1** with Yasnovsky. The proposed combination would have predictably resulted in the advertising system of Nicholas further adapted such that ad selection **140** (“**the one or more processors**”) would have received from advertiser node **160** (“**the given client**”), a target fund amount specifying the budget for placing advertising content on websites. It would also have been obvious to receive the target fund amount “**in the message**,” as claimed, *e.g.*, either in the message that comprises the advertising material (limitation 1[a]) or the message that results in presentation of the advertising buy options (limitation 1[c]). For example, it would have been obvious to include a selection for the target fund amount (shown in Figure 3A-1 of Yasnovsky) as an additional option on the user interface webpages (*e.g.*, Figure 6 or Figure 7) of Nicholas. Yasnovsky is an analogous reference in the same field of Internet-based advertising and would have been reasonably pertinent to problems facing the inventor, including techniques for allowing an advertiser to specify a target fund amount for an advertising campaign.

172. An ordinarily skilled artisan would have been motivated to combine the prior art for Ground 1 with Yasnovsky to provide greater control to the advertiser over how much it wishes to spend on its advertising campaign. This would have

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provided a clear improvement to the Nicholas-Mayadas system by providing a further protection against the advertiser spending beyond its desired budget. For example, as explained for limitation 1[e] in **Ground 1** above, under Nicholas-Mayadas combination, ad selection node **140** would have received a block of funds from the advertiser based on the estimated cost of the advertisement campaign. (Mayadas, ¶0029 (“The system receives a block of funds from the advertiser based on the estimated cost of the advertisement campaign to the system, block **170**. The block of funds from the advertiser is placed in an escrow account ready for distribution in conjunction with serving the advertisement through the web sites, block **175**.”); *see also id.*, ¶0041 (“When an advertiser sets up an advertisement campaign, the advertiser gives it a maximum size: days, number of impressions, etc. The advertiser must then put funds into an escrow account to support the maximum size of campaign selected.”) (emphasis added).) Under the further combination with Yasnovsky, allowing the advertiser to explicitly specify a target fund amount for the campaign would have enabled the advertising system to beneficially inform the advertiser in the event its advertising selections (*e.g.*, number of impressions) result in a campaign requiring more than the desired budget. (Yasnovsky, ¶0046 (“The campaign budget is the maximum amount to be spent on this campaign.”).) As an additional benefit, allowing the advertiser to specify a budget would have allowed

ad selection node **140** to end the campaign when the campaign reached the desired budget, thus preventing unwanted expenditure of any excess funds prepaid into the escrow account by the advertiser. (Yasnovsky, ¶0044 (“The advertiser prepays a certain amount in his account. As ads run, debits are generated against the prepayment, drawing down the prepayment.”).)

173. An ordinarily skilled artisan would have also had a reasonable expectation of success. The techniques described in Nicholas and Yasnovsky on which I rely disclose standard Web technologies that date back to the 1990s that would have been part of the background knowledge of ordinarily skilled artisans, such as creating web-based user interfaces to allow advertisers to manage their advertising campaigns and specify budgets. An ordinarily skilled artisan would have found the disclosures in Nicholas and Yasnovsky sufficiently detailed to implement the techniques that I cite in my Declaration, without undue experimentation.

174. The Nicholas-Mayadas combination therefore renders obvious **“receiving, by the one or more processors [*i.e.*, ad selection node **140**], from the given client [*i.e.*, advertiser node **160**]... a target fund amount for the content [*i.e.*, the fund amount received from the advertiser].”**

2. **Claim 8: “The computer-implemented method of claim 1, further comprising: prior to determining that the number of impressions is equal to the predetermined number of impressions, obtaining, by the one or more processors, via an input in the graphical user interface, a request for increasing the predetermined number of impressions of the advertising material for users visiting the at least one website; and based on the obtaining, automatically increasing the predetermined number of impressions.”**

175. As explained for claim limitation 1[f] in the discussion of **Ground 1** above, if the system in Nicholas determines that the number of impressions is equal to the predetermined number of impressions, further delivery of the advertisement will be ceased. (Nicholas, ¶0061.) Nicholas does not appear to expressly disclose the further ability to increase the predetermined number of impressions, but this would have been obvious in view of Yasnovsky.

176. Yasnovsky discloses the ability to manage an existing advertising campaign, including the ability to edit a number of aspects of the campaign – including its budget. (Yasnovsky, ¶0049 (“The advertiser can also edit any of the following: the campaign budget 414, the run dates 415 of the campaign, and which ads 416 are used in the campaign.”) (emphasis added), Fig. 4A.) “[T]he advertiser can make these edits at any time via the self-service platform.” (Yasnovsky, ¶0049.) It would have been obvious that this feature would have enabled an advertiser to increase the budget for an advertising campaign.

177. It would have been obvious to combine the prior art for **Ground 1** with Yasnovsky. The proposed combination would have predictably resulted in the advertising system of Nicholas further adapted to allow an advertiser to increase the number of predetermined advertising impressions for an existing advertising campaign. This is directly suggested by Yasnovsky which, as explained, discloses the ability of an advertiser to increase the budget for an advertising campaign.

178. Although the advertiser in Nicholas specifies a *number* of advertising impressions for an advertisement rather than the *budget* for those impressions, an ordinarily skilled artisan would have been motivated based on Yasnovsky to adapt Nicholas to allow the advertiser to increase the previously-established number of impressions through the graphical interface. A person of ordinary skill in the art would have appreciated that, in many implementations, the budget for an advertising campaign may be correlated with the number of advertising impressions that can be delivered during that campaign. Nicholas describes specifying the number of impressions as a “standard method” for defining the quantity or duration of the advertising campaign. (Nicholas, ¶0061 (“A standard method for defining the quantity and/or duration of a network advertisement is to specify a number of impressions, or the number of times the advertisement will be delivered.”).) It therefore would have been obvious to adapt the system of Nicholas, based on the

teachings of Yasnovsky, to allow the advertiser in Nicholas to change the number of impressions. The combination of Nicholas with Yasnovsky would have predictably resulted in the receipt of “**a request for increasing the predetermined number of impressions of the advertising material for users visiting the at least one website,**” in which an advertiser requests an increase in the number of impressions for its advertisement, representing the advertiser’s desire to serve additional impressions beyond the initial number previously specified by the advertiser as described for limitation 1[d]. As explained below, a skilled artisan would have been motivated to add this functionality to Nicholas to enable the advertiser to beneficially continue an existing advertising campaign beyond the initially-selected number of impressions.

179. It would also have been obvious for ad selection node **140** in Nicholas to have received this request “**prior to determining that the number of impressions is equal to the predetermined number of impressions,**” as claimed. For example, if the advertiser found that its advertising campaign was successful and produced positive results, it would have sought to continue that campaign by adding additional impressions before the previously-specified number of impressions was exhausted and causing the campaign to end. This is directly supported by Yasnovsky, which explains that the advertiser can specify that “when the account

falls below a threshold level, an alert is generated to remind the advertiser to refill his account.” (Yasnovsky, ¶0040 (emphasis added).) As applied to Nicholas, in which the advertiser specifies a number of impressions rather than an advertising budget, it would have been obvious to allow the advertiser to add more impressions to its campaign, beneficially preventing the campaign from being terminated upon the previously-established number of impressions being delivered. Under the proposed combination, therefore, it would have been obvious that ad selection node **140** in Nicholas would have received a request for increasing the predetermined number of impressions *before* the number of impressions was equal to the predetermined number of impressions, to allow the advertising campaign to continue uninterrupted after the predetermined number of impressions had occurred.

180. It would also have been obvious, **“based on the obtaining,”** to **“automatically increas[e] the predetermined number of impressions.”** Under the proposed combination, in response to obtaining the request from the advertiser through the graphical user interface, ad selection node **140** in Nicholas under the proposed combination would have automatically increased the predetermined number of impressions thus enabling it to deliver more impressions beyond the amount initially specified. No further action would have been required by the user to effectuate the increase in the predetermined number of impressions. (Yasnovsky,

¶0044 (“If the overall system is real-time or near real-time, as is the case in this example, any changes will take effect immediately or near-immediately.”).)

181. An ordinarily skilled artisan would have also had a reasonable expectation of success. The techniques described in Nicholas and Yasnovsky on which I rely disclose standard Web technologies that date back to the 1990s that would have been part of the background knowledge of ordinarily skilled artisans, such as creating web-based user interfaces to allow advertisers to manage their advertising campaigns. An ordinarily skilled artisan would have found the disclosures in Nicholas and Yasnovsky sufficiently detailed to implement the techniques that I cite in my Declaration, without undue experimentation.

3. Claims 16-17 and 20

182. Claim 16 is substantially similar to claim 7 and claims 17 and 20 are substantially the same as claim 8, except that they depend from different independent claims. The following side-by-side table compares the two sets of claims (with differing language shown in underlining):

Claim 7	Claim 16
7. The computer-implemented method of claim 1, further comprising:	16. The computer program product of claim 10, the method further comprising:

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receiving, by the one or more processors, from the given client, in the message, a target fund amount for the content.	receiving, by the one or more processors, from the given client, in the message, a target fund amount for the content.
Claim 8	Claim 17
8. The <u>computer-implemented method</u> of claim <u>1</u> , further comprising:	17. The <u>computer program product</u> of claim <u>10</u> , further comprising:
prior to determining that the number of impressions is equal to the predetermined number of impressions, obtaining, by the one or more processors, via an input in the graphical user interface, a request for increasing the predetermined number of impressions of the advertising material for users visiting the at least one website; and	prior to determining that the number of impressions is equal to the predetermined number of impressions, obtaining, by the one or more processors, via an input in the graphical user interface, a request for increasing the predetermined number of impressions of the advertising material for users visiting the at least one website; and
based on the obtaining, automatically increasing the predetermined number of impressions.	based on the obtaining, automatically increasing the predetermined number of impressions.
Claim 8	Claim 20
8. The <u>computer-implemented method</u> of claim <u>1</u> , further comprising:	20. The <u>system</u> of claim <u>19</u> , the <u>method</u> further comprising:
prior to determining that the number of impressions is equal to the predetermined number of impressions, obtaining, by the one or more processors, via an input in the graphical user interface, a request for increasing	prior to determining that the number of impressions is equal to the predetermined number of impressions, obtaining, by the one or more processors, via an input in the graphical user interface, a request for increasing

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the predetermined number of impressions of the advertising material for users visiting the at least one website; and	the predetermined number of impressions of the advertising material for users visiting the at least one website; and
based on the obtaining, automatically increasing the predetermined number of impressions.	based on the obtaining, automatically increasing the predetermined number of impressions.

183. Claims 16, 17 and 20 are thus obvious for the same reasons as claims 7-8 discussed above.

D. Grounds 3-4: Claims 1-20 Are Obvious Over Ground 1 and Ground 2 Prior Art In Further View of Manowitz

184. As fully explained in **Part V.A.6**, I am informed by counsel that Patent Owner has suggested in pending litigation that the claimed “**web property content owner**” in the independent claims must be different from the owner or publisher of the website on which the content is populated. If the Board were to determine that this is a requirement of the challenged claims, the claims would nevertheless be obvious over the prior art cited for **Ground 1** (for claims 1-6, 9-15, and 18-19) and **Ground 2** (for dependent claims 7-8, 16-17, and 20), in further view of **Manowitz** (**EX1015**). For all aspects of the challenged claims, my analysis from **Grounds 1-2** remains applicable here.

185. Manowitz discloses the ability of a website to publish web content created by someone other than the owner of the website, and the further ability to

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provide advertising revenue to that content creator. Manowitz discloses “a model for sharing revenue between a publisher of content and an author who provides the content.” (Manowitz, p.1.) “In one embodiment, the author produces at least a portion of the content and provides it to the publisher. The publisher then publishes the content, for example, on a web site, for access by a consumer. If the consumer accesses the content, the publisher provides at least a portion of the revenue derived from the access to the author.” (Manowitz, pp.1-2; *see also id.*, p.5 (“For example, a site may contain the author’s content with a sale banner shown on the same site.”), p.6 (“sales banners that are co-located with the author’s content”), pp.7-8 (claim 1, claim 7 (“co-locating advertising content with the content”).) Manowitz explains that, in one embodiment, “[t]he publisher may be an entity that provides a server or other network interconnect capability to enable the consumer 20 and the author 15 to access information at the publisher 10.” (Manowitz, p.3.) In one embodiment, the publisher can be part of an Internet Service Provider (ISP) that provides content over the Internet. (Manowitz, p.3.) Manowitz discloses a further embodiment in which a content author receives advertising revenue when its content is presented by the publisher. In this embodiment, the publisher “tracks the number of hits to the author’s content,” “charges the advertiser based on the publisher’s tracking,” and then [t]he author is compensated based on the advertising revenue generated[.]”

(Manowitz, p.5; *see also id.*, Fig. 3b, pp.7-8 (claims 1, 6-8).)

186. ***Rationale and Motivation to Combine (Grounds 1-2 Prior Art + Manowitz)***: It would have been obvious to a person of ordinary skill in the art to combine the prior art described for **Grounds 1-2** with Manowitz. The combination would have predictably resulted in the system based on the prior art combination described for **Grounds 1-2**, further adapted such that the “**web property content owner**” recited in the independent claims would have been a person or entity other than the website owner or publisher. Accordingly, under limitation 1[f], the advertising material would have been populated “**within web property content of the at least one website,**” *i.e.*, under the further combination with Manowitz, within content created by a person or entity who is not the publisher or owner of the website. Similarly, under limitation 1[k], the system under the proposed combination would have collected “**a share of the advertising revenue to be transmitted to the web property content owner,**” *i.e.*, to the owner of the web content as discussed.

187. Manowitz is an analogous reference in the same field of the '898 patent of providing content and advertising over the Internet, and would have been reasonably pertinent to problems facing the inventor. For example, Manowitz would have been reasonably pertinent to understanding features for collecting advertising revenue for transmission to web property content owners.

188. A person of ordinary skill in the art would have been motivated to combine. The ability of a website to publish content that was provided by persons or entities other than the owner of the website was commonplace and had well-known advantages. For example, numerous websites prior to November 2004 incorporated content generated by their users or other third party authors, including popular and well-known websites such as Yahoo! and GeoCities. The ability of the website under the proposed combination to incorporate web content from third parties would have allowed the website to rapidly expand by freeing its owner from the costs and burdens associated with creating the content itself. The resulting expansion of content on the website, in turn, would have allowed the sale of more advertising impressions thus earning more advertising revenue. This motivation is further reinforced by Manowitz, which explains that, using his system, an author can publish content “and receive revenue directly or indirectly due to the particular content.” (Manowitz, p.2.) This would have provided a further financial incentive for third party creators to create content for presentation on the website.

189. A person of ordinary skill in the art would have also had a reasonable expectation of success. My Declaration cites Manowitz for the unremarkable and non-technical proposition that the claimed the “web property content” and the “web property content owner” refer to an entity other than the entity that owns and

operates the website on which web property content is displayed. As noted above, this type of arrangement was well-known prior to November 2004 and already part of the fabric of the Web. The techniques described in Manowitz on which I rely are nothing more than standard technologies that would have been part of the background knowledge of a person of ordinary skill in the art. A person of ordinary skill in the art would have found the disclosures in Manowitz, as well as the prior art references cited for Ground 1, sufficiently detailed to implement the techniques that I cite in my Declaration, without undue experimentation.

V. NO SECONDARY CONSIDERATIONS OF NONOBVIOUSNESS

190. As explained in **Part III.B**, I understand that “secondary considerations” may be used as indicia of nonobviousness, provided that any such consideration has a nexus to the invention claimed. I understand from Petitioner’s counsel that Patent Owner in the related district court litigation has not yet identified any evidence related to secondary considerations with a nexus to the claimed invention. Nor am I aware of information, such as commercial success, unexplained results, long felt but unsolved need, industry acclaim, simultaneous invention, copying by others, skepticism by experts in the field, and failure of others, suggesting that the claims addressed in this Declaration are not obvious. To the extent Patent Owner later provides information it claims relates to secondary

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considerations, I reserve the right to supplement my analysis and opinions to comment on it.

VI. CONCLUSION

191. In signing this Declaration, I recognize that the Declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in this proceeding. If required, I will appear for cross-examination at the appropriate time. I reserve the right to offer opinions relevant to the invalidity of the challenged claims at issue and/or offer testimony in support of this Declaration.

192. I hereby declare that all statements made herein of my own knowledge are true and that all statements are made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

Dated: January 17, 2025

Respectfully submitted,



Mark Crovella
Boston, Massachusetts

EXHIBIT A

MARK E. CROVELLA

Computer Science Department
Boston University
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Office: (617) 353-8923
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Date of Birth: October 28, 1959
Location: Buffalo, New York, USA
Nationality: USA

Current as of April 29, 2024

EDUCATION

Ph.D. Computer Science, University of Rochester, October 1994.
M.S. University of Rochester, May 1991.
M.S. State University of New York at Buffalo, May 1990.
B.S. Cornell University, May 1982.

SELECTED PROFESSIONAL EXPERIENCE

Professor Department of Computer Science, Boston University, 2006 to present. **Department Chair, Computer Science** 2013 – 2018; **Associate Professor** 2000 – 2006; **Assistant Professor** 1994 – 2000. On leave 2000 – 2001.

Professor Faculty of Computing & Data Sciences, Boston University, 2022 to present. **Chair of Academic Affairs, Faculty of Computing & Data Sciences** 2022 – present; **Founding Member, Faculty of Computing & Data Sciences**, 2020 – 2022; **Data Science Faculty Fellow** 2019 – 2022.

Chief Scientist Guavus, Inc., February 2012 to August 2014.

Technical Director Network Appliance, Tewksbury, MA. November 2000 to April 2002.

Chief Architect Webmanage Technologies, Chelmsford, MA. May 2000 to acquisition by Network Appliance in November 2000.

Senior Computer Scientist Calspan Corporation, Buffalo, NY. August 1984 to August 1994.

LEGAL CONSULTING

The following are all cases in which I provided consulting and provided a report or testified at trial or deposition.

Visual Networks v. Paradyne, 2005, District of Maryland.

Retained by Sughrue Mion, Washington DC on behalf of Visual Networks.
Provided Report on validity of Visual Networks patents.
Subject area: Communications networks. Settled.

Akamai Technologies and MIT v. Limelight Networks, 2007 - 2008, District of Massachusetts.

Retained by Choate, Hall and Stewart, Boston MA on behalf of Akamai.
Provided Infringement Report, Noninfringement Rebuttal, Deposition on expert reports, Testimony at trial (3 days).
Subject area: Content delivery networks. All claims were found infringed; no claims were found invalid; \$45M award of lost profits.

Interval Research v. Apple, Google, AOL, et al, 2011, US PTO.

Retained by O'Melveny & Myers, San Francisco on behalf of Apple.
Provided expert report in support of re-examination claim.
Subject area: Web browsers. Settled.

Straight Path IP Group v. Sony Et. Al., 2013, International Trade Commission and ED Virginia.
Retained by Wolf Greenfield, Boston MA on behalf of Sony.
Provided declarations in support of petitions for Inter Partes Review to USPTO.
Subject area: Video streaming technology.
Case number: 2:13-cv-00427. Filing Date: 8/1/2013.
Settled.

PersonalWeb v. Microsoft and Yahoo!, 2013-2014, Eastern District of Texas.
Retained by Haltom and Doan, and GreenbergTraurig on behalf of Yahoo!, and Microsoft.
Provided Invalidity Report on PersonalWeb patents, Deposition.
Subject area: Search engine technology.
Case number: 6:12-CV-658, 6:12-CV-663. Filing Date: 9/17/2012.
Settled.

RPX Corporation v. Cedatech Holdings, 2015, Patent Trial and Appeal Board.
Retained by Wolf Greenfield, Boston MA on behalf of RPX.
Provided declaration in support of petition for Inter Partes Review.
Subject area: Web browser and media technology.
Case number: IPR2015-00736. Filing Date: 2/13/2015.
Cedatech responded by disclaiming all patent claims.

Fortinet v. Sophos, 2015, Eastern District of Texas.
Retained by Quinn Emanuel on behalf of Fortinet.
Provided Reports on Invalidity and Noninfringement, Deposition.
Subject area: Security products.
Case number: 3:13-cv-05831-EMC. Filing Date: 12/16/2013.
Settled.

RPX v. Applications In Internet Time, 2015, Patent Trial and Appeal Board.
Retained by Wolf, Greenfield, Boston MA on behalf of RPX.
Provided Declaration in Support of Petition for IPR, Deposition.
Subject area: Application architecture.
Case number: IPR2015-01750. Filing Date: 8/17/2015.
PTAB instituted all claims.

Akamai v. Limelight, 2016-2017, Patent Trial and Appeal Board.
Retained by Choate, Hall & Stewart and WilmerHale, Boston, MA on behalf of Akamai.
Provided Declarations in Support of Petition for IPR, Deposition.
Subject area: Content delivery networks.
Case number: IPR2016-01011. Filing Date: 5/13/2016.
PTAB held all claims unpatentable..

Limelight v. Akamai, 2016-2017, Patent Trial and Appeal Board.
Retained by WilmerHale, Boston MA on behalf of Akamai.
Provided Declaration in Support of Patent Owner Preliminary Response.
Subject area: Content delivery networks.
Case number: IPR2016-01711. Filing Date: 9/6/2016.
PTAB held all claims unpatentable..

Finjan v. Symantec, 2017, Northern District of California.
Retained by Quinn Emanuel, Chicago IL on behalf of Symantec.
Provided Damages Rebuttal Report, Deposition.
Subject area: Security products.
Case number: 4:14-cv-02998. Filing Date: 6/30/2014.
Dismissed 3/5/2018.

Sound View Innovations v. Hulu, 2017-2019, Central District of California.
Retained by O'Melveny & Myers on behalf of Hulu, LLC.
Provided Expert Reports on Noninfringement and Invalidity, Deposition.
Subject area: Database Technology.

Case number: LACV17-04146 JAK (PLAx). Filing Date: 6/2/2017.
Summary Judgment for Defendant.

RPX and Bank of America v. Publishing Technologies, 2018, PTAB.

Retained by Winston & Strawn on behalf of RPX Corporation.
Provided Declaration in support of Petition for Inter Partes Review.
Subject area: Content Management System.
Case number: IPR2018-01131 and IPR2018-01132. Filing Date: 5/31/2018.
PTAB held all claims unpatentable.

Intellectual Ventures v. BITCO and Great West (Old Republic), 2015-2019, Eastern District of Texas.

Retained by Sidley Austin on behalf of BITCO and Great West.
Provided Expert Reports on Invalidity and Noninfringement, Deposition, Testimony at Trial.
Subject area: Web Technology.
Case number: 6:18-cv-00298. Filing Date: 1/20/2015.
Jury Trial March 2019; ruling for plaintiff.

Centripetal Networks, Inc. v. Cisco Systems, Inc., 2019, Eastern District of Virginia, Norfolk.

Retained by Duane Morris on behalf of Cisco.
Provided Expert Reports on Invalidity and Noninfringement, Deposition, Testimony at Trial.
Subject area: Security Products.
Case number: 2:18-cv-00094-HCM-LRL. Filing Date: 3/29/2018.
Bench Trial May-June 2020; ruling for plaintiff.

British Telecommunications PLC v. Fortinet LLC, 2019, PTAB.

Retained by Duane Morris on behalf of Fortinet.
Provided Declaration in Support of IPR.
Subject area: Distributed Network Management.
Case number: IPR2019-01323. Filing Date: 7/11/2019.
PTAB denied institution.

Express Mobile v. Magento (X.commerce), 2019, Northern District of California.

Retained by Sidley Austin on behalf of Magento.
Provided Expert Reports on Invalidity and Ensnarement, Deposition.
Subject area: Web Authoring Software.
Case number: 17-cv-02605-RS. Filing Date: 2019.
Ongoing.

Ohio State Innovation Foundation v. Akamai, 2019, District of Massachusetts, PTAB.

Retained by Farella Braun & Martell on behalf of Akamai.
Provided Declaration in Support of IPR.
Subject area: Content Distribution and Prefetching.
Case number: 1:19-cv-11528. Filing Date: 2019.
Settled.

Askeladden v. Lightwire, 2020, PTAB.

Retained by Wilmer Hale on behalf of Askeladden.
Provided Declaration in Support of IPR.
Subject area: Identity Management in E-commerce. Filing Date: 2020.
PTAB Granted Institution.

Broadcom Corporation and Avago Technologies International Sales Pte. Limited v. Netflix, Inc., 2020, Northern District of California.

Retained by Kecker, Van Nest & Peters on behalf of Netflix.
Provided Expert Reports on Invalidity and Non-infringement, Deposition.
Subject area: Video Streaming.
Case number: 3:20-cv-04677-JD. Filing Date: 2020.

CA, Inc. and Avago Technologies International Sales Pte. Limited v. Netflix Inc., 2020, Eastern District of Texas.

Retained by Keker, Van Nest & Peters on behalf of Netflix.

Provided Expert Reports on Invalidity and Non-infringement; Declaration on Claim Construction.

Subject area: Video Streaming.

Case number: 2:21-CV-80-JRG-RSP. Filing Date: 2021.

Sable Networks Inc et al v. Juniper Networks, Inc., 2020, Western District of Texas.

Retained by Farella Braun + Martell, LLP on behalf of Juniper.

Provided Prior Art Search and Analysis.

Subject area: Network Switch Technology.

Case number: 6:20-cv-00524. Filing Date: 2020.

Settled December 2020.

Sable Networks Inc et al v. Cloudflare, 2021, Western District of Texas.

Retained by Farella Braun + Martell, LLP on behalf of Cloudflare.

Provided Prior Art Search, Declaration in IPR.

Subject area: Network Switch Technology.

Case number: 6:21-cv-00261. Filing Date: 2021.

Eolas v. Amazon et al., 2021, Northern District of California.

Retained by Latham and Watkins, LLP on behalf of Amazon.

Provided Report on Invalidity, Deposition.

Subject area: Web Browser Technology.

Case number: 4-17-cv-03022. Filing Date: 2017.

Summary Judgment of Invalidity under Sec 101, May 2022.

RightQuestion, LLC v. Samsung Electronics Co., et al, 2021, Eastern District of Texas.

Retained by O'Melveny and Myers LLP on behalf of Samsung.

Provided IPR Declaration, Invalidity Report, Deposition.

Subject area: Authentication Management.

Case number: 2:21-cv-00238. Filing Date: 2021.

Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards v. IBM, 2021-2022, PTAB.

Retained by GreenbergTaurig, LLP on behalf of Petitioner Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards.

Provided Declaration in Support of IPR, Deposition.

Subject area: Personalization Methods.

Case number: IPR2022-00438, IPR2022-00439. Filing Date: 2021.

Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards v. IBM, 2021-2022, PTAB.

Retained by GreenbergTaurig, LLP on behalf of Petitioner Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards.

Provided Declaration in Support of IPR, Deposition.

Subject area: Authentication Methods.

Case number: IPR2022-00646. Filing Date: 2022.

Wapp Tech v. Bank of America, 2022, Eastern District of Texas.

Retained by O'Melveny & Myers LLP on behalf of Bank of America.

Subject area: Mobile Software Development.

Case number: 4:21-cv-00670. Filing Date: 2021.

Settled.

IBM v. Rakuten, Inc. et al., 2022, District of Delaware.

Retained by GreenbergTaurig, LLP on behalf of Defendants.

Provided Declaration in Support of Claim Construction, Deposition.
Subject area: Networking Technologies.
Case number: 1:21-00461. Filing Date: 2021.

Repairify v. LKQ Corp. and Keystone Automotive Industries, Inc., 2022, Western District of Texas.
Retained by Irwin IP on behalf of Keystone.
Provided Expert Report on Technology, Deposition.
Subject area: Automotive Networking.
Case number: 6:21-cv-00819. Filing Date: 2021.

Lionra v. Cisco, 2022, PTAB.
Retained by Duane Morris on behalf of Cisco.
Provided Declaration in IPR, Deposition.
Subject area: Network Security. Filing Date: 2021.

Daedalus v. Samsung, 2022-2023, Eastern District of Texas.
Retained by O'Melveny and Myers LLP on behalf of Samsung.
Provided Consulting on Invalidity.
Subject area: Security Technology.
Case number: 2:22-cv-352. Filing Date: 2021.
Settled.

Taasera v. Trend Micro, 2022-2023, Eastern District of Texas.
Retained by Duane Morris LLP on behalf of Trend Micro.
Provided Consulting on Invalidity, Noninfringement.
Subject area: Security Technology.
Case number: 2:21-cv-00441. Filing Date: 2021.
Settled.

IBM v. Epic Games, 2023, PTAB.
Retained by GreenbergTraurig on behalf of Epic Games.
Provided Declaration in IPR.
Subject area: Web Server Technology. Filing Date: 2022.

PATENTS HELD

Methods for Storing and Reading Digital Data on a Set of DNA Strands, US Patent # 10,027,347, issued July 17, 2018.

Method and Apparatus for Whole-Network Anomaly Diagnosis and Method to Detect and Classify Network Anomalies Using Traffic Feature Distributions, US Patent # 8,869,276, issued October 21, 2014.

Compressed Set Representation for Sets as Measures in OLAP Cubes, US Patent # 8,533,167, issued September 10, 2013.

Method and Apparatus for Dynamic Resource Discovery and Information Distribution in a Data Network, US Patent # 7,747,741, issued June 29, 2010.

System for Creating and Distributing Prioritized List of Computer Nodes Selected as Participants in a Distribution Job, US Patent # 7,346,682, issued March 18, 2008.

Method and Apparatus for Election of Group Leaders in a Distributed Network, US Patent # 6,993,587, issued January 31, 2006.

Method and Apparatus for Scalable Distribution of Information in a Distributed Network, US Patent # 6,748,447, issued June 8, 2004.

Method and Apparatus for Reliable and Scalable Distribution of Data Files in Distributed Networks, US Patent # 6,718,361, issued April 6, 2004. European Patent # EP1305924 issued March 31, 2010.

Distributed Routing, US Patent # 6,370,584, issued April 9, 2002.

Method and Apparatus for Assigning Tasks in a Distributed Server System, US Patent # 6,223,205, issued April 24, 2001.

SELECTED HONORS

Innovator of the Year, 2014, Boston University.

IEEE Fellow, 2011, “For contributions to the measurement and analysis of networks and distributed systems.”

ACM Fellow, 2010, “For contributions to the measurement and analysis of networks and distributed systems.”

FUNDING

Recipient of over 25 research grants from NSF, ARO, NGIA, Google, Sprint, GTE, Xerox, and Hewlett-Packard totalling over \$15 M.

SELECTED PROFESSIONAL ACTIVITIES

Scientific Advisory Board of the Max Plank Institute for Software Systems, 2016 – present.

General Co-Chair, CoNEXT 2011.

Chair, ACM SIGCOMM 2007–2009.

Program Co-Chair, IFIP Networking 2010.

Program Committee Chair, Internet Measurement Conference 2003.

BOOKS

M. Crovella and B. Krishnamurthy, “Internet Measurement: Infrastructure, Traffic, and Applications,” John Wiley and Sons, 2006, 512 pp.

PUBLISHED ARTICLES

Author of over 200 published articles in Computer Science, cited more than 30,000 times according to Google Scholar.